FEB 2023

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Current Affairs By Mayank Ojha

Important Highlights of the Month

- FIFA World Cup 2022
- Fiji, Peru & Malaysia gets their new heads
- PT Usha becomes 1st woman President of IOA
- Avani Lekhara receives Para Sports Person of Year award
- Lt. Gen Asim Munir appointed new Army Chief of Pakistan
- What is carbon capture, utilization, and storage? Explained
- Ravish Kumar resigns from NDTV following Adani acquisition
- India defeated Bangladesh to clinch their T20 World Cup for Blind
- Sukhwinder Singh Sukhu & Bhupendra Patel sworn in as new CMs
- Collegium system Vs NJAC: A judicial tussle between SCI & Central Govt.

Mock Tests 2023
SBI PO Prelims
SSC CHSL Prelims
RRB NTPC Prelims

HAPPY NEW YEAR
2023

La'eeb

PT Usha

Lt. Gen Asim Munir

250 High Level MCQ's
- Statement Based
- Current Affairs
- Economics
- History
- Polity
- Geography
- Physics
- Chemistry
- Biology

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I welcome you on behalf of the whole institute and thank you for showing your interest in us.

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Our Handbook plays a bigger role in many competitive and government exams. It holds the power of making or breaking your chance of success. Therefore, the candidates should cover Current Affairs thoroughly and smartly. Our Handbook is divided into different sections keeping in mind the need for various exams. Presentation of the given Current Affairs has been planned meticulously. It has been planned in such a way that it remains in the minds of readers for a longer duration.

Our mission is to provide a safe, secure environment in which every student will acquire the skills and knowledge necessary to become accomplished, productive members of the ever-changing, global community. Our faculty is a very dedicated group of individuals who continue to focus on providing the best possible instruction for our students.

Once again, welcome to our community of shared principles and values. Wish you happy, healthy, and fruitful years ahead.

Looking forward to welcoming you to the Institute.

Mayank Ojha

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── THIS EDITION INCLUDES ──

ABOUT US:

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Name of Editor/Manager: Shri Mayank Ojha M.sc (biochemistry)

Name of Advisors: Dr. Balram Verma, Dr. Virendra Patel, Dr. B.L Verma, Dr Naveen Pandey

Name of Marketing Manager & Contact: Dinesh Singh 8175888175

Advertisement Manager Name & Contact: Md Junaid 8299188167

Legal Manager Name & Contact: Ad. Abhishek Tiwari 7619801994

Address: Bhayara Road, Jyori, Masauli, Uttar Pradesh

Contact Info: 6389611115, 9454787301, 8400071593

Email: veenasudhakarojha123@gmail.com

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Books and Authors

Book: The Indian Navy@75 Reminiscing the Voyage
Author: Ranjit B Rai and Aritra Banerjee
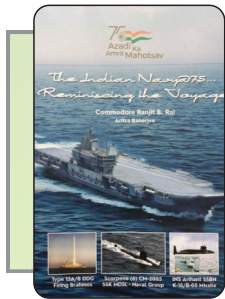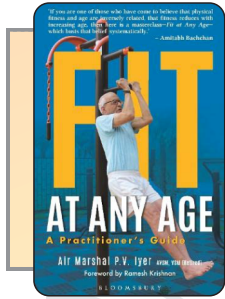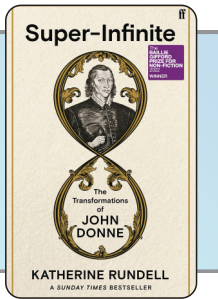**About:** The book tells you how the exploits and sacrifices of the British-era Royal Indian Navy (RIN) during World War 2 were omitted by British historians.

Book: Super-Infinite: The Transformations of John Donne
Author: Katherine Rundell
About: The book argues that Donne is a writer perhaps as great as Shakespeare, and a writer we should all inspire.

Book: Fit At Any Age
Author: PV Iyer
About: Air Marshal PV Iyer has penned his journey to fitness in the book and shared anecdotes from his life to explain how he became motivated to work out daily.

Book: Empire of Pain: The Secret History of the Sackler Dynasty
Author: Patrick Radden Keefe
About: This book is an expose of the family that helped unleash the United States' opioid epidemic.
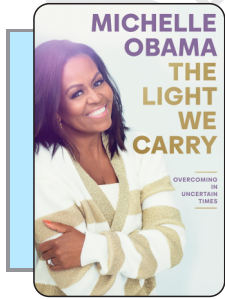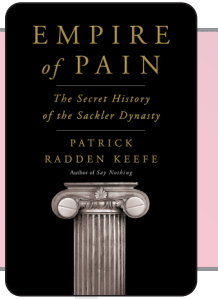
Book: Light We Carry: Overcoming in Uncertain Times
Author: Michelle Obama
About: In this book the former First Lady shares her practical wisdom and powerful strategies for staying hopeful and balanced in today's highly uncertain world.

Book: The Chipko Movement: A People's History
Author: Shekhar Pathak
About: This book maps a journey of the people of Uttarakhand and a century of peaceful agitations to fight for the very survival of their habitat and their existence.
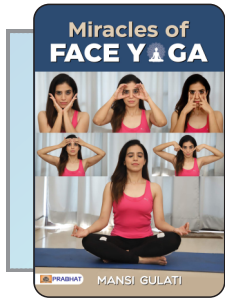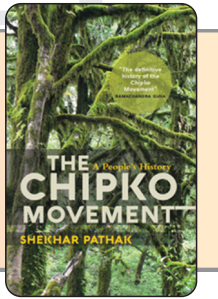
Book: Miracles of Face Yoga
Author: Mansi Gulati
About: This book introduces the concept of 'face yoga', a natural exercise for the face in addition to various other yoga exercises.

Book: Accidental Feminism
Author: Swethaa S Ballakrishnen
About: Exploring the unintentional production of seemingly feminist outcomes In India, elite law firms offer a surprising oasis for women within a hostile, predominantly male industry.
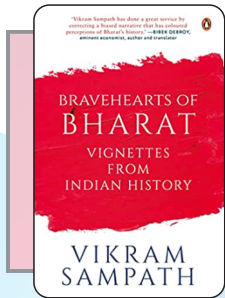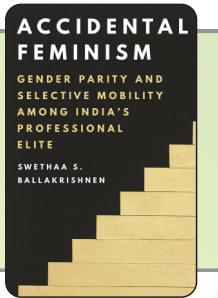
Book: Brave Hearts of Bharat, Vignettes from Indian History
Author: Vikram Sampath
About: This is the Story of Fifteen Brave Men and Women of Bharat, who Fought to Protect their Rights, Faith and Freedom.

Book: Whole Numbers and Half Truths
Author: Rukmini S
About: This book is probably the first one to talk of 'Modern India' that is predicated on empirical data.
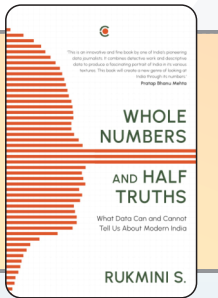
Let's Recap

- Anwar Ibrahim has been sworn in as Prime-Minister of which country? **Malaysia**
- What is the name of the founder of "Rasna" who has passed away recently? **Areez Pirojshaw**
- Who has been appointed as the Election Commissioner? **Arun Goel**
- Who has become first Indian woman to win medal at Asian Cup 2022? **Manika Batra**
- Which country will take over the Chair of the Global Partnership on Artificial Intelligence for 2022-23? **India**
- What is the name of Chief Election Commissioner of India, who has been invited by the Election Commission of Nepal as an international observer for the forthcoming elections? **Rajiv Kumar**
- Recently, Bandaru Wilsonbabu named as the Ambassador of India to which country? **Comoros**
- Recently, who has been appointed as the Governor of West Bengal? **C V Ananda Bose**
- Who has been elected as the prime minister of Israel recently? **Benjamin Netanyahu**
- Edtech company BYJU's has appointed whom as brand ambassador for its social initiative? **Lionel Messi**
- Who has become Meta's India head? **Sandhya Devanathan**
- Who has become the first Indian player to get elected in the Athletes' Commission of the International Table Tennis Federation? **Sharath Achanta Kamal**
- The Government of India has appointed whom as a full-time member of NITI Aayog? **Arvind Virmani**
- Government of India has nominated whom as the Director on RBI's central board? **Vivek Joshi**
- Who has been elected as the Chairperson of the Athletes Commission of the Indian Olympic Association? **Mary Kom**
- Who has been appointed as chief executive officer of Prasar Bharati? **Gaurav Dwivedi**
- Natasa Pirc Musar has been elected as the first Female President of which country? **Slovenia**
- RL Kashyap, who has passed away recently, was a famous - **Mathematician**
- Who has been elected as Chairman of International Cricket Council for 2 year? **Greg Barclay**
- Who has been elected as new president of All India Rubber Industries Association? **Ramesh Kejriwal**
- Who has been appinted as the new CEO of Adidas, a German multinational corporation? **Bjorn Gulden**
- Recently who has been elected as the president of New Zealand Cricket (NZC)? **Lesley Murdoch**
- Recently who has been named the Interim Managing Director of Hewlett Packard in India? **Gurpreet Brar**
- Recently who took oath as the 50th Chief Justice of India after succeeding Justice UU Lalit? **Justice DY Chandrachud**
- Recently who was elected as the new president of the International Hockey Federation (FIH), succeeding India's Narinder Batra as its full-time chief? **Mohammad Tayyab Ikram**
- Who has been appointed as the new chairperson of Law Commission of India after a gap of 4 years? **Justice Ritu Raj Awasthi**
- Who will head the committee formed by Government of India to strengthen assessment of higher educational institutions? **K Radhakrishnan**
- Which two women officers of Central Reserve Police Force has promoted for the first time to Inspector General Rank? **Seema Dhundia and Annie Abraham**
- Padma Bhushan awardee Elaben Bhatt, who has passed away recently, was the founder of which trade union? **Self Employed Women's Association**
- Who has become the first woman director of ICAR-SBI? **Dr G Hemaprabha**
- Who has been taken over as Southern Command Chief? **Ajai Kumar Singh**
- Padma Bhushan Jamshed J Irani, who has passed away recently, was famous by which name? **Steel Man of India**
- Which company has officially appointed Lee Jae-yong as its executive chairman? **Samsung**
- Luiz Inacio Lula da Silva has recently become President of which country for third time? **Brazil**
- Who has been appointed as the chairperson of union government's engagement group Civil 20 (C20)? **Mata Amritanandamayi**
- Who has taken charge of Twitter after resigning Parag Agarwal as CEO? **Elon Musk**
- Pinaki Chaudhuri, who has passed away recently, was associated with which field? **Cinema**
- The government of India has appointed whom as the acting chairperson of the Competition Commission of India? **Sangeeta Verma**
- Who has been named as chairperson of United Nation's Air Transport Committee? **Shefali Juneja**

- Who has become the first Indian-origin Prime Minister of the UK from Britain's Conservative Party? **Rishi Sunak**
- Recently, which state government has issued a notification to declare Arittapatti village as a Biodiversity Heritage Site? **Tamil Nadu**
- Recently, the Andaman & Nicobar Islands has filed an application, seeking the Geographical Indication tag for which object? **Nicobari Hodi craft**
- Prime Minister of India has inaugurated the month-long Kashi Tamil Sangamam in which city? **Varanasi**
- What is the name Arunachal's first Greenfield Airport, which has recently inaugurated by PM Modi? **Donyi Polo Airport**
- India's first Elephant Death Audit Framework introduced by which state? **Tamil Nadu**
- Which city of United Arab Emirates will host first global media congress? **Abu Dhabi**
- Recently, Union Jal Shakti Minister Gajendra Singh Shekhawat has inaugurated the GeoSmart India 2022 Summit in which city? **Hyderabad**
- Which ministry has conducted Mother Tongue Survey of India? **Ministry of Home Ministry**
- PM Gati Shakti Multimodal Waterways Summit will be held in which city? **Varanasi**
- Recently, India has decided to launch a Young Professionals Exchange in 2023 along with which country? **United Kingdom**
- Which country has emerged as the second-largest producer of crude steel? **India**
- According to which international organisation, the human population across the globe touched 8 billion? **UNFPA**
- With which country India has hosted the Leadership for Industry Transition (LeadIT) Summit? **Sweden**
- Recently, which international organization has launched a report titled as "Financing India's Urban Infrastructure Needs: Constraints to Commercial Financing and Prospects for Policy Action"? **World bank**
- The central government will launch the world's longest luxury river cruise from Varanasi to which city? **Dibrugarh**
- Which intergovernmental forum has agreed to build a pandemic fund to prevent and prepare for the pandemic? **G20**
- The 9th Ministerial meeting of India-US Economic & Financial Partnership has held in which city? **New Delhi**
- Prime Minister of India has recently unveiled the 108-feet long Bronze statue of whom in Karnataka? **Nadaprabhu Kempegowda**
- 42nd International Congress of the Indian National Cartographic Association (INCA) has started in which state? **Uttarakhand**
- What is the theme of the India's G20 Presidency as announced by PM Narendra Modi? **One Earth, One Family, One Future**
- What will be the new applicable percentage of Quota for economically weaker section (EWS) announced by the SCI recently? **10%**
- This year the Conference of the Parties of the UNFCCC, or COP27 is organised by which country? **Egypt**
- Recently ADB has approved a $70 million loan to which country to support government efforts to deepen reforms in upper secondary science, technology, engineering, and mathematics (STEM) education across the country? **Cambodia**
- Which state government has launched Lakhpati Didi Yojana? **Uttarakhand**
- The Vice President of India Jagdeep Dhankhar has recently inaugurated the 15th CII Agro Tech -2022 in which city? **Chandigarh**
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- Which government agency has released 7th edition of "Handbook of Statistics on Indian States, 2021-22"? **Reserve Bank of India**
- The Reserve Bank of India has allowed the opening of how many special vostro accounts in two Indian Banks (UCO Bank and IndusInd Bank) for the settlement of payments in rupee for trade between India and Russia? **Nine**
- Which government agency has launched a regulatory framework for online bond platform providers in a bid to streamline their operations? **SIDBI**
- The Regional Centre for Biotechnology is located in which city, where "Indian Biological Data Bank" has recently set up? **Faridabad**
- Which bank has topped in PSU lenders' list in Q2 Credit Growth? **Bank of Maharashtra**
- Recently, which government agency has released the Report on Municipal Finances? **Reserve Bank of India**
- Which ministry has recently approved India's first Sovereign Green Bonds Framework? **Ministry of Finance**
- Recently how much fund has been allocated for the action plan for 'Early Warnings for All' was launched at the United Nations' Climate Summit — COP27? **$3.1 Billion**
- How much fund has announced by Spain in the recently launched International Drought Resilience Alliance at the COP27? **5 Million Euro**
- India's first floating financial literacy camp was organized recently by which payment bank? **India Post Payments Bank**
- Which country's Parliament has passed Free Trade Agreement with India? **Australia**
- An MoU of the exhibition has been signed between India with which country? **Denmark**
- Recently, how many new countries has signed up for Global Offshore Wind Alliance at COP27? **Nine**
- The International Financial Services Centres Authority has signed a Memorandum of Understanding with which agency for supervision of regulated entities? **RBI**
- Which company has signed a MoU with the Inland Waterways Authority of India to build the country's first hydrogen fuel cell catamaran vessel? **Cochin Shipyard**
- Which state government has signed a MoU with Ashok Leyland for development, management and operation of three new Institutes of Driving Training and Research (IDTR)? **Odisha**
- Which company will join hands with the Indian Institute of Technology (IIT) Madras to support startups in the maritime sector? **Cochin Shipyard Ltd (CSL)**
- Which Indian multinational conglomerate is going to acquire German retailer METRO AG's Cash & Carry

- business in India in a deal estimated at around 500 million euros? **Reliance Industries**
- Recently, Government of Indian has signed a MoU with FIFA, AIFF for which initiative in India? **Football4Schools**
- Which Indian Institute of Technology has collaborated with NASA Jet Propulsion Laboratory to study the interactions between microbes in the International Space Station? **IIT Madras**
- Who has been honoured with the prestigious Dr Kalam Seva Puraskar 2022? **Ravi Kumar Sagar**
- Who has been awarded by Tenzing Norgay National Adventure Award 2021 in "Land Adventure" category? **Naina Dhakad**
- Which company has been named a recipient of the Salesforce Partner Innovation Award in the "Communications" category? **Prodapt**
- Purnima Devi Barman, who has been awarded the United Nation's highest environmental honor, "Champions of the Earth", for 2022, is from which state? **Assam**
- Which Telugu star has recently honored with the Indian Film Personality of the Year 2022 award at the opening ceremony of the 53rd International Film Festival of India? **Chiranjeevi**
- Which country has won excellence in leadership in family planning awards? **India**
- Who has become Indian Army's first woman sky diver with 10,000 ft jump? **Lance Naik Manju**
- Who has been awarded by the UK's Order of Merit 2022? **Venki Ramakrishnan**
- Recently, Major Dhyan Chand Khel Ratna Award has been awarded to the which Table Tennis player? **Achanta Sharath Kamal**
- Who has been awarded by the Satyajit Ray Lifetime Achievement Award 2022? **Carlos Saura**
- Who has been awarded by Australian of the Year 2023? **Amar Singh**
- Recently, Which Railway Station has been awarded by 4- star "Eat Right Station"? **Bhopal Railway Station**
- Who has been awarded by the 32nd Bihari Puraskar? **Dr Madhav Hada**
- Who has received International Kannadiga Rathna award 2022? **YKC Wadiyar**
- Who has been awarded by Kuldip Nayar Patrakarita Samman Award for 2022? **Arfa Khanum**
- Name the Indian-American professor, who receives Amazon Research Award to study evolving machine learning systems? **Pavithra Prabhakar**
- This year who has been honoured with the 'The Guru Nanak Interfaith Prize' for the year 2022? **Amardeep Singh**
- Who has been honoured with a member of the Order of Australia Award? **Amit Dasgupta**
- Which regional command has won the Air Force Lawn Tennis Championship 2022-23 held at Nagpur? **Western Air Command**
- Who has been awarded by the Kerala Jyothi award 2022? **M T Vasudevan Nair**
- Which company has recently received India's first Responsible-Steel Certification? **TATA Steel**
- Which word is chosen as Collins Dictionary's Word of the Year? **Permacrisis**
- Bangladesh Prime Minister has conferred the prestigious "Friends of Liberation War" honour to whom? **Edward M Kennedy**
- Who has conferred with Karnataka Ratna Award posthumously? **Puneeth Rajkumar**
- Which IIT has won National Intellectual Property Award for 2021 and 2022? **IIT Madras**
- International Federation of Film Critics has declared which movie as best Indian movie? **Pather Panchali**
- The people of which country have been awarded by Sakharov Prize for Freedom of Thought 2022 by the European Parliament? **Ukraine**
- Which state has won the first position in Pradhan Mantri Awas Yojana- Urban (PMAY-U) Awards 2021? **Uttar Pradesh**
- Which fair of India has created a world record of largest open-air trade fair in the world? **Cuttack Baliyatra**
- India has won how many gold medals at 15th Asian Airgun Championship? **25**
- Who has become the youngest world Number one ATP Player? **Carlos Alcaraz**
- Which state has topped in the medal tally of Northeast Olympic Games 2022 with 237 medals? **Manipur**
- Who has won the Brazilian Formula 1 Grand Prix 2022? **George Russell**
- Which country will host U-19 Men's T20 World Cup 2024? **Sri Lanka**
- Which team has won T20I world Cup 2022? **England**
- Which state cricket team has clinched the Syed Mushtaq Ali T20 Trophy title 2022? **Mumbai**
- Which state will host Khelo India National University Games in 2023-2024? **Uttar Pradesh**

- Charlotte Edwards, who has been inducted in the prestigious list of cricket legends by ICC, is from which cricket team? **England**
- Who has become the first Indian wrestler to won Gold medal in U-23 World Wrestling Championships? **Aman Sehrawat**
- Name the first Indian mixed doubles pair to enter the top five of the International Table Tennis Federation (ITTF) World Rankings? **Manika Batra and Gnanasekaran Sathiyan**
- This year which eminent personalities has been feliciated with the Uttarakhand Gaurav Samman? **Ajit Doval, Bipin Rawat, Girish Chandra Tiwari & Viren Dangwal**
- Name the Indian Shooters who clinched gold in P3 team event at Para Shooting World Championship at Al Ain, UAE? **Rahul Jakhar, Singhraj and Nihal Singh**
- Recently who has won the Paris Masters 2022 title? **Holger Rune**
- In the recently concluded BWF Para-Badminton World Championships 2022, which nation clinched maximum no of golds in the tournament? **Indonesia**
- Which state will host Track Asia Cup 2022 Cycling Tournament? **Kerala**
- Who has won India's first silver medal after 11 years of trying at the World Puzzle Championship? **Prasanna Seshadri**
- Footballer Gerard Pique who has recently announced his retirement from the sport, is from which country? **Spain**
- Which country has won the FIFA U-17 Women's World Cup 2022? **Colombia**
- Who has won 2022 ATP finals title by beating Casper Rudd? **Novak Djokovic**
- Which state government has launched "Amar Sarkar" Web portal? **Tripura**
- What is the name of India's first privately developed rocket, which has been successfully launched Sriharikota? **Vikram-S**
- The most powerful rocket ever Artemis 1 has recently launched by which space agency to Moon? **NASA**
- Which ministry has launched the Green Energy Open Access portal? **Ministry of Power**
- Which research institute has mandated to archive all life science data generated from publicly-funded research in India? **Indian Biological Data Centre**
- What is the name of the rocket launched by Iran's Revolutionary Guard that will be used for future launches of Iran's Nahid communications satellites? **Ghaem 100 rocket**
- What is the name of India's first privately developed rocket, designed by Skyroot? **Vikram-S**
- Recently which country has unveiled an "upgraded version" of the Bavar-373 (Belief-373) surface-to-air missile system with a range of more than 300 km? **Iran**
- What is the name of the process of partially oxidizing coal with air, oxygen, steam or carbon dioxide to form syngas? **Coal Gasification**
- Name the India's first "eye in the sky" satellite, which has recently crashed in Indian Ocean? **RISAT-2**
- Adani New Industries Ltd has constructed a wind turbine in which state as part of its growth plans for renewable energy? **Gujarat**
- Indian Army has announced to acquire how many Kamikaze Drones along with 10 aerial targeting systems? **120**
- Which country has recently launched "Mengtian", the last module its permanent space station? **China**
- The Ministry of Agriculture and Farmers Welfare has recently restricted the use of which herbicide Chemical compound, citing health hazards? **Glyphosate**
- North India's first hyperscale data center Yotta Yotta D1 has recently inaugurated in which state? **Uttar Pradesh**
- Which city will host 3-day "Akash for Life" Space Conference in November? **Dehradun**
- Recently launched ISROs' heaviest rocket LVM3 M2 has placed how many satellites in orbit? **36**
- What is the strike range of recently tested next-generation Agni-prime ballistic missile? **1,000 to 2,000 km**
- As per Reserve Bank of India's data on daily wage payments in India, which state has the highly paid agricultural and non-agricultural workers? **Kerala**
- Sangai festival is associated with which state, that has commenced recently? **Manipur**
- Shaheedi Diwas or Martyrdom Day of "Guru Tegh Bahadur" has recently on which day of November? **24 November**
- Which Indian city has become the first city in South Asia to Top CDP's Climate Action List? **Mumbai**
- Which port has launched Continuous Marine Water Quality Monitoring Station in association with IIT Madras? **Nhava Sheva Port**

- Vayusena Nagar is located in which state, where Indian Airforce's Air Fest 2022 has organized? **Maharashtra**
- India has celebrated Happy Children's Day on November 14. In context to the same tell us World Children's Day is observed on which day? **20 November**
- The 400th birth anniversary of Assam's legendary war hero Lachit Borphukan has celebrated in which city from 23rd to 25th November, 2022? **New Delhi**
- Recently, "INMARCO 2022" held in which city, where India's first National Centre of Excellence for Green Port & Shipping has launched? **Mumbai**
- Recently inaugurated largest South Asian Film Market- Film Bazaar will be organized by which company? **National Film Development Corporation of India**
- Who has authored the book "The World: A Family History"? **Simon Sebag**
- When has the birth anniversary of Rani Lakshmibai observed recently? **19 November**
- What is the rank of India in Network Readiness Index 2022? **61st**
- What is the theme of World Toilet Day 2022 observed on 19 November? **Making the Invisible Visible**
- Which organization has launched a report "Living Amazon Report" 2022, which stated that some 35% of the rainforest is either totally lost or highly degraded? **World Wildlife Fund**
- Recently, which edition of Norway-India Joint Working Group Maritime meeting 2022 was held in Mumbai, India? **Eighth**
- Which edition of "No Money for Terror Ministerial Conference" on countering dinancing of terrorism has recently addressed by PM Narendra Modi? **Third**
- What has been chosen as Paris 2024 mascot? **Phrygian cap**
- "Patan Patola" scarf is associated with which state, which has recently been gifted by PM Narendra Modi to PM of Italy? **Gujarat**
- National Press Day is observed every year on - **November 16**
- National Press Day is celebrated across India every year on 16th November to commemorate the setting up of the which organisation? **Press Council of India**
- What is the rank of India in the Climate Change Performance Index (CCPI) 2023 out of 63? **Eighth**

- Janjatiya Gaurav Diwas 2022 has celebrated on the birth anniversary of whom? **Birsa Munda**
- According to recent findings, which state has the largest anthropomorphic burial site collection? **Andhra Pradesh**
- Recently, which edition of the "pan-India" coastal defence Exercise Sea Vigil-22 has scheduled to be held on 15th-16th November 2022? **Third**
- Amur Falcon is a festival of which state, which 7th edition has recently observed? **Manipur**
- Which armed force has conducted "Prasthan", an offshore security exercise? **Indian Navy**
- Which year has been declared as ASEAN-India Friendship year? **2022**
- Recently, the birth anniversary of whom, has celebrated on 11th November 2022? **Acharya Kripalani**
- Recently, which international organisation has released "Global Vaccine Market Report 2022"? **World Health Organisation**
- Which state government has passed a bill to raise the total reservation to how much percent, offered to different categories? **77%**
- As per the recent amendment in Electoral Bond Scheme, the sale of electoral bonds has been extended by how many days in the year of general elections? **15 days**
- Recently launched websites and applications "protected system" or "Critical Information Infrastructure" is related to - **National Population Register**
- According to Global Carbon Budget 2022 report, the global carbon emissions are expected to reach how much tonnes of carbon dioxide into the atmosphere in 2022? **40.6 billion tonnes**
- National Education Day has celebrated on the birth anniversary of whom? **Abul Kalam Azad**
- Which state government has observed 10th November as "Millet Day" in the state? **Odisha**
- As per the recent amendment in Aadhaar Rules, the updation of documents in Aadhar must be done in how many year? **10 Years**
- Recently, the Human Rights Council Universal Periodic Review session was held in which city? **Geneva**
- Which state government has launched logo of Purple Fest for Education? **Goa**
- Which Ministry has released the Dynamic Ground Water Resource Assessment Report for the entire country for the year 2022? **Minister of Jal Shakti**

- The "Nuclearization of Asia" has been authored by whom? **Rene Naba**
- Recently India joined the MAC at the 27th Summit of the Conference of Parties (COP27) at Sharm el-Sheikh in Egypt. In context to same what does MAC stands for? **Mangrove Alliance for Climate**
- India is participating in 26th International Malabar Naval Exercise in Japan. Which are the other nations participating in? **USA, Japan & Australia**
- Which company holds the numero uno position in the top-100 rank of 'Forbes' World's Best Employers rankings 2022'? **Samsung**
- Name the only Indian company to be ranked under 100 in the recently released Forbes' World's Best Employers ranking 2022? **Reliance Industries Ltd (RIL)**
- Ministry of Jal Shakti has organized "Ganga Utsav- The River Festivals" 2022 on which day of November? **04 November**
- Recently, Defence Exercise "Operation Vigilant Storm" has conducted between South Korea and which other country? **United States**
- Zojila Day is commemorated on 1 November to celebrate the gallant action by Indian troops of which operation? **Operation Bison**
- An event "Run for Unity" was held in which city to mark the birth anniversary of Sardar Vallabhbhai Patel, also celebrated as Ekta Diwas nationwide? **Latur**
- Ministry of Home Affairs has declared "Union Home Minister's Special Operation Medal-2022" to how many police officers for four special operations? **63**
- University Grants Commission has directed to colleges to observe "Bharatiya Bhasha Divas" on which day? **December 11**
- Recently, the Indian Navy participated in which edition of India-Mozambique-Tanzania Trilateral Exercise (IMT TRILAT) Joint Maritime Exercise 2022? **First**
- National Unity Day 2022 has recently observed on the birth anniversary of whom? **Sardar Vallabhbhai Patel**

- Which institution released the "Commodity Markets Outlook report for October 2022"? **World Bank**
- Which company has achieved the No 1 rank in the Indian oil and gas sector for its sustainability performance in the 2022 edition of the S&P DJSI ranking? **Bharat Petroleum**
- India recently marked 30th anniversary of relations with which regional bloc in 2022? **ASEAN**
- What is the height of Shiva statue called "Viswas Swaroopam", which has been built in Nathdwara, Rajasthan? **369 - foot**
- Recently launched book "Delhi University – Celebrating 100 Glorious Years" authored by whom? **Hardeep Singh Puri**
- Which institute has designated as best educational institution in India, according to "QS World University Rankings: Sustainability 2023"? **IIT Bombay**
- With which country India has participated in a bilateral exercise "Garuda VII" at Air Force Station Jodhpur? **France**
- The Directorate General of Civil Aviation has granted the aerodrome license to Jeypore airport. The airport is located in which state? **Odisha**
- According to Official Airline Guide report, which airport of India is the 10th busiest airport in the world in terms of seat capacity? **Indira Gandhi International Airport**
- Recently, which international organisations has released a report titled "Coldest Year of the Rest of Their Lives - Protecting children from the escalating impacts of heatwaves"? **UNICEF**
- The Accession Day of Jammu and Kashmir has recently celebrated on which day of October? **26th October**
- Which two Indian Beaches have recently added to the coveted list of Blue Beaches? **Minicoy Thundi and Kadmat**
- Recently, the World has celebrated the which anniversary of the United Nations(UN) on 24th October 2022? **77th**

"There is a powerful driving force inside every human being that, once unleashed, can make any vision, dream, or desire a reality."

"Keep on going, and the chances are that you will stumble on something, perhaps when you are least expecting it. I never heard of anyone ever stumbling on something sitting down."

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Recent Appointments

JSW Energy to appoint Parth Jindal as director

JSW Energy has received the shareholders' approval to appoint Parth Jindal as a director on the company's board. He is the son of the company's Chairman and Managing Director Sajjan Jindal. The resolution to appoint Parth Jindal has been passed with requisite majority, as per a regulatory filing. Presently, he is the managing director of JSW Cement Ltd, managing director of JSW Paints Pvt Ltd and founder of JSW Sports Pvt Ltd. Parth Jindal, who is 32 years, was appointed as an additional director of the company with effect from October 28. He joined the USD 22 billion-JSW Group in 2012 and prior to that, he spent two years working abroad. He was appointed as an economic analyst within the group's corporate strategy team.

JSW Energy
➢ Parent organization: JSW Group
➢ Founded: 10 March 1994
➢ Subsidiaries: JSW Hydro Energy Limited, etc.
➢ CEO: Prashant Jain
➢ Headquarters: Maharashtra
➢ Founder: Sajjan Jindal

Sitiveni 'Rambo' Rabuka confirmed Fiji's new PM
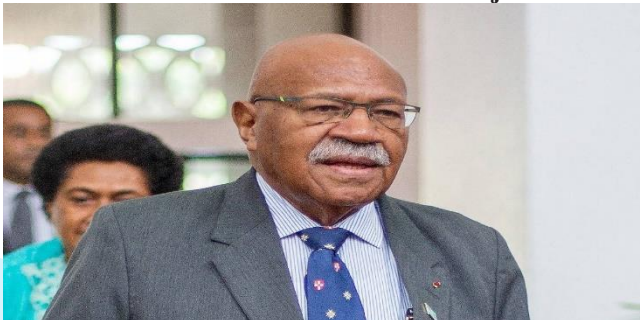
Sitiveni Rabuka has become Fiji's 12th prime minister, ending a tense political stalemate that had gripped the small Pacific island nation. The Fijian Parliament in the capital Suva convened to vote in Rabuka, who is now holding the prime minister's job for a second time. The two-time coup leader and former prime minister, Rabuka — still referred to by his nickname "Rambo" — narrowly triumphed over Bainimarama by 28 votes to 27 in a secret ballot. Rabuka, the head of the People's Alliance Party (PAP), won the nomination after forming a majority coalition with two other smaller parties.

Fiji
➢ Capital: Suva
➢ Currency: Fijian Dollar
➢ Continent: Oceania
➢ Official languages: Fijian, English, Hindi, Fiji Hindi

Suhel Ajaz Khan appointed India's new ambassador to Saudi Arabia

The Government of India has appointed senior diplomat Suhel Ajaz Khan as India's new ambassador to Saudi Arabia. Suhel Ajaz Khan is a 1997-batch Indian Foreign Service officer and is presently serving as Indian ambassador to Lebanon. Khan worked at the Indian Embassy in Riyadh between September 2017 and June 2019 as Deputy Chief of Mission. Saudi Arabia is India's fourth largest trading partner after the United States of America, China and the United Arab Emirates. More than 18% of India's crude oil imports are sourced from Saudi Arabia. During April - December 2022, bilateral trade was valued at US$29.28 billion. During this period, India's imports from Saudi Arabia were valued at US$22.65 billion and exports to Saudi Arabia were worth US$6.63 billion. There are about 22 lakhs Indians living in Saudi Arabia and they constitute the largest expatriate community in Saudi Arabia.

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Saudi Arabia:
- Capital: Riyadh
- Currency: Saudi Riyal

T. G. Sitharam assumes charge as AICTE Chairman

Indian Institute of Technology (IIT) Guwahati, former Director, T. G. Sitharam has assumed the charge as the Chairman of All India Council for Technical Education (AICTE). Sitharam succeeded M Jagadesh Kumar, chairperson, University Grants Commission (UGC), who had the additional charge of AICTE since September 2022. With the approval of the Minister of Education in his capacity as Chairperson of IIT Council, Parameswar K. Iyer took over charge as Officiating Director of IIT Guwahati from Sitharam.

AICTE:
- Founded: November 1945
- Headquarters: New Delhi
- Chairperson: Anil Sahasrabudhe

Centre extends term of Vinay Mohan Kwatra as Foreign Secretary

The government has extended the term of Vinay Mohan Kwatra as Foreign Secretary. The IFS officer's term has been extended beyond the date of his superannuation on December 31 his year up to April 30, 2024, or until further orders. Vinay Mohan Kwatra is a seasoned diplomat and he took charge as Foreign Secretary in May 2022, at a time when India was dealing with various geopolitical developments including the crisis in Ukraine and the severe economic crisis in Sri Lanka.

Who is Foreign Secretary?
Foreign Secretary is the top diplomat of India and administrative head of the Ministry of External Affairs. This post is held by an Indian foreign service officer of the rank of secretary to the government of India.
- Appointer: ACC
- Term length: 2 years, term can be extended.

PT Usha set to become first woman President of IOA

The legendary PT Usha is set to become the first woman President of the Indian Olympic Association (IOA) as she emerged as the lone candidate for the top post for the December 10 elections. The 58-year-old Usha, a multiple Asian Games gold medallist and a fourth-place finisher at the 1984 Olympics 400m hurdles final, filed her nomination papers for the top job, along with 14 others from her team for the various posts. Usha will also become the first Olympian and first international medallist to head the IOA in its 95-year-old history. It will also add another feather to her cap after dominating Indian and Asian athletics for two decades before retiring in 2000 with a bagful of international medals. Ajay Patel of the National Rifle Association of India is set to be the Senior Vice-President as he is also the lone candidate for the post.

IOA
- Founded: 1927
- Headquarters: New Delhi
- Secretary General: Rajeev Mehta
- Founders: Harry Buck, Arthur Noehren

WHO appoints Jeremy Farrar as chief scientist

World Health Organization (WHO) has appointed Dr Jeremy Farrar as its new Chief Scientist with effect from the 2nd quarter of 2023. He will be replacing Soumya Swaminathan, who resigned from the post after a 5-year stint.

Dr Jeremy Farrar is a clinician scientist who is currently serving as the Director of Wellcome Trust, a global charitable foundation that supports science to solve urgent health challenges. Dr Amelia Latu Afuhaamango Tuipulotu former Minister for Health of the Kingdom of Tonga is set to join the WHO as Chief Nursing Officer in the first quarter of 2023.

Sukhwinder Singh Sukhu takes oath as Himachal CM
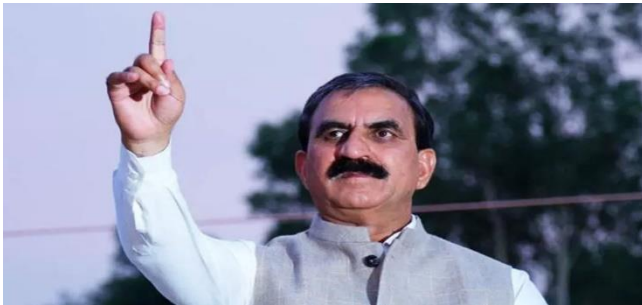
Congress leader Sukhwinder Singh Sukhu took oath as the chief minister of Himachal Pradesh. Congress' Mukesh Agnihotri was sworn-in as the deputy chief minister of the state. Sukhu, who is known for his proximity with the Gandhi family, was named leader of the Congress Legislature Party (CLP) after two days of hectic politicking by AICC in-charge for state Rajiv Shukla after his appointment was approved by Mallikarjun Kharge. Sukhu, who has the support of a majority of Congress lawmakers, emerged from the three candidates in the fray for the chief ministerial post after getting majority in the 68-member Assembly by winning 40 seats.

Himanchal Pradesh:
➢ Chief minister: Sukhvinder Singh Sukhu
➢ Capitals: Shimla (Summer), Dharamshala (Winter)

Bhupendra Patel sworn in as Gujarat CM for 2nd consecutive term

BJP leader Bhupendra Patel took oath as the Chief Minister of Gujarat for a second straight term in Gandhinagar. Governor Acharya Devvrat administered the oath as the 18th Chief Minister of the state. Patel was sworn in as the 17th Chief Minister of Gujarat on September 13, 2021. The BJP created history in Gujarat with 7th consecutive victory in the 2022 elections. The BJP won 156 seats in the 182-member assembly, its best-ever performance in the state. The opposition Congress could win only 17 seats while Arvind Kejriwal's Aam Aadmi Party had to be content with just 5 seats.

Gujarat:
➢ Capital: Gandhinagar
➢ Chief minister: Bhupendrabhai Patel
➢ Governor: Acharya Devvrat

Nihar Malaviya named interim CEO of Penguin Random House

Nihar Malaviya, an Indian-origin publishing executive, has been named interim CEO of New York-based international publishing group Penguin Random House. Malaviya, who has been President and Chief Operating Officer (COO) of the publisher's American division Penguin Random House US since 2019, will assume the role of Interim CEO of Penguin Random House starting January 1, 2023. Malaviya, who will report to Bertelsmann CEO Thomas Rabe, will join the Bertelsmann's Group Management Committee (GMC), as well as continue to be a member of the Penguin Random House Global Executive Committee. As interim CEO of Penguin Random House, Malaviya will lead the creation of new competitive advantages that position the global company for future growth.

Penguin Random House:
➢ Founded: 1 July 2013
➢ Subsidiaries: Random House, Penguin Books
➢ Founder: Markus Dohle
➢ Parent organization: Bertelsmann
➢ Headquarters: New York

Government appoints Meenesh C Shah as the Managing Director of NDDB

The government of India in an order issued has appointed Meenesh C Shah as the Managing Director of National Dairy Development Board (NDDB). There has been no regular chairman at NDDB since December 2020. Presently Meenesh Shah was also holding the additional charge of the Chairman NDDB. Varsha Joshi, the then Joint Secretary in the Department of Animal Husbandry and Dairying, Government of India, held the additional charge of the post of Chairman, NDDB, from December 1, 2020 to May 31, 2021.

NDBB:
➢ Founded: 1965
➢ Subsidiaries: Mother Dairy, Indian Immunologicals Limited
➢ Founder: Verghese Kurien
➢ Chairman: Meenesh C Shah

Meghna Ahlawat elected first female president of TTFI

Meghna Ahlawat was elected president of the Table Tennis Federation of India with former stalwart Kamlesh Mehta elected secretary general. Patel

Nagender Reddy was elected treasurer. The Delhi High Court had suspended TTFI in February and appointed a Committee of Administrators (CoA) to take over its functioning. The judgement came after woman's India No 1 Manika Batra petitioned the court alleging match-fixing against the national coach during Tokyo Olympics qualifiers.

TTFI:
➢ Founded: 1926
➢ Headquarters: New Delhi
➢ Affiliation: International Table Tennis Federation
➢ President: Dushyant Chautala
➢ Secretary: Arun Kumar Banerjee

NABARD named Shri Shaji KV as Chairman

K V Shaji has been named Chairman of the National Bank for Agriculture and Rural Development (NABARD). He formerly served as NABARD's Deputy Managing Director (DMD) till May 21, 2020. Before joining NABARD, he worked in Canara Bank in various capacities for 26 years. As his last assignment, he was in charge of Strategy, Planning and Business Development at the Corporate Office of Canara Bank. He successfully handled the project of amalgamation of Syndicate Bank into Canara Bank. He was earlier also the Chairman of India's largest Regional Rural Bank, Kerala Gramin Bank. He is a post graduate in Agriculture and holds a PGDM degree in Public Policy from the Indian Institute of Management (IIM), Ahmedabad.

NABARD:
➢ Established: 1982
➢ Headquarters: Mumbai

Arun Kumar Singh appointed as the new Chairman of ONGC

The Government of India has appointed former chairman of Bharat Petroleum Corporation Limited (BPCL), Arun Kumar Singh, as the new chairman of the Oil and Natural Gas Corporation (ONGC). He has

been appointed for a term of three years. ONGC has been without a regular chairman and managing director since April 2021. Vetsa Rama Krishna Gupta has taken over the additional charge of Chairman and Managing Director of Bharat Petroleum Corporation Limited (BPCL).

Oil and Natural Gas Corporation (ONGC)
➢ Headquarters: New Delhi
➢ Founded: 14 August 1956
➢ Subsidiaries: Hindustan Petroleum

Dina Boluarte assumes office as first female President of Peru

Peru's President Pedro Castillo has been impeached. In his place, Vice President Dina Boluarte has been sworn in as President on 7 December. Dina is the first female President of the country. She will hold the post till 2026. In the 130-member parliament, 101 voted in favor of the motion, while only 6 voted in support of the president. 10 MPs abstained from voting. Francisco Morales, head of Peru's constitutional court, ordered Vice President Dina Boluaarte to assume the presidency in a speech before parliament voted on an impeachment motion. Police have taken Pedro Castillo into custody in the capital Lima. Pedro Castillo was elected as the President of Peru in July 2021. While in office, he faced an investigation over allegations of corruption.
Peru:

➢ President: Dina Boluarte
➢ Capital: Lima
➢ Currency: Sol

Virat Kohli appointed as the new brand ambassador of Noise

Noise, India's consumer tech brand has roped in the youth icon cricketer-Virat Kohli as its new brand ambassador for their smartwatch series. Noise and Virat Kohli- both are leaders in the smart connected lifestyle industry and the cricket world respectively. Noise signed Kohli because of his super-athlete fitness, which makes him a role model for the brand. Noise has staked claim to emerge as one of the strongest Indian brands in the smartwatch segment. Over the tenure, Virat will be involved in a robust campaign that entails all touchpoints related to the smartwatch segment of the company.

Rajeeva Laxman Karandikar named as chairperson of the National Statistical Commission
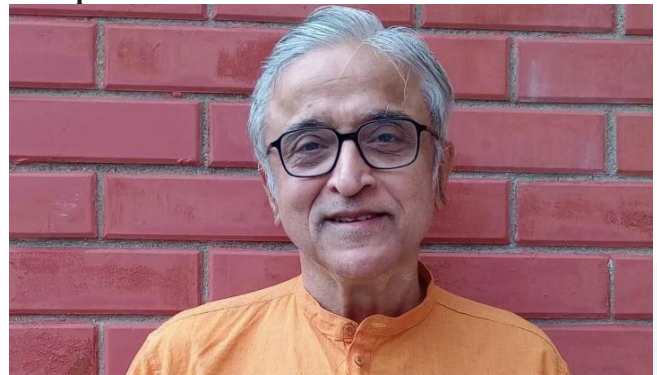
The Chennai Mathematical Institute (CMI) has appointed Rajeeva Laxman Karandikar, Professor Emeritus at CMI, as the part-time chairperson of the National Statistical Commission (NSC) of India for a period of three years. Mr. Karandikar will take up this role as an additional responsibility while continuing as Professor Emeritus at CMI. He joined CMI as a visiting

professor in 2010, and officiated as the Director of CMI from January 2011 to April 2021. Mr. Karandikar was a member of the committee constituted by the Election Commission (EC) of India to advice the EC on the sampling scheme for EVM-VVPAT verification.

National Statistical Commission:
➢ Jurisdiction: Indian Government
➢ Headquarters: New Delhi
➢ First executive: Suresh Tendulkar
➢ Preceding executive: Pronab Sen

Sanjay Kumar takes charge as Secretary, Department of School Education & Literacy

IAS Sanjay Kumar took charge as Secretary of the Department of School Education and Literacy, Ministry of Education in Shashtri Bhawan in New Delhi. Sanjay Kumar, a 1990-batch Bihar cadre IAS officer, was a former Secretary, Department of Youth Affairs, Ministry of Youth Affairs and Sports and replaced Anita Karwal IAS upon her superannuation on November 30, 2022. Sanjay Kumar also served as the principal secretary of education in Bihar.

Ministry of Education:
➢ Founded: 15 August 1947
➢ Headquarters: New Delhi
➢ Ministry executive: Anita Karwal
➢ Officeholders: Dharmendra Pradhan (Union Minister), Rajkumar Ranjan Singh (Minister of State)
➢ Subsidiaries: National Institute of Open Schooling

UNSC Presidency: India assumes United Nations Security Council Presidency for December 2022

India assumed the Presidency of the United Nations Security Council (UNSC) on December 1, 2022, for the month of December. It is the second time in its two-year tenure as an elected member of the UN Security Council in 2021-22 that India has assumed the Presidency of the Council. India had earlier assumed the Presidency in August 2021. During India's December Presidency, many high-level events will take place to discuss terrorism and regional security issues that the world faces in the present times.

India and UNSC:
India has been a non-permanent member of the United Nations security council for 8 terms, with the most recent being the 2021-22 term. India is also a member of G4, a group of nations who back each other in seeking a permanent seat on the UN Security Council and an advocate in favour of the reformation of the UNSC. India is also a part of the G-77.

M Paramasivam appointed as the new Executive Director of Punjab National Bank

The Appointments Committee of the Cabinet (ACC) has approved the appointment of M Paramasivam as the Executive Director of the Government-owned Punjab National Bank with an effect from December 1, 2022, for a period of three years. During M Paramasivam's tenure as Wing Head at Priority Credit Wing at Head Office, Canara Bank, FRUITS Portal was started in coordination with NABARD and Karnataka State Government. Paramasivam was also instrumental in the commencement of Agri Credit Centers in terms of EASE-3 norms. He has also undertaken the Leadership Development Strategy Programme organized by the Banks Board Bureau and Indian Bank's Association.

Punjab National Bank:
➢ Headquarters: New Delhi
➢ CEO: Atul Kumar Goel
➢ Founded: 19 May 1894
➢ Founder: Dyal Singh Majithia
➢ Subsidiaries: Punjab National Bank Housing Finance

Sanjay Malhotra takes charge as Revenue Secretary in Finance Ministry

Sanjay Malhotra took charge as the secretary in Department of Revenue, Ministry of Finance. Malhotra replaced Tarun Bajaj. A 1990-batch IAS officer of the Rajasthan cadre, Malhotra was working as an officer on special duty (OSD) in the revenue department since October this year. Prior to that, he was serving as the secretary in Department of Financial Services (DFS). Malhotra takes over as the top bureaucrat in the revenue department at a time when the government is preparing for the Union Budget 2023-24 to be tabled in Parliament on February 1. He would be looking into various tax-related proposals for the Budget and would also be the ex-officio Secretary to the GST Council.

Pashanth Kumar elected president of AAAI

Prasanth Kumar, the chief executive officer (CEO) for South Asia of GroupM Media (India) Pvt Ltd, has been elected the president of the Advertising Agencies Association of India (AAAI) for 2022-23. Kumar will replace Anupriya Acharya, who will now be the ex-officio member of the AAAI Board for 2022-23. He worked at Pepsi, The Hindu, The Media Edge & McCann Erickson before joining GroupM. He has also been vice president of AAAI from 2020 to 2022. Rana Barua, the group CEO of Havas Group India, was unanimously elected the vice president of the AAAI. Other elected members of the board are Vivek Srivastava, Vishandas Hardasani, Kunal Lalani, Rohan Mehta, Chandramouli Muthu, Sridhar Ramasubramanian, Shashidhar Sinha, and K Srinivas.

Laxmi Singh becomes UP's first woman Police Commissioner

The Government of Uttar Pradesh has appointed the IPS Officer Laxmi Singh as the new Noida Police Chief, making her the first woman officer to head a Police Commissionerate in UP. Laxmi Singh who is a 2000-batch officer replaced Alok Singh in Gautam Buddha Nagar. The Uttar Pradesh Government issued a transfer and the posting list of 16 Indian Police Service (IPS) Officers in the state. It also included the new commissionrates of Agra, Varanasi, and Prayagraj. Laxmi Singh has been serving as an Inspector General of Police, Lucknow range. She holds the distinction of being the first woman IPS topper (33rd overall rank) in the UPSC-held exams and was adjudged the best probationer at the Sardar Vallabhbhai Patel National Police Academy in Hyderabad.

Peru President appoints 5th Prime Minister in 16 months

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Peru's President Pedro Castillo appointed the culture minister Betssy Chavez as the country's new prime minister. Betssy Chavez, a 33-year-old lawyer who also did a stint as labor minister, was sworn in as the fifth prime minister since the beleaguered Castillo took office 16 months ago. Castillo, in power since July 2021, has already faced two impeachment attempts in parliament and is under investigation in six corruption cases, including accusations against his family and political entourage.

Peru:
➤ President: Pedro Castillo
➤ Capital: Lima
➤ Currency: Sol

Anwar Ibrahim Sworn in As Malaysia's New PM

Malaysia's opposition leader Anwar Ibrahim was sworn in as the country's new Prime Minister. The new leader was appointed by King Al-Sultan Abdullah. Mr Anwar was deputy prime minister in the 1990s and the official prime minister-in-waiting in 2018. His coalition, known as Pakatan Harapan, won the most seats in Saturday's vote with 82, while Muhyiddin's Perikatan Nasional bloc won 73. They needed 112 – a simple majority - to form a government.

Malaysia:
➤ King: Abdullah of Pahang
➤ Capital: Federal Territory of Kuala Lumpur
➤ Prime minister: Anwar Ibrahim

Lt. Gen Asim Munir appointed as the new Army Chief of Pakistan

Lieutenant General Asim Munir, was appointed as the new Chief of Army Staff (COAS) of Pakistan. The Prime Minister of Pakistan Muhammad Shahbaz Sharif has decided to appoint Lt. Gen Sahir Shamshad Mirza as the Chairman of the Joint Chiefs of Staff and Lt. Gen. Syed Asim Munir as the Chief of the Army Staff using the constitutional authority. Lt. Gen Asim Munir will take charge as the new Army Chief of Pakistan on November 29 when the incumbent, General Qamar Javed Bajwa leaves office at the scheduled end of his 6-years tenure. Lt. Gen Asim Munir is at present the Quarter Master General at GHQ. As a Brigadier, Munir was a Commander in the Force Command North Areas (FCNA), at a time when Bajwa was a Commander of the X Corps.

Pakistan:
➤ Capital: Islamabad
➤ Prime minister: Shehbaz Sharif

"The Best Way To Get Started Is To Quit Talking And Begin Doing."

"You Learn More From Failure Than From Success. Don't Let It Stop You. Failure Builds Character."

National News

Parliament passes Maritime Anti Piracy Bill 2022

Rajya Sabha passed a Bill which the government said would provide an effective legal instrument to combat maritime piracy. The Bill provides for stringent punishment to those convicted of such crimes. In the absence of a specific law or a legal provision in the Indian Penal Code or the Criminal Procedure Code on piracy, this Bill would provide an effective legal instrument to combat maritime piracy. Between 2008 and 2011, there have been 27 maritime incidents in which 288 Indian nationals were involved. And between 2014 and 2022, there were 19 piracy cases in which 155 Indian crew members were involved. It would enable us to discharge our obligations under the UNCLOS which we had signed in 1982 and ratified in 1995.

Centre introduced Repealing and Amending Bill in LS

The Centre introduced in Lok Sabha the Repealing and Amending Bill, 2022 for repealing certain enactments. Union Law Minister Kiren Rijiju introduce the bill in the lower house. The Centre will also to get the Anti-Maritime Piracy Bill 2019 passed in Lok Sabha. It was introduced in the lower house on December 7. BJP MP Kirit Solanki will lay two reports of the Standing Committee on the Welfare of Scheduled Castes and Scheduled Tribes (2022-23). The reports are on the reservation of SCs and STs in public sector banks and RBI and credit facilities provided to these communities by financial institutions, especially SBI. Rajendra Agrawal will six reports of the Standing Committee on Education, Women, Children, Youth and Sports.

Lok Sabha clears Bill to include Hattee community in ST list of Himachal Pradesh

The Constitution (Scheduled Tribes) Order (Third Amendment) Bill, 2022, aimed at inclusion of the Hattee community of Trans Giri area in Himachal Pradesh's Sirmaur district in the Scheduled Tribes list, was passed by Lok Sabha. Based on the state's recommendation, the Centre introduced the Bill and proposed to modify the ST list with respect to Himachal Pradesh by amending the Constitution (Scheduled

Tribes) Order, 1950, and including the Hattee community. The community is spread across 154 panchayats and four Assembly constituencies — Shillai, Paonta Sahib, Pachhad, Shri Renukaji – and had a population of 2.5 lakh as per the 2011 Census, which has now increased to about 3 lakh.

Himachal Pradesh:
➢ Chief minister: Sukhvinder Singh Sukhu
➢ Capitals: Shimla (Summer), Dharamshala (Winter)

Parliament passes New Delhi International Arbitration Centre (Amendment) Bill, 2022

Parliament has passed the New Delhi International Arbitration Centre (Amendment) Bill, 2022 with Rajya Sabha approving it unanimously. The Bill seeks to amend the New Delhi International Arbitration Center Act, 2019. The Bill seeks to rename the New Delhi International Arbitration Center in New Delhi as the India International Arbitration Centre. The new Bill expands this in the Act to include the operation of other forms of alternative dispute resolution. The manner of conduct of arbitration and other forms of alternative dispute resolution shall be specified by the Central Government through regulations. The Bill allows the government to remove any difficulty in implementing the Act for five years from the date of enactment of the Act.

Delhi:
➢ Chief minister: Arvind Kejriwal
➢ Lieutenant Governor: Vinai Kumar Saxena

J&K Land Granted Rules, 2022 ended all monopolies on govt lands

All monopolies on government lands in cities, towns and health resorts in Jammu and Kashmir will end after the implementation of the new Land Grants Rules, 2022. In a landmark decision, the J&K government notified new Land Grants Rules extinguishing all the previous rules on the subject. Under the provisions of the new rules, all outgoing lessees will have to hand over possession of land to the government which they had taken on lease where leases have either expired or were determined before rules as 'not to be renewed.

The Land Grants Rules 2022 state:

All the outgoing lessees (except in the case of subsisting/expired leases for residential purposes) shall immediately handover the possession of the land taken on lease to the government, failing which the outgoing lessee shall be evicted as per the provisions of public premises (eviction of the unauthorized occupant) Act, 1988". The rules, however, state that the outgoing lessees shall, however, be paid for any improvement carried out or structure constructed thereon at the value assessed as provided under Sub-Rule (xi) of Rule 13 provided that the lessee has not violated any of the conditions of the lease.

Kerala Assembly passes Bill to remove Governor as Chancellor of state's universities

Kerala Assembly passed a Bill to remove the Governor as the ex-officio Chancellor of 14 universities in the state. The CPI(M) government introduced the University Laws (Amendments) Bill in the Assembly in the wake of recurring issues with Governor Arif Mohammed Khan on administration and appointments at these universities. The Bill envisages appointing academicians of high repute as the chancellor of universities. The chancellor would be selected by a committee comprising the Chief Minister, the Opposition leader and the Assembly Speaker. The chancellor would be appointed by the Cabinet for a term of five years with a provision to remove him/her from office by an order in writing on charges of grave misconduct or other sufficient reason.

Kerala:
➢ Chief Minister: Pinarayi Vijayan
➢ Capital: Thiruvananthapuram
➢ Governor: Arif Mohammad Khan

Rajya Sabha passes the Energy Conservation (Amendment) Bill, 2022

Parliament passed the Energy Conservation (Amendment) Bill, 2022 with the approval of Rajya Sabha. This bill has been brought to amend the Energy Conservation Act of 2001. It promotes energy efficiency and conservation. The Bill empowers the Center to specify a carbon credit trading scheme. The legislation also stipulates that designated consumers may be required to meet a proportion of their energy needs from non-fossil sources. The Energy Conservation Code for Buildings will be applicable to office and residential buildings with a connected load of 100 kW or more. It provides for increasing the membership in the Governing Council of the Bureau of Energy Efficiency (BEE). Empowers the State Electricity Regulatory Commissions to frame rules for the smooth discharge of their functions. Enacts enabling provisions to mandate the use of clean energy, including green hydrogen, and to establish a carbon market. The Bill seeks to mandate the use of non-fossil sources for energy and feedstock, including green hydrogen, green ammonia, biomass and ethanol.

India's 1st gold ATM comes up in Hyderabad

Hyderabad-based Goldsikka Pvt Ltd has set up a gold ATM here, which is the country's first real-time yellow metal dispensing machine. Customers can use a debit or credit card to buy gold coins through the ATM. Goldsikka Pvt Ltd has installed the first such ATM at Begumpet here with technical support from Opencube Technologies Pvt Ltd, a city-based startup. These ATMs can dispense gold coins in different weights ranging from 0.5 grams, 1 gram, 2 grams, 5 grams, 10 grams, 20 grams, 50 grams to 100 grams. To make the process transparent, real-time prices are displayed on the screen for the customers. The coins are dispensed in tamper proof packs certified with 999 purity and provide full value for the customers' money.

NADA India to host Inclusion Conclave to sharpen focus on athletes with disabilities.

National Anti-Doping Agency (NADA India) will break ground when it hosts an Inclusion Conclave for the first time to sharpen the focus on anti-doping education and processes for athletes with disabilities.
NADA India has already developed comprehensive modules on anti-doping education & awareness in Universal Design of Learning (UDL) for athletes with disabilities. UDL is a multi-modal framework to improve and optimize teaching and learning for all persons using sign language visual representation, transcribed subtitles, and contains audio. Some material, usually available in print only, has now been produced in Braille and audio formats as well. Besides, NADA India has conducted sensitisation workshops for Dope Control Officers (DCO) who collect samples from athletes with disabilities and has upgraded the DCO kit for such athletes.

NADA India:
➢ Headquarters: New Delhi
➢ Chairman: Minister of Sports (India)

International Events

Japan adopts new policy to promote use of nuclear power to tackle energy

Japan adopted a new policy promoting greater use of nuclear energy to ensure a stable power supply amid global fuel shortages and to reduce carbon emissions a major reversal of its phase-out plan since the Fukushima crisis. The new policy says Japan must maximise the use of existing nuclear reactors by restarting as many of them as possible and prolonging the operating life of old reactors beyond their 60-year limit, and by developing next-generation reactors to replace them. Anti-nuclear sentiment and safety concerns rose sharply in Japan after the 2011 Fukushima disaster, and restart approvals have since come slowly under stricter safety standards. Utility companies have applied for restarts at 27 reactors in the past decade. Seventeen have passed safety checks and only 10 have resumed operations. That was in line with Japan's earlier plan to phase out nuclear energy by 2030. The council also adopted plans to make renewables Japan's main energy source and further promote hydrogen and ammonia as well as off-shore wind power and other forms of energy to promote decarbonisation, supply resilience and economic security. Nuclear energy accounts for less than 7 per cent of Japan's energy supply, and achieving the government's goal of raising its share to 20-22 per cent by fiscal 2030 will require about 27 reactors, from the current 10 a target.

Japan:
- Capital: Tokyo
- Prime minister: Fumio Kishida

Scotland passed gender recognition reform bill

Scotland's lawmakers passed controversial legislation which will make it easier for transgender people to legally change their gender, despite the toxic debate that led to a split within the ruling Scottish National Party (SNP). Now the bill has been passed, it should gain royal assent which will lower the minimum age for those seeking the gender recognition certificate to 16 and drops the time required for an applicant to live in their acquired gender from two years to three months. It also removes the need for a medical diagnosis of gender dysphoria to obtain the certificate. Section 35 of the Scotland Act allows the UK Government to intervene and block the passage of a Bill if it the UK Government believes it makes modifications to the law on reserved matters or has an adverse effect on the operation of the law around reserved matters.

Scotland:
- Capital: Edinburgh
- Currency: Pound sterling
- National animal: Unicorn

Iranian parliament approves bill for Iran's accession to SCO

The Iranian parliament has approved a bill for Iran's membership to the Shanghai Cooperation Organisation (SCO). The accession of the Islamic Republic of Iran to the SCO is indicative of Iran's resolve and seriousness to develop regional, international and economic cooperation and bolster (the country's) approach to Asia. In September 2021, the 21st summit of the SCO leaders in Dushanbe, Tajikistan, declared the decision to start admitting Iran as a full member of the SCO from an observer.

What is SCO?
The Shanghai Cooperation Organisation is a Eurasian political, economic and security organization. It is the world's largest regional organization in terms of geographic scope and population, covering approximately 60% of the area of Eurasia, 40% of the world population, and more than 30% of global GDP.
- Headquarters: Beijing, China
- Founded: 15 June 2001
- Founders: Russia, China, Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan

Canada launches Indo-Pacific strategy to boost military and cyber security

Canada has launched its long-awaited Indo-Pacific strategy, outlining 1.7 billion US dollars in spending to boost military and cyber security in the region. It has also vowed to deal with a "disruptive" China while working with it on climate change and trade issues. Canada will tighten foreign investment rules to protect intellectual property and prevent Chinese state-owned enterprises from snapping up critical mineral supplies.

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Canada is seeking to deepen ties with a fast-growing Indo-Pacific region of 40 countries accounting for almost 50 trillion Canadian dollars in economic activity. The strategy plan says China is an increasingly disruptive global power. Note: Official data for September show bilateral trade with China accounted for under seven percent of the total, compared to 68 percent for the United States.

Canada
➢ Capital: Ottawa
➢ Prime minister: Justin Trudeau
➢ Official languages: French, English

India, Australia free trade agreement to come into force from Dec 29

The free trade agreement between India and Australia will come into force from December 29, a move which will help in almost doubling the bilateral commerce to USD 45-50 billion in around five years. The agreement, which was signed on April 2, would provide duty-free access to Indian exporters of over 6,000 broad sectors, including textiles, leather, furniture, jewellery and machinery in the Australian market. Labour-intensive sectors which would gain immensely include textiles and apparel, few agricultural and fish products, leather, footwear, furniture, sports goods, jewellery, machinery, and electrical goods. Under the pact, Australia is offering zero-duty access to India for about 96.4 per cent of exports (by value) from day one. This covers many products that currently attract 4-5 per cent customs duty in Australia. India's goods exports to Australia stood at USD 8.3 billion and imports from the country aggregated to USD 16.75 billion in 2021-22.

Australia:
➢ Capital: Canberra
➢ Prime minister: Anthony Albanese
➢ Governor-general: David Hurley

ADB approves $100mn loan for technical, vocational education in Pak

The Asian Development Bank (ADB) has approved a $100-million loan to help improve technical and vocational education and training (TVET) in Pakistan's Punjab province. The Improving Workforce Readiness in Punjab Project will help enhance the quality and relevance of TVET to increase graduates'

employability, upgrade workers' skills, and ensure more equitable access to training for women and disadvantaged groups while improving management and strategic planning in TVET institutions. The ADB's project would finance the establishment of 19 TVET centers of excellence in eight priority economic sectors, including automobile assembly parts and repairs, construction, food processing, health, information and communication technology, light engineering, textiles and garments, and tourism and hospitality. They would provide programs with linkages to industry and deploy best practices. The project will include the development of skills training programs using technology in response to emerging trends in the fourth industrial revolution.

ADB:
➢ Headquarters: Philippines
➢ Founded: 19 December 1966
➢ Subsidiaries: Asian Development Bank Institute
➢ President: Masatsugu Asakawa

Uzbekistan gets about $1bn World Bank loan for strategic reforms

The World Bank has approved a financial support package to Uzbekistan comprised of $470 million in highly concessional loans and $ 480 million low-cost loans. The financing will support "an inclusive transition to a private-sector-led economy by strengthening market institutions and ensuring all citizens take part in the benefits of economic growth" in Uzbekistan. These funds will be provided by the World Bank's two sovereign lending institutions -- the International Development Association and the International Bank for Reconstruction and Development. The financing will support reforms to establish a new National Social Protection Strategy, and expand publicly funded maternity benefits to private sector employees. It will also help Uzbekistan establish new legislations on privatizing state-owned enterprises and on insolvency to improve the private sector business environment, increase private participation and enhance competition in the country's mobile telecommunications.

Uzbekistan:
➢ Capital: Tashkent
➢ President: Shavkat Mirziyoyev
➢ Prime Minister: Abdulla Nigmatovich Aripov
➢ Currency: Uzbekistani Som

IMF approves $3-bn loan to Egypt amid high inflation, forex funds shortage

The International Monetary Fund (IMF) executive board approved a loan to Egypt of about $3 billion over 46 months. The decision enables an immediate disbursement of about $347 million to Egypt, "which will help meet the balance of payments need and provide support to the budget". The loan package is expected to encourage Egypt's international and regional partners to provide an extra 14 billion dollars to finance the most populous Arab country. Egypt's annual urban consumer inflation rate rose from 16.2 per cent in October to 18.7 percent in November, marking the highest increase since December 2017 when it reached 21.9 percent, according to official data. The IMF support package, along with the anticipated additional $14 billion from other partners, will make up for the hot money withdrawal and the foreign currency shortage and eventually contain inflation. Egypt carried out a three-year economic reform program that started in late 2016 with the support of a $12-billion loan from the IMF.

Egypt:
- Capital: Cairo
- President: Abdel Fattah El-Sisi
- Currency: Egyptian Pound

World Bank to finance USD 250 million to Bangladesh for environment management

The World Bank has approved USD 250 million financing to help Bangladesh strengthen environment management and promote private sector participation in green investment. Successful implementation of the Bangladesh Environmental Sustainability and Transformation (BEST) Project will help the country tackle key pollution issues, benefitting over 21 million people living in Greater Dhaka and beyond. The project will help construct four vehicle inspection centres using private-public partnership modality to inspect about 46,000 vehicles annually. An E-waste management facility will be set up to process 3,500 metric tons of e-waste annually. The project will help reduce over 1 million metric tons of GreenHouse Gas emissions from targeted sources. The project will also set up a first-ever network of 22 continuous surface water quality monitoring stations to start monitoring of water quality of Dhaka rivers and targeted international rivers in real time. It will also establish continuous water quality monitoring stations to ensure environmental compliance of selected industrial effluent treatment plants. Note: The credit is from the World Bank's International Development Association (IDA), which provides concessional financing. It has a 30-year term with a five-year grace period.

Bangladesh
- Capital: Dhaka
- Currency: Bangladeshi Taka
- Prime minister: Sheikh Hasina
- Official language: Bengali

Israeli PM-designate Netanyahu agrees to annex West Bank in coalition deal

Israel's Prime Minister-designate Benjamin Netanyahu has agreed to annex the occupied West Bank in a coalition deal that was made public. Netanyahu, who signed a series of coalition deals, announced that he had succeeded in forming a coalition government that is set to bring him back to power as the leader of the most right-wing government in Israeli history. In a deal that Netanyahu's Likud party signed with Religious Zionism, a pro-settler party led by Bezalel Smotrich, the former promised to draft and advance a plan to annex the West Bank that Israel seized in the 1967 Middle East war. The Palestinians hope to establish an independent state on the 1967 borders with East Jerusalem as the capital. According to the agreement, a copy of which has been seen by Xinhua, "the Prime Minister will lead the formulation and promotion of a policy within which (Israeli) sovereignty will be extended to Judea and Samaria." Judea and Samaria is a frequently used Israeli term for the West Bank. A coalition deal that Netanyahu signed with Jewish Power, an extreme-right party led by Itamar Ben-Gvir, says that a law that bans candidates who incite racism from running in parliamentary elections will be canceled. Netanyahu needs to finalise the agreements with his coalition partners and appoint ministers before a deadline on January 2, 2023, the latest date his government can be sworn.

Israel:
- Prime minister: Yair Lapid
- Capital: Jerusalem
- Founded: 14 May 1948
- Continent: Asia

G-7 agrees to $15.5B energy deal with Vietnam to cut emissions

The Group of Seven (G-7) rich industrialised nations have approved an agreement to provide $15.5 billion to Vietnam. This will help the Southeast Asian nation rapidly move from coal-fired power to renewable energy, thereby reducing its climate-damaging pollution. The Group of Seven major economies, along with Norway and Denmark, said that the aim is to help Vietnam reduce its emissions to "net zero" by 2050, a goal that experts say needs to be met globally to cap global warming at 1.5 degrees Celsius. The first such deal was signed with South Africa last year, and a similar agreement was reached with Indonesia last month. The $15.5 billion of funding will come from public and private sources over the coming three to five years.

G7:
The G7 or the Group of Seven is a group of the seven most advanced economies. The seven countries are Canada, the USA, the UK, France, Germany, Japan, and Italy. It was formed in 1975. G7 countries meet annually to discuss issues of common interest like global economic governance, international security, and energy policy. All the G7 countries and India are a part of the G20. The UK currently chairs the G7 and has invited India along with Australia, the Republic of Korea, and South Africa as guest countries for the G7 summit.

Biden signs bill on same-sex marriage (Ld)

President Joe Biden has signed legislation that protects same-sex and interracial marriage in the United States. The new law officially voids the Defense of Marriage Act, which defined marriage as between a man and a woman. The new law is intended to safeguard gay marriages if the US Supreme Court ever reverses Obergefell v. Hodges, its 2015 decision legalizing same-sex unions nationwide. The new law also protects interracial marriages. In 1967, the Supreme Court in Loving v. Virginia struck down laws in 16 states barring interracial marriage. The signing marks the culmination of a monthslong bipartisan effort sparked by the Supreme Court's decision in June to overturn Roe v. Wade, the 1973 ruling that made abortion available across the country.

01 DECEMBER

WORLD AIDS DAY
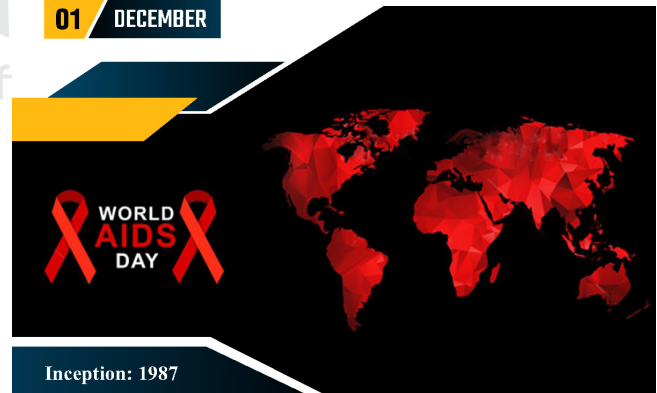
Inception: 1987

1st observed: 1988

Importance: To show support for people living with HIV, and to commemorate those who have died from an AIDS-related illness.

By: James W. Bunn and Thomas Netter

Motto: To raise awareness of the AIDS pandemic caused by the spread of HIV infection and mourning those who have died of the disease.

2022 Themes: Equalize

Note: World AIDS Day was the first ever international day for global health.

"People Who Are Crazy Enough To Think They Can Change The World, Are The Ones Who Do."

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Current Affairs By Mayank Ojha

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Banking & Economy

ADB kept its forecast for India's economic growth unchanged at 7 percent for FY23

Asian Development Bank (ADB) has kept its outlook for India's economic growth unchanged at 7 percent for the current fiscal year while forecasting a weaker-than-previously expected pace for developing Asia. ADB's 7 percent growth projection for fiscal 2022-23, unchanged from its September forecast, compares to 8.7 percent GDP growth in 2021-22. For 2023-24, the GDP growth has been kept unchanged at 7.2 per cent. The Manila-based ADB in a report saw Asia expanding 4.2 per cent this year before accelerating to 4.6 per cent in 2023. These projections compare to the previously estimated expansion of 4.3 per cent and 4.9 per cent, respectively. Despite recent global headwinds, the Indian economy is expected to grow by 7.0 per cent, as projected in the Update, supported by a strong domestic base. The growth forecast for 2023-34 is unchanged at 7.2 percent. Inflation in India is still expected to rise to 6.7 per cent in 2022-23 before falling back to 5.8 per cent.

ADB:
➢ Headquarters: Philippines
➢ Founded: 19 December 1966
➢ Subsidiaries: Asian Development Bank Institute
➢ President: Masatsugu Asakawa

Shikhar Dhawan announces Global Investment Sports Tech Fund

India opener Shikhar Dhawan has announced that he would be launching a new 75 million dollars Global Investment Tech Fund to focus on innovation across the sports spectrum. The Fund, consisting of a greenshoe option of 25 million dollars, is the first organised VC fund by an Asian sportsperson and the first by an Indian celebrity. The 37-year-old cricketer made the announcement during the annual Abu Dhabi Global Market (ADGM) Finance Week. Dhawan, one of the most reputed names in the cricket world, has established a globally enriched and seasoned founding team who will lead the fund's investment thesis across the spectrum of Sports to include technology, esports, gaming, web3 & more. The deployment of funds will be global in nature, as is the LP community.

What is a Greenshoe Option?
A greenshoe option is an over-allotment option. In the context of an initial public offering (IPO), it is a provision in an underwriting agreement that grants the underwriter the right to sell investors more shares than initially planned by the issuer if the demand for a security issue proves higher than expected.

RBI signs Currency Swap Agreement with Maldives Monetary Authority

The Reserve Bank of India (RBI) has signed an agreement to extend up to $200 million currency swap facility to Maldives Monetary Authority (MMA) under the SAARC Currency Swap Framework. This agreement will enable the MMA to make drawals in multiple tranches up to a maximum of $200 million from the RBI. The facility is to provide swap support as a backstop line of funding for short term foreign exchange liquidity requirements. In 2020, the RBI had signed a similar pact for extending up to $400-million currency swap facility to Sri Lanka. The SAARC Currency Swap Framework came into operation on November 15, 2012.

RBI
➢ Governor: Shaktikanta Das
➢ Founded: 1 April 1935
➢ Founder: British Raj

ADB approves USD 780 million loan to expand Chennai metro rail network

The Asian Development Bank (ADB) approved a loan of USD 780 million to build new lines for Chennai metro rail and improve its network connectivity with bus and feeder services.

Highlights:
➢ ADB will provide an additional USD 1 million technical assistance (TA) grant to help the Chennai Metro Rail with the planning and management of the metro system's multimodal integration.
➢ ADB Approves USD 300 Million Loan to Improve Road and Regional Trade in India

➢ The Asian Development Bank (ADB) approved a USD 300 million loans to upgrade more than 300 kilometres of state highways and major district roads in Assam, including six road sections in the state's western, central, and southern regions.

➢ The project will expand state highways and major district roads from single lane to two lanes and introduce new disaster and climate-resilient structures.

➢ It will also establish pedestrian and public transport facilities, elevate highways in flood-prone areas and also include landslide prevention structures in hilly and mountainous areas.

Asian Development Bank (ADB):
➢ Headquarters: Mandaluyong, Philippines
➢ Founded: 19 December 1966
➢ Subsidiaries: Asian Development Bank Institute
➢ President: Masatsugu Asakawa

RBI's monetary policy - RBI hikes repo rate by 35 basis points (bps)

The Reserve Bank of India (RBI) raised its key repo rate, or the key lending rate, by 35 basis points (bps) to 6.25%, to curb lingering inflation pressures. This is the fifth time in a row that the RBI has increased the repo rate this year. The decision was announced by the six-member Monetary Policy Committee (MPC) headed by Reserve Bank of India (RBI) Governor Shaktikanta Das. Earlier, the RBI had increased the repo rate by 40 bps in May and 50 bps each in June, August and September. The RBI policy rate is now at its highest level since August 2018. The RBI also cut the growth forecast for the current financial year to 6.8 per cent. Standing deposit facility (SDF) rate stands adjusted to 6.00 per cent. The marginal standing facility (MSF) rate and the bank rate have been kept at 6.50 per cent. In FY23 Consumer Price Index (CPI) estimate at 6.7 per cent. It remains unchanged.

"The Best Way To Get Started Is To Quit Talking And Begin Doing."

02 / DECEMBER

National Pollution Control Day

Inception: 1984

Edition: 38th

Importance: This day is observed in the memory of those who have lost their lives in the Bhopal Gas tragedy on 2nd December, 1984.

Motto: To control the Industrial disaster and to reduce the level of pollution.

Bhopal Gas Tragedy:
• A gas leak incident on the night of 2–3 December 1984 at the Union Carbide India Limited (UCIL) pesticide plant in Bhopal(M.P), India.
• Considered among the world's worst industrial disasters.
• Causing Agent: Methyl isocyanate
• Deaths: Over 16,000 claimed
• Non-fatal injuries: At least 558,125

"People Who Are Crazy Enough To Think They Can Change The World, Are The Ones Who Do."

02 / DECEMBER

INTERNATIONAL DAY FOR THE ABOLITION OF SLAVERY

Inception: 2004

Edition: 18th

Importance: To mark adoption of the declaration by UNGA for the Suppression of the Traffic in Persons and of the Exploitation of the Prostitution of Others(Dated 2 December 1949)

Organisation Involved: ILO

Motto: To highlight the importance of eradicating contemporary forms of slavery including trafficking in persons, sexual exploitation, child labour, forced marriage, etc.

Note: According to the UN, an estimated 40.3 million people are in modern slavery, including 24.9 in forced labour and 15.4 million in forced marriage.

MoU's Signed

Uzbekistan, Kazakhstan to have union relations, sign deals worth $8bn

Uzbekistan's President Shavkat Mirziyoyev and visiting President of Kazakhstan Kassym-Jomart Tokayev have signed agreements on union (allied) relations and the demarcation of the Uzbek-Kazakh border. The agreement on the demarcation of the state border testifies to the strength of our ties and serves the cause of peace and security in the region. During the visit trade contracts and investment agreements worth $8 billion were signed.

Uzbekistan:
➢ President: Shavkat Mirziyoyev
➢ Capital: Tashkent
➢ Currency: Uzbekistani Som

NTPC Limited and GE Power India Limited sign MoU to reduce carbon intensity

NTPC and GE Power India Limited and will partner to reduce carbon intensity at NTPC's coal fired units. This is a first of a kind step for coal fleet decarbonization in the country. This partnership aims to demonstrate technologies for firing higher percentage of Torrefied Biomass in NTPC's coal fired unit, Methanol Firing & Ammonia Firing. This first of a kind MOU aims at partnering on research, development and engineering of technologies that will enable NTPC to reduce the amount of coal fired in their units and gradually replace it by co-firing of 'alternate fuel' in boiler - both (i) carboneous (methanol, Carbon neutral fuel- agri-waste, biomass, etc) and (ii) non-carboneous (such as ammonia). Further, as in India coal is the only option for base load so it will help to reduce carbon footprint from source of reliable power, for decades in future. As a primary goal, the collaboration is to support NTPC in co-firing of biomass pellets beyond 20% and up to 100%, as well as enabling the co-firing of methanol. It will also explore the possibility of introducing ammonia as a co-firing fuel, and also develop, test and demonstrate technologies that allow a total co-firing with lower carbon fuels in coal fired power plants.

NTPC:
➢ Founded: 7 November 1975
➢ Headquarters: New Delhi, India

Reliance Retail Ventures Ltd. set to acquire METRO Cash & Carry India in Rs 2,850 cr deal

Reliance Retail Ventures Limited (RRVL), a subsidiary of Reliance Industries Ltd, has signed definitive agreements to acquire a 100 percent equity stake in METRO Cash & Carry India Pvt. Ltd. (METRO India) for a total cash estimation of Rs 2,850 crore, subject to closing adjustments. METRO India started operations in India in 2003 as the first company to introduce a cash-and-carry business format in the country and currently operates 31 large format stores across 21 cities with nearly 3,500 employees. The multi-channel B2B cash and carry wholesaler has a reach to more than 3 million B2B customers in India, of which 1 million are frequently buying customers, through its store network and e-B2B app. METRO India has established itself as a trusted partner for 'kiranas' and other small businesses and merchants. In the financial year 2021/22 (FY ended September 2022), METRO India generated a sales of Rs 7,700 crore (926 million Euros), its best sales performance since its market entry into India.

ADNOC Logistics, AG&P sign 11-year charter deal for India import terminal

The maritime logistics arm of state oil firm Abu Dhabi National Oil Company (ADNOC) and Singapore-based Atlantic, Gulf and Pacific (AG&P) have signed a charter agreement to use a liquefied natural gas (LNG) carrier as a floating storage unit in India. The LNG carrier is owned by ADNOC Logistics & Services (ADNOC L&S). It will be used at AG&P's LNG import terminal in India which will be commissioned in the second half of 2024. The agreement is valid for 11 years with the option of a four-year extension and is the third agreement signed between the two companies for a floating storage unit lease in India and the Philippines. AG&P subsidiary called GAS Entec would convert the LNG carrier to a floating storage unit, while its operations and maintenance will be undertaken by ADNOC L&S. The floating storage unit will be moored alongside a regasification unit, and the integrated terminal will have an initial capacity of 5 million tons per annum (mtpa).

Jordan signed MoU for gold, lithium exploration

Jordan's Ministry of Energy and Mineral Resources has signed a Memorandum of Understanding with the Arab Mining Company to explore lithium and gold in southern Jordan. The Arab Mining Company will explore gold in an area of 50 square km in Jabal Mubarak in Aqaba of Jordan and will explore lithium in an area of 35 square km in Wadi Araba's Finan area. Jordanian Minister of Energy and Mineral Resources, Saleh Kharabsheh stressed the importance of the deal, adding that it will help boost the mining sector and help create jobs.

Satellite owner Maxar to be acquired in $6.4 bn deal led by Advent

Satellite owner and weather forecaster Maxar Technologies Inc announced an agreement to go private through an acquisition led by Advent International. The transaction is worth a total of $6.4 billion including debt. Advent is taking a $3.1 billion stake in the Colorado-based firm at $53 per share, with British Columbia Investment Management Corporation making a $1 billion equity contribution. The first major pillar of Maxar's product portfolio is the Maxar 1300 Class satellite series. Systems in the series can be customized for a variety of tasks. NASA will use a Maxar 1300 Class spacecraft to study an asteroid orbiting the sun. In addition to satellites, Maxar provides other types of aerospace hardware. The company is collaborating with NASA to build a new robotic arm that will be capable of assembling satellite subsystems in space. Its proposed acquisition by Advent International would enable it to accelerate engineering initiatives. In particular, Maxar expects that the deal will help speed the deployment of two upcoming Earth observation satellites dubbed Legion 7 and Legion 8. The company will also invest in the development of new machine learning software.

EESL Signs MoU with Institution of Engineers' Energy Conservation Mission

Energy Efficiency Services Limited (EESL) signed a Memorandum of Understanding (MoU) with Energy Conservation Mission of The Institution of Engineers (India) in an effort to propagate the importance of energy conservation in Telangana. EESL and Energy Conservation Mission have partnered with the aim to conduct awareness sessions on 'Energy Conservation' across 30 schools in the state. They will also collaborate on developing and conducting skill development and training activities for upskilling unemployed youth. Furthermore, they will facilitate capacity building sessions in educational institutions, MSMEs engaged in energy related businesses, NGOs, Women's self-help groups etc, on energy conservation practices as well as energy efficiency technologies and programmes.

EESL:
- CEO: Arun Kumar Mishra
- Headquarters location: New Delhi
- Founded: 2009

Microsoft, Viasat partnered to deliver satellite internet globally by 2025

Tech titan Microsoft and satellite company Viasat announced a partnership to bring satellite-based Internet connectivity to 10 million people across the globe, with five million of them based in Africa. The planned collaboration is part of Microsoft's Airband initiative, in which the software giant aims to bring internet access to 250 million people by the end of 2025. 100 million of these targeted users are based in Africa. The companies will combine expertise and assets to help enable telehealth, distance learning and education, precision agriculture, clean power, and other services to reach new areas through the transformational provision of power and connectivity. Satellite technology can bring internet access to remote zones that other connectivity tools cannot easily penetrate. Since its launch in 2017, Microsoft's Airband initiative saw the company partnering with government bodies, NGOs, energy companies, telecom firms, and internet companies to widen net coverage in underserved regions of the world.

Microsoft:
- Founders: Bill Gates, Paul Allen
- Headquarters: United States
- Founded: 4 April 1975
- Chairperson: Satya Nadella

Indian Embassy in Nepal & Nepal sign MoUs for development projects in Nepal

The Embassy of India and Nepal government's Ministry of Federal Affairs and General Administration signed a Memorandum of Understandings (MoU) for

undertaking three projects in Nepal under the grant assistance of the Indian government, one each in education, healthcare, and drinking water sectors. The three projects include the construction of the Shree Janata Belaka Secondary School building in the Udayapur district, the construction of Ngonga Thenchowk Chholing meditation center in the Soulukhumbu district, and the construction of Lisnekhola Tikasung Dangchet Jharlang water supply project in Dhading district shall be implemented. The construction of these projects will provide better education, healthcare, and drinking water facilities for people in Nepal. The construction of the above projects will provide better education facilities, better health care facilities, and safe drinking water facilities for the local community and improve the quality of life for people in Nepal.

NEPAL:
➢ Capital: Kathmandu
➢ Currency: Nepalese Rupee
➢ Prime minister: Pushpa Kamal Dahal

NIIFL Signs MoU with Tamil Nadu Govt for Infra Projects

The National Investment and Infrastructure Fund Limited (NIIFL) announced the signing of a Memorandum of Understanding (MoU) with the Tamil Nadu Infrastructure Development Board (TNIDB) to help attract commercial capital into infrastructure opportunities in Tamil Nadu, under the public-private project model.

National Investment & Infrastructure Fund Limited (NIIFL):
➢ Founded: February 2015
➢ Chairperson: T. V. Mohandas Pai
➢ Headquarters: Mumbai, India
➢ CEO: Sujoy Bose

HDFC Bank Partners with Startup India to Launch Sixth Parivartan SmartUp Grants

HDFC Bank in partnership with the Government of India (GoI)'s flagship initiative 'Startup India', launched the 6th 'Parivartan SmartUp Grants', the annual grants program for social startups. This program aims to identify startups that are working towards social impact and to support them through monetary grants to their incubators. The grants have been offered under the aegis of Parivartan, the umbrella name for the HDFC Bank's social initiatives.

About the program:
The bank has been enabling startups through its state-of-the-art SmartUp program, by providing specialised banking and value-added services to entrepreneurs.
The Bank is offering grants under the aegis of Parivartan, the name for the HDFC bank's social initiatives. Until now, the HDFC bank has disbursed over Rs. 30 crore to more than 45 incubators which supported around 165 startups working in the areas of environment, agri-business, ed-tech, waste management, healthcare, and skill development sectors.

The Khadi and Village Industries Commission (KVIC) & Assam Rifles sign MoU

The Khadi and Village Industries Commission (KVIC) signed an agreement with Assam Rifles to supply mustard oil. Amit Shah also made it mandatory to sell only "Swadeshi" products through the CAPF canteens across India. The Assam Rifles will soon place an order for supply of 458 quintals of high quality kachhi ghani mustard oil, worth about Rs. 2.71 Crores, which will be supplied by KVIC during 2022-23. The Expressed Mustard oil will be packed in 15 kg square ISI marked tin conforming to BIS specification No IS: 10325-2000 and 01 Litre Pet Bottle as per the specification of BIS/FSSAI norms as applicable in PAN India. Supplies of Mustard oil by the KVIC shall conform to the relevant FSSAI Standards. The quality of Mustard oil will be checked at consignee's door step by a Board of Officers detailed by the DG, Assam Rifles. Mustard oil proposed to be supplied will carry "Shelf Life'' of approx. nine (09) months from the date of supply at Assam Rifles for soundness, wholesomeness and fitness for human consumption. Supply will be provisioned by KVIC within 45 days from the date of issue of supply order by Assam Rifles.

KVIC:
➢ Founded: 1956
➢ Headquarters: Mumbai
➢ Chairperson: Manoj Kumar

Spice Money Partnered with Axis Bank for Financial Inclusion in Rural India

Spice Money has partnered with Axis Bank to facilitate opening of instant, zero balance savings or current

accounts for rural citizens through its Adhikari network. Through this association, Spice Money aims to bridge the rural-urban divide and bring financial inclusivity by providing access to banking products to the last mile at their doorstep, thereby financially empowering thousands of rural citizens living in the hinterlands of India.

Aim: To bridge the rural-urban divide and bring financial inclusivity by providing access to banking products to the last mile at their doorstep A regulated entity under RBI, the fintech firm delivers various financial services such as cash deposit and withdrawal, and insurance premium to the rural masses.

ISRO and Social Alpha sign MoU to establish SpaceTech Innovation Platform

Indian Space Research Organisation (ISRO) and Social Alpha signed an MoU to launch SpaceTech Innovation Network (SpIN). It is a one-of-its-kind public-private collaboration for start-ups and SMEs in the space industry. This is an important step towards providing further impetus to India's recent space reform policies. It will work towards identifying and unleashing the market potential of promising space technology innovators. SpIN has launched its first innovation challenge for developing solutions in areas of maritime and land transportation, urbanisation, mapping, and surveying.

SpaceTech Innovation Network (SpIN):
It will be India's first dedicated platform for innovation and venture development for the burgeoning space entrepreneurial ecosystem. It will primarily focus on facilitating space tech entrepreneurs in three distinct innovation categories -
1. Geospatial Technologies and Downstream Applications
2. Enabling Technologies for Space & Mobility
3. Aerospace Materials, Sensors, and Avionics

NSIC signs MoU with Walmart

A MoU was signed between Walmart Global Sourcing India Private Limited and The National Small Industries Corporation Limited. Through this MoU NSIC will be able to extend the NSIC schemes and other services to MSMEs who would participate in various Vriddhi program. Moreover, the MSMEs would get the exposure to various advantages of gaining working capital, bulk procurement support etc.

under various opportunities offered by NSIC. MSMEs who are part of the NSIC ecosystem will also be linked to the Vriddhi program in relevant clusters and get access to existing business training content, advisory support, tools and knowledge under the program – "free of cost". The MoU will play a critical role in enabling MSME's reach $2 trillion worth of exports by 2030.
Through this partnership, MSMEs across the country can get the necessary support required to further expand their businesses nationally and across the globe.

Walmart:
➤ Founder: Sam Walton
➤ Founded: 2 July 1962
➤ Headquarters: United States
➤ Subsidiaries: Sam's Club, Flipkart, Walmart Canada, Massmart

India - France Partnership on Kaziranga Project

India and France are collaborating under the Kaziranga Project in the Kaziranga National Park in Assam. With France and India technical and financial support, the Indo-Pacific Parks Partnership will facilitate partnership activities for natural parks of the Indo-Pacific region. These activities include biodiversity conservation, wildlife management and engagement with local communities.

Kaziranga project:
The Kaziranga project is a part of a larger Assam Project on Forest and Biodiversity Conservation (APFBC) for which the Agence Française de Développement (AFD) has committed funding of €80.2 million for a 10-year period, between 2014-2024. The project envisages afforestation of 33,500 hectares of land by 2024 and training of 10,000 community members in alternative livelihoods. The AFD program has been most effective in skill development in the area, especially in the forest dwelling communities. The Assam government has started a massive reforestation drive with the help of AFD.

NDDB, Amul to provide technical support to enhance milk production in Sri Lanka

India will provide technical support to Sri Lanka to enhance its dairy industry and milk output. India is the largest producer of Milk in the world and National Dairy Development Board (NDDB) played a crucial role in it. The Sri Lankan government is being assisted

by the officials of the National Dairy Development Board (NDDB) and the Gujarat Cooperative Milk Marketing Federation (GCMMF), which markets milk under the Amul brand. They will provide necessary technical support for the production of milk in Sri Lanka. India's success in increasing the production of milk and dairy products is result of a cooperative dairy model pioneered by NDDB and its marketing done by the GCMMF which is also a cooperative .

NDDB:
➢ Founded: 1965
➢ Headquarters location: Anand
➢ Founder: Verghese Kurien
➢ Chairman: Meenesh Shah
➢ Subsidiaries: Mother Dairy, Indian Immunologicals Limited

India, Germany ink deal on comprehensive migration and mobility partnership

External Affairs Minister S Jaishankar and Germany's foreign Minister Annalena Baerbock signed a comprehensive migration and mobility partnership, which will facilitate easier access for people to study, research and work in both countries. The deal which aims at facilitating two-way movement of students, professionals and researchers, is also set to address the challenges of illegal migration. The migration and mobility partnership is set to encourage increased exchange of students between the two countries. The Indian government will facilitate admission of German students in Higher Education Institutions (HEIs) under programmes like Study in India. Further the deal ensures an active people-to-people exchanges including among students, academia and professional work force. This thereby enhances efforts on Germany and India's part to expand the internationalisation higher education systems, to interlink further the innovation and research landscapes of both countries, and to strengthen dual structures for Vocational Education and Training.

Germany:
➢ Capital: Berlin
➢ Currency: Euro

India & South Korea Signs Agreement for EDCF Loan worth 1500 Crore

India and South Korea signed an agreement for an Economic Development Cooperation Fund (EDCF)

loan worth 245.081 billion (approx. Rs. 1,495.68 crores) for the establishment of an Intelligent Transport System on the Nagpur-Mumbai Super Communication Expressway Project to improve traffic management efficiency. This is the first project that is funded by an EDCF loan by the Government of the Republic of Korea.

Objectives:
To enhance the efficiency in traffic management through the establishment of the Intelligent Traffic Management System (ITMS) including the traffic center, for improving the efficiency in toll management through the establishment of the Toll Collection System (TCS). To establish a sustainable model of ITS and its O&M through the transfer of technology from the Republic of Korea.

Tata group & Singapore Airlines agrees to merge Air India and Vistara

Singapore Airlines (SIA) and Tata Sons (Tata) agreed to merge Air India and Vistara, with SIA also investing Rs 20,585 million (SD 360 million, USD 250 million) in Air India as part of the transaction. As a result, SIA would hold a 25.1% share in an enlarged Air India group that would have a significant presence in all important market segments. SIA and Tata aim to complete the merger by March 2024.

Key Highlights:
➢ SIA intends to fully fund this investment with its internal cash resources, which amounted to SD17.5 billion as of September 30, 2022.
➢ The expansion and operations of the larger Air India in FY2022/23 and FY2023/24 will be funded by fresh capital injections from SIA and Tata, if necessary.
➢ SIA's share of any additional capital infusion, based on its 25.1% post-completion stake, could be up to Rs 50,200 million (SD 880 million, USD 615 million), payable only once the transaction is complete.
➢ The actual amount will depend on factors, including the expansion of Air India's business plan and its access to other funding options.
➢ Currently, SIA and Tata hold a 49% and 51% stake in Vistara respectively.

YES Bank Acquired 9.9 percent stake in JC Flower ARC

Yes, Bank has inked the share purchase agreement (SPA) with JC Flowers Asset Reconstruction Company (ARC), acquiring a 9.9 percent stake in the ARC at Rs 11.43 per share. A subsequent acquisition of the additional shareholding of 10 percent is subject to requisite regulatory approvals. On September 20, Yes Bank's board had approved the sale of stressed loans worth Rs 48,000 crore to JC Flowers. As of 31 March, 2022, JC Flowers ARC had Rs 595 crore in assets under management with annual turnover of Rs 19.9 crore. For the three-month ended 30 September 2022, the net profit of Yes Bank dropped by 32.2 percent year-on-year to Rs 152.8 crore. Total income during Q2 FY23, was higher at Rs 6,394.11 crore as against Rs 5,430.30 crore in the same period a year ago. Gross non-performing assets came down to 12.89 percent of gross advances as against 14.97 percent in the year-ago period.

YES BANK:
➢ CEO: Prashant Kumar
➢ Founded: 2004
➢ Founders: Rana Kapoor, Ashok Kapur

Maharashtra Govt Signs MoU with Women's World Banking to Strengthen BC Sakhi Program

The government of Maharashtra signed a Memorandum of Understanding (MoU) with the United States (US)-based Women's World Banking, to operationalize and strengthen 5,000 women of self-help groups (SHGs) to become business correspondents (BC Sakhis) supporting banking services in rural areas.

Women's World Banking is a global non-profit organization with funding support from MetLife Foundation. It works for inclusive finance for low-income women across the world.

BC Sakhis:
In August 2021, the Jharkhand State Livelihood Promotion Society (JSLPS) and the Small Industries Development Bank of India (SIDBI) partnered to launch the BC Sakhi Initiative to promote digital banking through a banking correspondent.

PhonePe to Acquire ZestMoney

Digital payments firm PhonePe is set to acquire fintech start-up ZestMoney for $200-300 million. The acquisition would help Walmart-owned PhonePe to strengthen its lending services and compete with Google Pay, Paytm, and Amazon Pay in Indian fintech,

which is expected to be worth $350 billion by 2026. ZestMoney, which was founded in 2015, allows customers to pay for products over time. Increasing smartphone use, cheap data plans and online shopping have helped pay-later offerings in the country. The company is being acquired for a price less than the $470 million valuation it achieved in the last funding round. ZestMoney raised $50 million in September 2021, which it topped with an additional $20 million raise. The firm has raised a total of $140 million from investors such as Australia's Zip, Goldman Sachs, Quona Capital, and Xiaomi. ZestMoney's loss in FY22 surged 216 per cent to Rs 398 crore from Rs 125.8 crore in the previous fiscal year, according to data accessed by the business intelligence platform, Tofler. Revenue grew by 62 per cent to Rs 145 crore in FY22 from Rs 89.3 crore in FY21.

Phonepe:
➢ Founded: 2015
➢ Headquarters: Maharashtra
➢ CEO: Sameer Nigam
➢ Parent organization: Flipkart
➢ Founders: Sameer Nigam, Rahul Chari, Burzin Engineer

BSE signs TAC Security as Cyber Security Partner

The BSE Limited (formerly Bombay Stock Exchange) signed an agreement with TAC Security, a risk and vulnerability management company, to make it the official cyber security partner of the BSE.

BSE joined hands with TAC security to ensure that the BSE is empowered with the highest possible level of cybersecurity.

TAC Security:
➢ Headquarters: San Francisco United States
➢ Founded: 2013

Honda Cars India Signs MoU with IDBI Bank to Offer Finance Schemes

Honda Cars India Limited (HCIL) has signed a Memorandum of Understanding (MoU) with IDBI Bank to offer finance schemes, which aims to assist and provide customers with hassle-free affordable financing options and schemes for <strong>purchasing Honda Car models. The benefits under the partnership include attractive interest rates, minimum processing charges, maximum loan amount and maximum repayment period.

Awards & Recognition

IIT Prof. Pradeep Thalappil bags VinFuture Prize 2022

Renowned researcher and Madras IIT Professor Pradeep Thalappil has bagged the VinFuture Prize 2022 instituted by the VinFuture Prize Council to honour breakthrough research projects. Thalappil has been awarded the 'Special Prize dedicated to Innovators from Developing Countries' for his development of a low-cost filtration system to remove arsenic and other heavy metals from groundwater. The prize consists of a purse of Rs 4 crore. Earlier, Thalappil was conferred with the Padma Shri in honour of his work to develop affordable and safe drinking water solutions using nanomaterials. The award was presented by Prize Council Chairman Richard Friend at a ceremony in Vietnam's capital Hanoi. Professor Thalappil is the son of poet and retired teacher NN Thalappil and PP Kunjilakshmi Amma, natives of Edappal.

Vietnam
- Capital: Hanoi
- Currency: Vietnamese dong
- Official language: Vietnamese
- President: Nguyễn Xuân Phúc
- Prime Minister: Phạm Minh Chính

PRAKASHmay: NHPC Won Best Globally Competitive Power Company Of India

NHPC Limited has been awarded as Winner of 'Best Globally Competitive Power Company of India – Hydropower and Renewable Energy Sector' at PRAKASHmay '15th Enertia Awards 2022'. The Award has been conferred to NHPC in recognition of its leadership in the hydropower sector with a gross asset class renewable energy capacity of more than 7000 MW. The award also recognizes that NHPC has more than 5000 MW of projects under construction and an ambitious 7000 MW plus plan for Solar capacity addition. The 15th Enertia Awards 2022 was organized by the ENERTIA Foundation and supported by the Renewable Energy Promotion Association and the New Delhi Institute of Management.

NHPC

- Founded: 7 November 1975
- Headquarters: Faridabad, India
- CMD: Rajeev Kumar Vishnoi
- Parent organization: Government of India, Ministry of Power

Sudeep & Shobhana Won Rabindranath Tagore Literary Prize 2021-22

The Rabindranath Tagore Literary Prize 2021-22 has been jointly won by Sudeep Sen for his genre and formbender Anthropocene: Climate Change, Contagion, Consolation (Pippa Rann Books & Media, 2021) and Shobhana Kumar for her haibun collection A Sky Full of Bucket Lists (Red River, 2021). The winners, awarded $10,000 and a Rabindranath Tagore statuette, were picked from a shortlist of 11 at India International Centre, with the Tagore Prize for social achievement going to Sanjoy K Roy, producer of the Jaipur Literature Festival. The Rabindranath Tagore Literary Prize was started in 2018 to annually recognise literary and social accomplishments. In 2020, the award was won by Raj Kamal Jha, Chief Editor, The Indian Express, for The City and The Sea (2019, Penguin Books), and in 2019, it was awarded posthumously to Kabir for One Hundred Poems of Kabir, translated by Rabindranath Tagore.

England star Beth Mead crowned BBC Sports Personality of the Year 2022

Beth Mead has been crowned the BBC Sports Personality of the Year for 2022 after firing England to a history-making European Championship that propelled women's football into the mainstream. The 27-year-old saw off competition from Ben Stokes and Ronnie O'Sullivan to win the prize, hobbling on to the stage at MediaCity in Salford to collect the award after seriously injuring her knee last month. The prize completed a clean sweep for England women at the 69th Sports Personality of the Year awards. They also won team of the year and coach of the year for Sarina Wiegman – the first woman to take the accolade in its 23-year history. It is the first time in half a century that the top prize has been won by women in consecutive years, following Emma Raducanu's triumph in 2021.

UIDAI HQ Building wins top Green Building Award

The Unique Identification Authority of India (UIDAI) Headquarter in New Delhi has won the prestigious GRIHA Exemplary Performance Award 2022, a top national level Green Building Award. GRIHA (Green Rating for Integrated Habitat Assessment) is a national rating system for green buildings in India. UIDAI HQ has been declared a winner among the existing highest rated building category. UIDAI believes and promotes the idea of recycle and reuse to reduce carbon footprint. It has been harnessing solar power to meet a portion of its energy consumption. It is recycling and reusing water and has been adhering to sustainable waste management practices. On average, 25% to 30% of its daily water consumption is coming from recycled water. Similarly, UIDAI Headquarter building is also recharging ground water on an average of 3590 KL per year. In 2021, the UIDAI Headquarters building was declared the runner-up.

UIDAI:
➢ Headquarters: New Delhi
➢ Founded: 28 January 2009, India
➢ Founder: Government of India

Shalini Kumari received first prize in 3rd ASEAN India Grassroots Innovation Forum

Shalini Kumari from India received first prize in the Grassroots Innovation Competition at the 3rd ASEAN India Grassroots Innovation forum for her innovation 'Modified walker with adjustable legs'. The first prize winner from India Ms Shalini Kumari at the forum, a resident of Patna in Bihar; she was first recognized by the National Innovation Foundation (NIF) – India. The technology was transferred to the industry, Vissco Rehabilitation Aids, a leading manufacturer of orthopaedic products in the country. She has won the cash prize of USD 1,500 by virtue of being the winner of first prize. The second and third prizes were won by innovators from thePhilippines and Myanmar, who won US$1000 and US$500, respectively. A total of 45 innovators participated and represented 9 nationalities in the competition. The first and second prize in the Student Innovation competition has been won by participants from Thailand whereas the third prize has been won by the student from Lao PDR.

Indian Startup Kheyti Wins Prince William's Earthshot Prize, To Get 1 Million Pounds

An Indian firm is among the five startups that have been announced as winners of Prince William's Earthshot Prize, which aims to reward projects that aim to save the planet. The winners will receive 1 million pounds each. Kheyti, an Indian startup that designed the "greenhouse-in-a-box" for small hold farmers, won in the Protect and Restore Nature category. The solution is powerful: their innovation saves on water and pesticides, with much higher yields at a fraction of the price. They aim to equip 50,000 farmers with a greenhouse-in-a-box by 2027.Other winners included a female-founded startup from Kenya that designed cleaner burning stoves as well as a British project that uses marine plants to create biodegradable packaging. Last year's Earthshot Prize ceremony was held in London, with India-based project Takachar winning the prize for the Clean Our Air category. Note: Launched last year, the Earthshot Prize was inspired by US President John F. Kennedy's Moonshot Project, which aimed to put a man on the moon.

Canara Bank wins 'Banker's Bank of the Year Award 2022' for India

Canara Bank has won the "Banker's Bank of the Year Award 2022" for the Indian segment of the Global Banking Summit. The event took place in London from November 29 to December 1, 2022 and L V Prabhakar, the bank's MD and CEO, accepted the award from the organiers. The Bankers' Bank of the Year Award is considered to be like Oscar award for the banking sector and the winners are judged on their ability to deliver returns, strategy, innovation, technology and product and services in their respective geographies in the last 12 months. The Banker's magazine is world's premier banking and finance resource for more than 180 countries across the globe. The Banker's magazine is from the Financial Times (FT) group, which is the British based global financial daily newspaper.

Canara Bank
➢ Headquarters: Bengaluru
➢ MD & CEO: Lingam Venkat Prabhakar
➢ Founder: Ammembal Subba Rao Pai
➢ Founded: 1 July 1906
➢ Owner: Government of India

Paralympic medallist Lekhara receives Para Sports Person of Year award

At the Turf 2022 and India Sports Awards of FICCI, former Ranji cricketer Sarkar Talwar was honoured with the Lifetime Achievement of the Year award. Talwar, the Director-Sports, Manav Rachna Education Institutions, is also the recipient of the Dronacharya Lifetime Award, given by the President of India. Apart from Talwar, Avani Lekhara, who won two medals at the Tokyo 2020 Paralympics, was recognized as the Para Sports Person of the Year, while Shrey Kadyan was recognized as the Special Sportsperson of the Year. For their remarkable work over the past decade, Odisha was recognized as the best state for promoting sports.
The All India Chess Federation won the National Sports Federation of the Year Award for hosting another successful edition of the Chess Olympiad this year.
FICCI Turf 2022
FICCI is back with the 11th edition of its Global Sports Summit, TURF, which took place on November 26, 2022. The theme for this edition is "Vision 2047: Indian Sports after 100 years of Independence," putting a spotlight on the growth of the Indian sporting industry and the path ahead towards becoming a global sporting superpower.

NMDC wins IEI Industry Excellence Award 2022

National Miner NMDC won the coveted IEI (Institution of Engineers, India) Industry Excellence Award 2022 in Chennai. The largest producer of the iron ore in the country was felicitated at the 37th Indian Engineering Congress for its outstanding performance and high level of business excellence. The Institution of Engineers (India) has given the Industry Excellence Award to NMDC , after reviewing the business operations, financial performance, environmental performance, research and development, CSR and corporate governance policies of a company. With an eco-friendly, economic and efficient approach, NMDC is taking up transformational projects to retain its domestic leadership and foray towards becoming a global mining company.
NMDC:
➢ Headquarters: Hyderabad
➢ Subsidiaries: NMDC Steel Limited, Legacy Iron Ore Ltd.
➢ Founded: 15 November 1958

World no. 1 Swiatek wins maiden WTA 'Player of the Year' award

World number one Iga Swiatek won WTA 'Player of the Year' award for the first time. The 21-year-old led the tour with 67 match wins and eight titles, which included a run of six trophies in a row during a 37-match winning streak. Among the eight titles, Swiatek won two Grand Slam titles, French Open and US Open. She ascended to the top of the rankings after Ash Barty suddenly retired at age 25 and relinquished that spot. Swiatek later won her second major championship at the French Open in June, then claimed the U.S. Open title in September, making her the first woman with two Slam trophies in one season since Angelique Kerber in 2016. The WTA Coach of the Year award went to David Witt. He works with Jessica Pegula, a 28-year-old American who rose to a career-best No. 3 in the rankings during 2022 and was a quarterfinalist at three Grand Slam tournaments — losing to Barty or Swiatek each time.

Jos Buttler, Sidra Ameen win ICC Player of the month awards

The International Cricket Council (ICC) announced the winners of the ICC Player of the Month awards for November 2022. England's T20 World Cup-winning captain Jos Buttler was named the ICC Player of the Month for the first time after his stellar performance in November. Playing his 100th T20 match against New Zealand in Brisbane, opener Buttler played a key role in the victory. Butler has achieved this award by leaving behind his compatriot spinner Adil Rashid and Pakistan's star fast bowler Shaheen Afridi. Pakistan's Sidra Amin became the country's second consecutive winner of the Women's Player of the Month award after a stellar performance in the ODI series win against Ireland. Sidra played an unbeaten inning of 176 runs against Ireland in the month of November, this was also the highest score of his cricket career. Sidra has won this award leaving behind Thailand's Natthakan Chantham and Ireland's Gabby Lewis.
ICC:
➢ Headquarters: Dubai, United Arab Emirates
➢ Founded: 15 June 1909
➢ Chairman: Greg Barclay
➢ General Manager: Wasim Khan
➢ Subsidiary: Asian Cricket Council

Ashleigh Barty wins Australia's prestigious Don Award for 2nd Time

Ashleigh Barty, who retired from tennis earlier this year at the age of 25, won Australia's prestigious Don Award for the 2nd time in her career after 2019. The Don Award is given to the player (or a team) who has provided the most inspiration to the country in the previous year through performance and example. Ashleigh Barty is the 3-time Grand Slam winner and the No.1 ranked female player. She became the 3rd person to win the award twice, following hurdler Sally Pearson (2012 and 2014) and pole vaulter Steve Hooker (2008 and 2009).

Australia:
- Capital: Canberra
- Prime minister: Anthony Albanese

NTPC Gurdeep Singh wins the S&P Platts Global CEO of the Year Award

Mr. Gurdeep Singh, CMD NTPC has been bestowed with the CEO of the Year Award at the 24th Annual Platts Global Energy Awards held in New York for his outstanding contribution to the power sector. Mr. Singh is an alumnus of NIT Kurukshetra and IIM Ahmedabad and has undergone management and leadership training from Harvard and Oxford business schools. In an illustrious career spanning, more than three and a half decades, he has held leadership positions with several national and multinational companies like PowerGen, CESC, AES, IDFC, GSECL, and DVC. He is a member of IEA's High-Level advisory group on Coal in the Global Net Zero transition and also a member of the Clean Energy Ministerial H2I advisory group. An accomplished business leader with expertise in building and managing businesses across the power sector value chain, Mr. Singh is leading NTPC's transformational journey into a sustainable integrated energy company. Mr. Singh embraces innovation and a people-centric sustainable approach to business. Under his leadership, NTPC has been consistently ranked as a 'Best Employer' internationally and also received awards and recognitions for its community-oriented innovative CSR initiatives and business sustainability.

Veena Nair won Prime Minister's prize in Australia

An Indian-origin teacher in Australia has received the 2022 Prime Minister's Prize for Excellence in Science Teaching in secondary schools. Melbourne-based Veena Nair, who is ViewBank College's Head of Technology and STEAM project leader, has been awarded for demonstrating practical application of STEAM to students, and how they can use their skills to make a real impact in the world. Nair began her teaching career in Mumbai, where she provided computers to low socio-economic schools and taught students how to code. Nair is a BSc in Physics and a BEd in Science and Mathematics from the University of Mumbai and an MEd (maths education) from Deakin University. She won the Educator of the Year Award by the Design and Technology Teachers' Association of Australia in 2018. The annual awards celebrate the contributions of 12 of the country's leading scientists, innovators and science teachers.

Indian-American Krishna Vavilala receives US Presidential Lifetime Achievement Award

The United States of America President Joe Biden has conferred the Presidential Lifetime Achievement (PLA) Award on the Indian American Krishna Vavilala. The Presidential Lifetime Achievement is America's highest honour and is awarded to American citizens, who exhibit outstanding character, worth ethic, and dedication to their communities. 86 years old Krishna Vavilala is from Andhra Pradesh and migrated to the United States. He is a retired Electrical Engineer and is the founder and Chairman of the Foundation for India Studies (FIS). It is a non-profit organisation, whose Indo-American Oral History Project" won the 2019 Mary Fay Barnes Award for Excellence.

Dr Ogarit Younan and Dr Waleed Slyabi of Lebanon gets the Jamnalal Bajaj Award

The Jamnalal Bajaj Foundation has on 8 December 2022 announced the winners of the Jamnalal Bajaj award 2022 .Dr Ogirat Younan and Dr Walid Slyabi of Lebanon was awarded the Jamnalal Bajaj award for Promoting Gandhian Values outside India. The Jamnalal Bajaj Foundation was established in 1977, in the memory of Mr. Jamnalal Bajaj, a close associate and adopted fifth son of Mahatma Gandhi. It was inaugurated on 4th November, 1977 by Mr. Morarji Desai, Prime Minister of India. Each award carries a Citation, a Trophy and a Cash Prize of Rs. 10, 00,000. The Foundation gives 4 awards in different categories. Three are given to Indians and one award, for

promoting Gandhian values outside is given to a foreigner.

Jamnalal Bajaj 2022 winners:

Nilesh Desai of Madhya Pradesh has been chosen for the Jamnalal Bajaj award for Constructive Works. He is the founder of the Sampark Samaj Sevi Sansthan which works for the upliftment of the Bhil Community.

Bank of Baroda wins EAG Laureate award on Financial Security

State-owned Bank of Baroda has bagged an EAG Laureate award in the International Olympiad of Financial Security held at Sochi, Russia on 10 October 2022. The Eurasian group on combating money laundering and terrorism (EAG) is a FATF type regional which comprises of 9 members including India. The Financial Action Task Force (FATF) is the global anti- money laundering and anti- terrorist financing body.

Bank of Baroda:

It is the second largest public sector bank in India after State Bank of India (SBI). The banks in which the government of India holds 51% or more equity shares are called public sector banks in India.

➢ Chairman of the Bank: Hasmukh Adia
➢ Managing Director (MD) and Chief Executive Officer (CEO): Sanjiv Chadha
➢ The Headquarters of the bank: Vadodara, Gujarat
➢ Tagline of the Bank: India's International Bank

Manisha Ramadass claims the BWF Female Para-Badminton Player of the Year award

Young Indian shuttler Manisha Ramadass has claimed the BWF Female Para-Badminton Player of the Year award for her stellar run this season. The Badminton World Federation (BWF) named Manisha as the winner after the 17-year-old won the gold in the World Championships in the SU5 section. Overall, she claimed 11 gold and five bronze medals in 2022. Other contenders in this section were India's Nithya Sre Sumathy and Manasi Joshi, Sarina Satomi, Giuliana Poveda Flores, and Pilar Jauregui. Bhagat, who claimed his fourth world championships singles gold this year, was among those short-listed for the BWF Male Para-Badminton Player of the Year but the award went to WH2 world champion and reigning Paralympic champion Daiki Kajiwara, winner of 10 gold and four

bronze medals overall. The Japanese earned the nod ahead of Cheah Liek Hou, Lucas Mazur, Chu Man Kai, and Choi Jungman besides Bhagat. In the award for able-bodied shuttlers, Olympic champion Viktor Axelsen and Zheng Si Wei/Huang Ya Qiong's extraordinary dominance this season was honoured as they won the BWF Player of the Year Awards in their respective categories.

New York Film Critics Circle awards 2022: Filmmaker SS Rajamouli won Best Director

Filmmaker SS Rajamouli won the Best Director Award for RRR at the New York Film Critics Circle. A pre-Independence fictional story, "RRR" stars Ram Charan and Jr NTR as real-life Indian revolutionaries in the 1920s Alluri Sitarama Raju and Komaram Bheem, respectively. At the New York Film Critics Circle, Todd Field's Tar won Best Picture of the year, also nabbing Best Actress for Cate Blanchett's leading performance. Colin Farrell won Best Actor for two of his performances this year — Kogonada's future-set sci-fi drama After Yang and Martin McDonagh's The Banshees of Inisherin. Ke Huy Quan won Best Supporting Actor for his performance in Everything Everywhere All At Once, and Keke Palmer won Best Supporting Actress for Nope.

3 Indian-Origin Women Scientists recognized as Australia's 'Superstars of STEM'

Three Indian-Origin women are among 60 scientists, technologists, engineers, and mathematicians who have been selected as Australia's Superstars of STEM. It is an initiative that aims to smash society's gender assumptions about scientists as well as increase the public visibility of females and non-binary people. In 2022, among those recognized as Superstars of STEM include three Indian-Origin women- Neelima Kadiyala, Dr. Ana Baburamani, and Dr. Indrani Mukherjee. Apart from the Indians, female scientists of Sri Lankan origin have also been selected for recognition.

What is Australia's 'Superstars of STEM'?

Every year Science and Technology Australia (STA), which is the country's peak body in the sector and represents more than 1,05,000 scientists and technologists, supports 60 Australian experts employed in Science, Technology, Engineering, and Mathematics (STEM) to become highly visible media and public role models.

This year among those recognized as Australia's Superstars of STEM include three Indian-Origin women- Dr. Ana Baburamani, Neelima Kadiyala, and Dr. Indrani Mukherjee.

Chhatrapati Shivaji Maharaj Vastu Sangrahalaya wins UNESCO Asia-Pacific Award

The restoration of the 100-year-old Chhatrapati Shivaji Maharaj Vastu Sangrahalaya in Mumbai has won the Award of Excellence in the 2022 UNESCO Asia-Pacific Awards for Cultural Heritage Conservation. The museum is part of the Victorian Gothic and Art Deco Ensembles of Mumbai's World Heritage property. It was established as the Prince of Wales Museum of Western India in 1922. On the other hand, the Byculla Railway Station of the Central Railway has received an award of merit for conservation, giving a double pride moment to the people of Mumbai city.

Key Details:
➤ Thirteen projects from six countries- India, China, Afghanistan, Nepal, Iran, and Thailand- have been acknowledged for awards by the jury in 2022.
➤ Jury deliberations were carried out in November 2022 when the members reviewed 50 entries from 11 countries from the Asia-Pacific region.
➤ The Domakonda Fort of Telangana and Byculla station of Mumbai is among the winners in the 'Award of Merit' category, while the step-wells of Golconda in Hyderabad have won an award in the 'Award of Distinction' category.
➤ Topdara Stupa, Charikar, Afghanistan, and Nantian Buddhist Temple, Fujian, China have also received the 'Award of Merit'.

Steven Spielberg to be honoured at the 73rd Berlin International Film Festival 2023

Steven Spielberg, the 75-year-old American director, producer and screenwriter, will be honoured at the 73rd Berlin International Film Festival with a Homage and Golden Bear for lifetime achievement in February 2023 in Berlin, Germany. Steven Spielberg's latest film 'The Fablemans' will be screened at the festival. He is an eminent director who has received 19 Oscar nominations and won Oscar thrice, including best director for 'Saving Private Ryan' and 2 best picture awards for 'The Color Purple' and 'Schindler List'

Army Chief General Manoj Pande Received Guard of Honour in Paris

Army Chief General Manoj Pande received a Guard of Honour at the Les Invalides in Paris, France. General Manoj Pande, was born on 6th May 1962 and was commissioned into the Bombay Sappers, one of the regiments in the Corps of Engineers in December 1982. He is now an Indian Army General serving as the 29th and the current Chief of the Army Staff. He had previously served as the Vice Chief of the Army Staff, General Officer-Commanding-in-Chief (GOC-in-C) of Eastern Command and was also the first officer from the Corps of Engineers to become the Army Chief. Other positions- As the COAS, he took over as the Honorary Colonel of the Sikh Light Infantry Regiment and the colonel of Regiment of the 61st Cavalry in May 2022. **Awards**- He has received the Param Vishisht Seva Medal, Ati Vishisht Seva Medal, and the Vishisht Seva Medal. He has also been awarded the COAS Commendation Card and two GOC-in-C commendation cards.

Ravi Kumar Sagar honoured with the prestigious Dr. Kalam Seva Puraskar

Ravi Kumar Sagar, 22, one of the youngest founders and CEO of RK'S INNO group was conferred with the most prestigious Dr. Abdul Kalam Seva Puraskar. The award was presented to him for his persistent service to society and is one of the youngest entrepreneurs in India. Dr. Kalam Seva Purasakar is hosted every year by Vandhe Bharat Foundation and LeadIndia Foundation to commemorate the birth anniversary of the late former President of India Dr. APJ Adul Kalam. The award is conferred to the deserving candidates on the birth anniversary of Dr. Kalam for recognizing various people who have been doing extraordinary work for society. A young entrepreneur from the twin Telugu states, Ravi Kumar Sagar also known as RK'S nailed it as a budding entrepreneur during the Covid-19 pandemic in 2020. When other businesses suffered huge losses due to the lockdown and the spread of the pandemic, Ravi Kumar Sagar started his entrepreneurship journey by selling PPE kits, sanitizers, and face masks to medical stores and hospitals.

Sports

Tata Motors to be title sponsor of Maharashtra Open for fifth year in a row

Auto major Tata Motors has bolstered its commitment to tennis by extending its association with Maharashtra Open, better known as Tata Open Maharashtra, as the title sponsor for the fifth consecutive year. This is South Asia's only ATP 250 tournament and will begin 31 December in Pune. The company said that its flagship SUV, the Tata Safari will be the official partner for the tennis tournament. Maharashtra Open is owned by IMG and managed by Reliance-backed RISE Worldwide and will be held at the Balewadi Stadium by the Maharashtra State Lawn Tennis Association (MSLTA) in association with the state government. It has brought big players like Rafael Nadal, Stan Wawrinka, Carlos Moya to India in the past. This year, 2014 US Open champion Marin Cilic will headline the tournament which features 17 of the top 100 players.

National Racing Championship: Ashwin Datta triumphs in LGB Formula 4

Ashwin Datta of Dark Don Racing emerged as champion in the LGB Formula 4 category at the final round of the 25th JK Tyre FMSCI National Racing Championship. In the last race and final few laps Chennai-based Ashwin, Saran Vikram Tears and Arya Singh were engaged in a great chase at the 2.3km circuit. This is probably the closest championship JK (Tyre) has ever seen in 25 years," an elated Ashwin, who won the last race with a timing of 27:46.956. He finished second behind MSport's Dhruvh Goswami but still went on to seal the championship. In a close race, Dhruvh finished the 10-lap race in 15:47.703. Kyle was marginally behind at 15:52.395. The second place in the championship went to Vinith Kumar.

Jaipur Pink Panthers wins Pro Kabaddi League 9

Jaipur Pink Panthers, owned by Abhishek Bachchan, lifted the trophy by defeating Puneri Paltan in season 9 of the Pro Kabaddi League. Jaipur Pink Panthers won the league again 9 years after its debut. V Ajith Kumar, Sunil Kumar, and Arjun Deshwal emerged as the best players for Jaipur Pink Panthers with 6 points each on the night. Badal Singh tackled V Ajith Kumar and

Aditya Shinde effected a raid, but Puneri Paltan couldn't find a way to level the score as the Panthers led at 31-29 in the dying minutes of the game. The Panthers then played perfectly in the final seconds of the match and clinched their second Vivo Pro Kabaddi title.

Top Performers:
Jaipur Pink Panthers:
➢ Best Raider - Arjun Deshwal (6 Raid Points)
➢ Best Defender - Sunil Kumar (5 Tackle Points)
Puneri Paltan:
➢ Best Raider - Aditya Shinde (5 Raid Points)
➢ Best Defender - Abinesh Nadarajan (4 Tackle Points)

Haughey defends title, U.S. finishes top at short-course world swimming championships

Siobhan Haughey of Hong Kong, China defended her women's 200m freestyle title, as the United States topped the medal table at the 16th FINA World Swimming Championships (25m). The United States won 36 medals, including 17 gold medals, at the six-day short-course event held at the Melbourne Sports and Aquatic Center. Hosts Australia finished second with 26 medals. Haughey, the women's 200m freestyle world record holder, had a comfortable victory in her event. The 25-year-old had earlier claimed silver in the 100m freestyle. American Nic Fink set a championship record time of 25.38 seconds in a thrilling men's 50m breaststroke race. He edged out Italy's Nicolo Martinenghi by 0.04 seconds to take gold. Yan Zibei from China finished seventh. American Ryan Murphy capped his dominant campaign by winning the men's 200m backstroke to add to his earlier gold in the 50m and 100m backstroke events. Torri Huske from the U.S. won silver and Sweden's Louise Hansson came third. Olympic champion MacNeil had earlier won gold medals in the 50m butterfly and 50m backstroke.

Avyaay Garg Bags Silver In Singapore Chess Event

India's Avyaay Garg bagged a silver medal in the prestigious Singapore Open Chess Championship after getting the better of upcoming talents from Brazil, China, Germany, Malaysia, Vietnam, Hong Kong and the United States. The 8-year-old Avyaay Garg, a third-standard student of Aditya Birla World Academy,

claimed the silver medal in his age group's open U-8 category that concluded in Singapore. About 500 participants were in the fray from across 10 countries in the four-day tourney. Avyaay grabbed the second position with an incredible score of 7 points out of a possible 8 while Singapore's Lim Shi Hun Magnus secured the top position with 7.5 points.

Singapore Open Chess Championship
The Singapore Chess Championship is the annual individual national chess championship of Singapore organised by the Singapore Chess Federation. The event also features a Challengers section, which is a FIDE-rated tournament for amateur chess players. In 2015, the Challengers section was named "Singapore Amateur Chess Championship".

Canada wins maiden Davis Cup title

Canada won their first Davis Cup title after Felix Auger-Aliassime beat Australia's Alex de Minaur to give them an unassailable 2-0 lead in Malaga, Spain. The world No. 6 showed his prodigious talent once again as he produced 16 winners compared to five from his opponent and basked in the cheers of his compatriots as he struck a lethal forehand to clinch the title. Canada made its debut in the Davis Cup title game in 2019, where Roberto Bautista Agut and Rafael Nadal defeated Auger-Aliassime and Shapovalov, respectively. Canada came agonisingly close to giving their nations their first Davis Cup victory that year.

Davis Cup
The Davis Cup is the premier international team event in men's tennis. It is run by the International Tennis Federation and is contested annually between teams from competing countries in a knock-out format.
➢ Founder: Dwight F. Davis
➢ Founded: 1900
➢ No. of teams: 18 (World Group)
➢ Most recent champion(s): Canada; (1st title)
➢ Most titles: United States; (32 titles)

T20 World Cup for Blind: India defeat Bangladesh to clinch their third title

India defeated Bangladesh by 120 to secure their third T20 World Cup for the Blind at the M Chinnaswamy Stadium in Bengaluru. Opting to bat first, India posted 277 runs on the board for the loss of two wickets in their allotted 20 overs. Sunil Ramesh (136 not off 63) and captain Ajay Kumar Reddy (100 not out off 50)

added a record 247-run stand for the third wicket in the tournament finale after the defending champions lost their first two wickets for just 29. Chasing India's mammoth total, Bangladesh could manage only 157/3 and lost the contest by 120 runs. For India, Lalit Meena and Ajay Kumar grabbed one wicket each. The previous two T20 World Cup wins for India came in the years 2012 and 2017, respectively.

ICC:
➢ Headquarters: United Arab Emirates
➢ Founded: 15 June 1909
➢ Chairman: Greg Barclay
➢ General Manager: Wasim Khan

Morocco to host the next football club world cup next year, FIFA

World football governing body FIFA president Gianni Infantino announced that Morocco will host the next football Club World Cup. The tournament will take place from 1-11 February 2023. Morocco has hosted the Club World Cup in 2013 and 2014. The most recent edition of the tournament was held in the United Arab Emirates in February 2022 which was won by the English football club Chelsea. Gianni Infantino also announced that from 2025 onwards the tournament will feature 32 teams. However the tournament will continue in its existing format for now, featuring the champions of the six continental federations along with the top team from the host nation.

FIFA Club World Cup:
It is an international club football championship where the continental club champions participate every year. The club champions of Asian AFC Championships League, African CAF Championships League, North American CONCACAF Championships League, South America Copa Libertadores, Oceanian OFC Champions League, European UEFA Champions League and the club champion of the host team participates in the tournament. The first club world cup was held in 2000 at Brazil which was won by Corinthians Paulista of Brazil. Real Madrid football club of Spain has won the cup for the maximum 4 times. The Spanish football clubs (Real Madrid 4 times and Barcelona 3 times) have won it a maximum of 7 times.

National Athletics Championship for the Blind commences in Delhi

The 22nd edition of the Usha National Athletics Championship for the Blind, the largest sports event for the visually challenged in the country, started in Delhi at Thyagraj Stadium. This tournament is being organized by Indian Blind Sports Association (bi-annually) and will further boost the true spirit of athletes in the country. This championship will have over 336 prizes to be won across various disciplines over the next three days. She also launched the coffee-table book, 'The Play of Dots', which showed the accomplishments of unsung heroes, whose struggles are often hidden and unrecognized. While announcing the Championship open in front of 550 participants from all over the country. The sponsor of the National Championship, Usha, has been a keen supporter and promoter of inclusive sporting initiatives across the nation.

Manu Bhaker bags gold at National Shooting Championship

Tokyo Olympian Manu Bhaker clinched a gold in the 10m pistol junior event at the ongoing National Shooting Championship being held in Bhopal. She was representing Haryana in the 65th edition of the championship, Bhaker defeated Telangana's Esha Singh in the final after topping the qualification with 583 points. She also did well in the semifinal, scoring 252.4 at the MP Shooting Academy shooting range, as per Olympics.com. Olympic silver medalist Vijay Kumar from Himachal Pradesh won the national title for men's 25 m center fire pistol with a score of 583.

Anish Bhanwala of Haryana and Indian Army's Gurpreet Singh had 582 points each and were the other two on the podium. Bhaker also took part in a 10 m pistol women's event but could score only 148 in the semis, thereby missing out on the medal round. Karnataka's Divya TS scored 254.2 points to top the 10 m pistol women's semifinal, finishing ahead of Sanskriti Bana, who ended up with 251.6, and Rhythm Sangwan, who won 250 points. In the final, Divya overcame Sanskriti to win the gold medal.

Viktor Axelsen and Akane Yamaguchi win badminton World Tour Finals

Men's badminton world number one Viktor Axelsen won the men's singles title after defeating Indonesian ace Anthony Ginting at the season-ending World Tour Finals in Bangkok. Defending world champion Akane Yamaguchi of Japan won the women's singles title by defeating Tai Tzu Ying of Taiwan. In the women's singles final, Yamaguchi won in straight games in a close match. With that, Yamaguchi became the first women's singles player since Ye Zhaoying in 1997 to claim the All England Open, World Championships and end-of-season finals all in the same year, as per the Badminton World Federation.

BWF World Tour:

The BWF World Tour is a Grade 2 badminton tournament series, sanctioned by Badminton World Federation (BWF). It is a competition open to the top world ranked players in singles (men's and women's) and doubles (men's, women's and mixed). The competition was announced on 19 March 2017 and came into effect starting from 2018.

Mirabai clinches silver at World Championship

Star Indian weightlifter Mirabai Chanu won a silver medal at the World Championships with a total lift of 200kg. The Tokyo Olympic silver medallist, competing in 49kg category, managed to lift 87kg in snatch and in 'clean and jerk' her best effort was a lift of 113kg. The Indian finished behind China's Jiang Huihua, who won the gold with a total effort of 206kg (93kg+113kg) while her compatriot and Tokyo Olympics champion Hou Zhihua 198kg (89kg+109kg) took home the bronze medal. However, Chanu, the world record holder in the category, succeeded in her final two attempts of 111kg and 113 kg to collect the overall and clean and jerk silver. He also took silver in snatch category. It is the Manipuri's second Worlds medal, she had won a gold in 2017. India have four more lifters in the fray. S Bindiyrani Devi (59kg), Chanambam Rishikanta Singh (61kg), Achinta Sheuli (73kg) and Gurdeep Singh (+109kg) will compete in their respective categories. The 2022 World Championship is the first qualifying event for the 2024 Paris Olympics, where weightlifting events will be cut from 14 at Tokyo Games to 10. Under the 2024 Olympic qualification rule, a lifter has to compulsorily compete in the 2023 World Championships and the 2024 World Cup.

16-year-old Aditya Mittal has become India's 77th chess Grandmaster

Sixteen-year-old Aditya Mittal has become India's 77th chess Grandmaster during an ongoing tournament in Spain. He drew the game against Spain's No.1 Francisco Vallejo Pons to achieve the feat. To become a GM, a player has to secure three GM norms and cross the live rating of 2,500 ELO points. Mittal earned his maiden GM norm at Serbia Masters 2021. Subsequently, he obtained his second GM norm at Ellobregat Open 2021. The teenager secured his third GM norm at Serbia Masters 2022. He is among the five players sharing the lead with five points at the ongoing Ellobregat Open. Mittal is also the fifth Indian to achieve the GM title in 2022 after Bharath Subramaniyam, Rahul Srivatshav, V Pranav V and Pranav Anand.

Six Indian para-shuttlers clinch gold medals at Peru Para-Badminton International in Lima

Indian shuttlers, led by Para World Championships bronze medallist Sukant Kadam, shone at the Peru Para-Badminton International in Lima by clinching six gold medals. World No.3 Kadam defeated Singapore's Chee Hiong Ang in the men's singles SL4 category, while Nehal Gupta won the SL3 event by beating Mathieu Thomas of France. In the women's section, Nithya Sre Sumathy Sivan and Mandeep Kaur won the titles in the SH6 and SL3 singles categories. While Nithya defeated Giuliana Poveda Flores of Peru, Mandeep beat Ukraine's Oksana Kozyna in their respective finals. The men's doubles pair of Nehal and Breno Johann (SL3-SL4) and the women's doubles combination of Parul Parmar and Vaishali Nilesh Patel (SL3-SU5) also bagged gold medals in their respective events. Nehal and Breno beat Peru pair of Renzo Diquez Bances Morales and Pedro Pablo De Vinatea, while Parul and Vaishali prevailed over Peru's Kelly Edith Ari Escalante and Mandeep.

India end campaign with 5 medals in Asia Junior Badminton Championship

Unnati Hooda had to settle for a silver medal after she lost to Sarunrak Vitidsarn of Thailand in the final of the under-17 women's singles of the Badminton Asia Junior Championships held in Nonthaburi, Thailand.

Unnati Hooda earlier created history by becoming the first Indian to enter the U-17 women's singles final at the Asia Junior Championships. India finished the Badminton Asia Junior Championships 2022 with 5 medals -3 silver and 2 bronze medals. On the last day of the championships, India won two more silver medals. Anish Thoppnai lost to Chung-Hsiang Yih of Chinese Taipei in the under -15 men's singles to settle for a silver. Arsh Mohammad and Sanskar Saraswat lost to Chinese Taipei's Lai Po Yu and Yi-Hao Lin in the men's under-17 doubles.

Shooter Rudrankksh Patil Clinches ISSF President's Cup in Egypt

The current world champion Rudrankksh Patil of India defeated world No. 1 Danilo Sollazzo of Italy in the men's 10m air rifle final to win the gold medal at the International Shooting Sport Federation (ISSF) President's Cup 2022 in Cairo, Egypt. It was held from 28 November to -4 December 2022 in Cairo, Egypt. Rudrankksh Patil was awarded the Golden Target award, given to the best athlete of the year in the category by the International Shooting Sport Federation (ISSF). Tokyo Olympian and world No. 4 Anjum Moudgil, had to settle for silver after narrowly losing to Anna Janssen of Germany in the women's 50m rifle 3 positions final. India finished the ISSF President's Cup 2022 with two medals - one gold and one silver. At the 2021 edition of the ISSF President's Cup, India won five medals - two golds, two silvers, and one bronze.

National Shooting Championship: Manu Bhaker & Sarabjot Singh clinch Mixed Team Pistol title

Manu Bhaker and Sarabjot Singh won the 10m air pistol mixed team title at the 65th National Shooting Championship Competitions (NSCC) here at the MP Shooting Academy range in Bhopal, venue of the Pistol shooting events. Manu and Sarabjot had earlier topped the qualification round as well with a combined score of 575, where the Karnataka pair had finished second with 573 to setup the title clash. Punjab and ONGC shared the bronze medals. In the junior mixed team pistol, the gold was won by Uttar Pradesh's Anjali and Sagar, when they beat Uttarakhand's Yashsavi and Abhinav 18-16 in the gold medal match. Maharashtra and Andhra Pradesh won the bronze medals on offer.

Science & Technology

WHO renames monkeypox as mpox

The World Health Organisation has renamed monkeypox as mpox, citing concerns the original name of the decades-old animal disease could be construed as discriminatory and racist. According to the UN health agency, mpox was its new preferred name for monkeypox, saying that both monkeypox and mpox would be used for the next year while the old name is phased out. Mpox was first named monkeypox in 1958 when research monkeys in Denmark were observed to have a pox-like disease, although they are not thought to be the disease's animal reservoir. Although WHO has named numerous new diseases shortly after they emerged, including Severe Acute Respiratory Syndrome or SARS and COVID-19, this appears to be the first time the agency has attempted to rechristen a disease decades after it was first named. Numerous other diseases, including Japanese encephalitis, German measles, Marburg virus and Middle Eastern Respiratory Syndrome have been named after geographic regions, which could now be considered prejudicial. However WHO has not suggested changing any of those names.

WHO
➢ Founded: 7 April 1948
➢ Headquarters: Geneva, Switzerland
➢ Director General: Tedros Adhanom Ghebreyesus
➢ Founders: United States, Brazil, United Kingdom, Mexico, Turkey, etc.
➢ Parent organization: United Nations

S.Korea approves mass production plan for light armed helicopters

South Korea has approved a mass production plan for light armed helicopters (LAH) to replace decrepit choppers. The 5.75-trillion-won ($4.3 billion) plan was endorsed to produce the homegrown LAH from 2022 through 2031, citing the Defense Acquisition Program Administration (DAPA). The domestically-developed LAH will replace the military's aging fleet of 500MD and AH-1S Cobra attack helicopters. The DAPA would sign a deal with Korea Aerospace Industries Co., South Korea's sole aircraft manufacturer, later this year for the mass production that is likely to begin early next year. The first batch of the LAH could be deployed in late 2024. Plans were also approved to locally develop a 130 mm guided-rocket system from 2022 to 2033 and a 155 mm precision-guided artillery munition from 2024 to 2036. A 3.3-trillion-won (2.5 billion dollars) plan was also endorsed to purchase heavy attack helicopters from abroad from 2023 to 2028.

South Korea
➢ President: Yoon Suk Yeol
➢ Capital: Seoul
➢ Currency: South Korean won

World's 1st Intranasal Covid vax from Bharat Biotech gets CDSCO approval

Leading vaccine maker, Bharat Biotech International Limited (BBIL) has announced that world's first intranasal vaccine for Covid-19, iNCOVACC (BBV154), has received approval from the Central Drugs Standard Control Organisation (CDSCO) under Restricted Use in Emergency Situation for ages 18 and above, in India, for heterologous booster doses. iNCOVACC is a recombinant replication-deficient adenovirus vectored vaccine with a pre-fusion stabilized SARS-CoV-2 spike protein. This vaccine candidate was evaluated in phases I, II, and III clinical trials with successful results. iNCOVACC has been specifically formulated to allow intranasal delivery through nasal drops. The nasal delivery system has been designed and developed to be cost-effective in low- and middle-income countries. iNCOVACC was developed in partnership with Washington University, which had designed and developed the recombinant adenoviral vectored construct and evaluated it in preclinical studies for efficacy. Product development related to preclinical safety evaluation, large-scale manufacturing scale-up, formulation, and delivery device development were conducted by Bharat Biotech. Product development and clinical trials were funded in part by the Government of India, through the Department of Biotechnology's, COVID Suraksha Program.

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Agnikul Cosmos sets up India's first private space vehicle launchpad at Sriharikota

Chennai headquartered space-tech start-up Agnikul, has set up India's first-ever launchpad that will be operated by a private player, at Sriharikota. The facility was inaugurated by S. Somanath, chairman, Indian Space Research Organisation (ISRO). The facility, which was designed by Agnikul and executed in support with ISRO and IN-SPACe (Indian National Space Promotion and Authorization Center) has two sections to it: the Agnikul launchpad (ALP) and the Agnikul mission control center (AMCC). All critical systems connecting these two sections, which are 4 km away from each other, are redundant to ensure 100% operationality during countdown. The launchpad is specifically built keeping in mind the necessity to support liquid stage controlled launches, while also addressing the need for ISRO's range operations team to monitor key flight safety parameters during launches.

First launch to be technology demonstrator:

Agnikul's first launch, which will be a controlled and guided mission, a vertical launch, using its patented engine will happen from this launchpad. The mission will be a technology demonstrator that will mirror Agnikul's orbital launch but at a reduced scale. Agnibaan is Agnikul's highly customizable, two-stage launch vehicle, capable of taking up to 100 kg payload to orbits around 700 km high (low Earth orbits) and enables plug-and-play configuration. Agnilet is the world's first single-piece 3-D printed engine fully designed and manufactured in India and was successfully test-fired in early 2021, making Agnikul the first company in the country to test its engines at ISRO. Agnibaan and Agnilet will be used in the Agnikul's first launch. Founded in 2017 by Srinath Ravichandran, Moin SPM and Professor S.R. Chakravarthy from IIT Madras, Agnikul is an IIT Madras incubated startup. It became the first Indian company to sign an agreement with ISRO in December 2020. The agreement signed under the IN-SPACe initiative sanctioned Agnikul access to the Indian space agency's expertise and facilities to build Agnibaan and its launchpads.

SpaceX launches 2 telecom satellites in its 200th orbital mission

SpaceX launched two telecom satellites in its 200th orbital mission. The satellites, O3b mPOWER 1 and 2, owned by satellite telecommunications network company SES, were launched from Cape Canaveral Space Force Station in Florida. Earlier in the day, SpaceX launched NASA's Surface Water and Ocean Topography (SWOT) satellite that will conduct the first global water survey. The second stage, meanwhile, continued carrying the O3b mPower 1 and 2 satellites toward their intended medium Earth orbits (MEO). The satellites were deployed on schedule about two hours after launch. O3b mPower 1 and 2 are owned and operated by SES, a Luxembourgish-French satellite telecommunications network company. The pair of spacecraft is the first of a planned constellation of an initial 11 high-throughput and low-latency satellites to provide multiple terabits of global broadband connectivity from MEO. Each satellite is based on a Boeing BSS-702X satellite bus and features phased array antennas that can provide up to 5,000 spot beams to distribute hundreds of gigabits of capacity to users on the ground. SES plans to launch six more O3b mPower satellites in 2023 and three in 2024.

NASA Launches International Mission to Survey Earth's Water

The US National Aeronautics and Space Administration (NASA) launched the newest Earth science satellite to track nearly all the water on Earth's surface. The Surface Water and Ocean Topography (SWOT) spacecraft was launched atop a SpaceX rocket from Space Launch Complex 4E at Vandenberg Space Force Base in California with a prime mission of three years. The satellite will measure the height of water in freshwater bodies and the ocean on more than 90 per cent of Earth's surface. This information will provide insights into how the ocean influences climate change; how a warming world affects lakes, rivers, and reservoirs; and how communities can better prepare for disasters, such as floods. After SWOT separated from the second stage of a SpaceX Falcon 9 rocket, ground controllers successfully acquired the satellite's signal. Initial telemetry reports showed the spacecraft in good health. SWOT will now undergo a series of checks and calibrations before it starts collecting science data in about six months. SWOT will cover the entire Earth's surface between 78 degrees south and 78 degrees north latitude at least once every 21 days, sending back about one terabyte of unprocessed data per day.

NASA:
➢ Headquarters: United States
➢ Founded: 29 July 1958

➢ Founder: Dwight D. Eisenhower

UAE successfully launches first ever Arab-Built lunar spacecraft

SpaceX Falcon 9 rocket carried into space the first ever Arab-built lunar spacecraft. It was launched from the Cape Canaveral Space Force Station in Florida. Named as Rashid Rover was built by Dubai's Mohammed bin Rashid Space Centre (MBRSC), in the United Arab Emirates (UAE), and is being delivered by the HAKUTO-R lander, engineered by Japanese lunar exploration company ispace. If the landing is successful, HAKUTO-R will also become the first commercial spacecraft ever to make a controlled landing on the moon. Rashid rover will provide 'novel and highly valued data, images, and insights,' as well as 'collect scientific data on matters relating to the origin of the solar system, our planet and life.' Its rover weighs just 22 pounds (10 kg) and will work on the surface for about 10 days.

UAE:
➢ President: Mohammed bin Zayed Al Nahyan
➢ Capital: Abu Dhabi
➢ Currency: United Arab Emirates Dirham

Japanese start-up launches country's first-ever Moon mission with help of SpaceX

A Japanese startup's spacecraft launched to the Moon in the country's first-ever lunar mission and the first of its kind by a private company. The launch was carried out by Elon Musk's SpaceX in Cape Canaveral in the US state of Florida after two postponements for additional pre-flight checks. So far only the United States, Russia, and China have managed to put a robot on the lunar surface. The space mission is the first of a program called Hakuto-R, which means "white rabbit" in Japanese. Measuring just over 2 by 2.5 meters, the spacecraft has a payload that includes a 10-kilogram rover built by the United Arab Emirates. The Gulf country is a newcomer to the space race but recently sent a probe into Mars' orbit last year. If the rover, named Rashid, successfully lands, it will be the Arab world's first Moon mission. Hakuto was one of five finalists in Google's Lunar XPrize competition to land a rover on the Moon before a 2018 deadline, which ended without a winner. The space lunar lander is also carrying two robots produced by Japan's space agency and a disc with the song "SORATO" by Japanese rock band Sakanaction, which was originally written in support of the Google competition.

Britain, Italy, and Japan to jointly develop a sixth-generation fighter jet that uses artificial intelligence

Rishi Sunak has announced a collaboration between the UK, Italy and Japan to develop a new fighter jet that uses artificial intelligence. The joint venture aims to create thousands of UK jobs and strengthen security ties. The nations will develop a next-generation fighter - due to enter service in the mid-2030s - that will eventually replace the Typhoon jet. Work on developing it is already underway - to create a combat aircraft that will provide speed stealth, use advanced sensors and even artificial intelligence to assist the human pilot when they are overwhelmed, or under extreme stress. It could also be flown without a pilot's input if required and could be able to fire hypersonic missiles. Other countries could still join the programme. France, Germany and Spain are already working together on their separate design - as is the United States. BAE Systems at Warton and Samlesbury will play a key role in developing Tempest in Britain. Japan's Mitsubishi Heavy Industries and Italy's Leonardo are among the other companies involved.

ISRO successfully completes hypersonic vehicle test run

The Indian Space Research Organisation (Isro) completed the first blow down test of the newly installed Trisonic Wind Tunnel at the Vikram Sarabhai Space Centre (VSSC), the space agency's lead rocket-building agency. Trisonic Wind Tunnel is a system to aid aerodynamic design of rockets and re-entry spacecrafts by characterising a scaled model by evaluating forces, moments, load distribution, unsteady pressures, acoustic levels etc. The tunnel has an overall length of about 160m and has a maximum cross section of 5.4m. The tunnel can be used for testing various space vehicles in three flight regimes — below the speed of sound, at the speed of sound and above the speed of sound — hence the name trisonic wind tunnel. The tunnel can simulate flight conditions from 0.2 times the speed of sound (68 m/s) to 4 times the speed of sound (1360 m/s).

ISRO:
➢ Headquarters: Bengaluru
➢ Founded: 15 August 1969
➢ Founder: Vikram Sarabhai

ISRO will develop "Spatial Data Infrastructure geoportal 'Geo-Ladakh' for Ladakh

The government of the Union Territory of Ladakh has approached the Indian Institute of Remote Sensing (IIRS), a unit of the Indian Space Research Organisation (ISRO) for developing "Spatial Data Infrastructure geoportal 'Geo-Ladakh' for UT-Ladakh. The project encompasses spatial database generation (water resources, vegetation and energy potential) using remote sensing, geospatial techniques and the development of a Geo-portal for hosting this database. The project also aims towards training of UT-Ladakh officials on Geospatial techniques and applications. Portal provides geospatial data visualization and analytics for UT-Ladakh, consisting of Spatial viewer, Carbon Neutrality, Geospatial utility mapping and Geo-Tourism.

Meghalaya Government launches 'Asia's first Drone delivery hub for easy access to healthcare''

The Meghalaya government in partnership with Startup TechEagle has unveiled Asia's first drone delivery hub and network Meghalaya Drone Delivery Network (MDDN), which is aimed at providing universal access to healthcare for the people in the state. The Meghalaya Drone Delivery Network (MDDN) project is aimed at delivering vital supplies like drugs, diagnostic samples, vaccines, blood and blood components quickly and safely to different regions of the state using a dedicated drone delivery network. The first official drone flight took off from Jengjal Sub Divisional Hospital on 5 December 2022, which acts as the hub, and delivered medicines to Padeldoba primary health centre in less than 30 minutes, which would otherwise have taken 2.5 hours by road. It expected that the Meghalaya Drone Delivery Network (MDDN) would bring universal access to healthcare for 2.7 million people of Meghalaya. Now with the help of drones, it will be possible to overcome the problem of lack of visibility, high delivery costs, outdated technology and inaccessibility through roads and railway networks and deliver better healthcare facilities to people of Meghalaya.

Meghalaya:
➢ Capital: Shillong
➢ Chief minister: Conrad Sangma
➢ Official animal: Clouded leopard
➢ Official tree: Gmelina arborea

US Unveils Its Newest Nuclear Stealth Bomber

The US Air Force has unveiled its newest nuclear stealth bomber, the B-21. The first new bomber in 30 years could cost nearly $700m (£569m) each and can carry nuclear and conventional weapons. The B-21 Raider was unveiled during a ceremony at manufacturer Northrop Grumman's facility in California. The plane would offer significant advances over existing bombers in the US fleet, stating that "even the most sophisticated air defence systems will struggle to detect the B-21 in the sky. The plane was also built with an "open system architecture," which allows for the incorporation of "new weapons that haven't even been invented yet". It will eventually replace the B-1 and B-2 models and the fleet is estimated to cost $203bn (£165bn) to develop, buy and operate over 30 years. The US Air Force is planning to acquire at least 100 of the aircraft.

IIT Madras develops Sindhuja-I or 'Ocean Wave Energy Converter'

The researchers at the Indian Institute of Technology Madras (IIT Madras) have developed a device called Sindhuja-I or 'Ocean Wave Energy Converter', that can generate electricity from sea waves. Sindhuja means "created from the ocea" in Sanskrit. The device trials were completed during the second week of November 2022. The device was deployed approximately 6 kilometers (km) off the coast of Tuticorin, Tamil Nadu, at a location with a depth of 20 meters. India's goals: deep water missions, clean energy, and achieving a blue economy. It could assist India in meeting its climate change-related goals of generating 500 GW of electricity from renewable energy by 2030.

'Ocean Wave Energy Converter' Test:
For the Ocean Wave Energy Converter test, IIT Madras has collaborated with a start-up Virya Paramita Energy Private Limited, and Motilal Nehru National Institute of Technology Allahabad, Uttar Pradesh.

Project Sindhuja-I:
Sindhuja-I was funded by the Australian Government's Department of Foreign Affairs and Trade through the Innovative Research Project of IIT Madras, TBI-KIET under the DST Nidhi-Prayas Scheme, and the Australian Alumni Grant Scheme 2022. The electrical storage system was designed by the GKC Institute of Engineering and Technology and MCKV Institute of

Engineering, West Bengal. Waterfront Engineering and Infrastructure Pvt Ltd assisted in deploying the system in the ocean.

Jindal Shadeed Group to set up a $3 billion green steel plant in Oman

The Jindal Shadeed Group has announced that it will invest more than $3 billion to set up a green steel plant in a special economic zone in the southern port city of Duqm, Oman. The hydrogen-ready steel project will have a capacity to produce 5 million tonnes of steel a year. The proposed new green steel plant will use natural gas for the production of steel. Jindal Shadeed Group is a wholly owned subsidiary of Naveen Jindal's Jindal Steel and Power Limited (JSPL) Company. It also has a 2 million tonnes steel per annum steel plant at Sohar in Oman.

Green Steel:

Green steel is the manufacturing of steel without the use carbon intensive fossil fuels. The steel is produced by using low-carbon energy sources such as hydrogen, natural gas, coal gasification, or electricity instead of the traditional carbon-intensive manufacturing route of coal-fired plants.

DRDO hands over AHSP of Akash weapon to Missile Systems Quality Assurance Agency

Defence Research and Development Organisation (DRDO) on Sunday handed over Authority Holding Sealed Particulars (AHSP) of the Indian Army's Akash Weapon System to Missile Systems Quality Assurance Agency (MSQAA) in Hyderabad. Akash is the first state-of-the-art indigenous surface-to-air missile system, which has been with the Armed Forces for nearly a decade, defending the Indian skies and providing national security. The Indian Army and Indian Air Force inducted it with an order value worth Rs 30,000 crore, which is one of the largest single-system order for indigenous missile system. Apart from DRDL, a number of other DRDO laboratories are involved in the development of the system. These include Research Centre Imarat; Electronics & Radar Development Establishment; Research & Development Establishment (Engineers); Integrated Test Range; Armament Research & Development Establishment; High Energy Materials Research Laboratory and Vehicles Research Development Establishment.

Indian Coast Guard Advanced Light Helicopter Mk-III squadron, 840 Sqn (CG) commissioned

In a major boost to further strengthening the Coast Guard Region East, 840 Sqn (CG), an Indian Coast Guard Advanced Light Helicopter (ALH) Mk-III squadron, was commissioned by DG Shri VS Pathania at ICG Air Station, Chennai. The commissioning of 840 Sqn (CG) is indicative of the leap towards self-reliance in the field of helicopter manufacturing, in line with the government's vision of 'Aatmanirbhar Bharat'. It will provide a major fillip to the abilities of the Indian Coast Guard in the security-sensitive waters off Tamil Nadu and Andhra region. The ALH Mk-III helicopters, indigenously manufactured by Hindustan Aeronautics Limited (HAL), feature state-of-the-art equipment including advanced RADAR as well as Electro optical sensors, Shakti engines, full glass cockpit, high-intensity searchlight, advanced communication systems, automatic identification system as well as search-and-rescue homer. This feature enables the helicopter to undertake maritime reconnaissance as well as carry out search and rescue at extended ranges while operating from ships both by day and night. The aircraft can switch roles from an offensive platform with a heavy machine gun to that of a benign one carrying a Medical Intensive Care Unit to facilitate the transfer of critically ill patients. A total of 16 ALH Mk-III aircraft have been inducted in the Indian Coast Guard in a phased manner and four of these aircraft are positioned in Chennai.

ISRO launches PSLV-C54 from Sathish Dhawan Space Centre, Sriharikota

The Indian Research Space Organisation (ISRO) successfully launched the PSLV-C54 rocket. The rocket carrying EOS-06, also known as Oceansat-3, and 8 nanosatellites took off from the Satish Dhawan Space Centre in Sriharikota of Andhra Pradesh. PSLV-C54 successfully placed Earth Observation Satellite into its intended orbit. The primary payload onboard PSLV-C54 was the EOS-06. It will be separated in Orbit-1."Subsequently, Orbit change is planned by using two Orbit ChangeThrusters (OCTs) introduced in the Propulsion Bay Ring of the PSLV-C54 Vehicle. The Passenger Payloads (PPLs) will be separated in Orbit-2. This is the 56th flight of the Polar Satellite Launch Vehicle (PSLV) and the 24th Flight of the PSLV-XL version with 6 PSOM-XLs.

Obituary

Veteran documentarian Julia Reichert passes away

Veteran documentarian Julia Reichert, who won an Oscar in 2020 for her feature film 'American Factory,' passed away at the age of 76 due to cancer. In a career spanning over 50 years, Reichert received four Academy Award nominations and one win, two Primetime Emmys, a Director's Guild Award, and two Peabody Awards nods. Her documentaries, including the Oscar-nominated "Union Maids," "Seeing Red: Stories of American Communists," and "The Last Truck: Closing of a GM Plant," addressed issues of gender, class, race, and the world economy. Reichert spent 28 years teaching film production at Wright State University in addition to being a filmmaker. Reichert is survived by Bognar, daughter Lela Klein Holt, three brothers, two grandchildren and a nephew.

Belarusian Foreign Minister Vladimir Makei dies

Belarusian Foreign Minister Vladimir Makei has died suddenly. Makei had for years been in the orbit of Belarusian President Alexander Lukashenko, becoming foreign minister in 2012. Previously, Makei served as an assistant and later as chief of staff to Lukashenko. Throughout the war in Ukraine, Belarus has remained a close ally to the Kremlin: Lukashenko has hosted Russian troops and equipment, allowed Russia to use his nation as a launchpad for airstrikes

against Ukrainian targets, and detained hundreds of antiwar demonstrators.

Belarus
➢ Capital: Minsk
➢ Currency: Belarusian ruble
➢ Official languages: Belarusian, Russian
➢ President: Aleksandr Lukashenko

Veteran US sports journalist Grant Wahl dies in Qatar during FIFA World Cup match

Grant Wahl, one of the most well-known soccer writers of the United States, died while covering the World Cup match between Argentina and the Netherlands in Qatar. This was the 8th World Cup for Wahl, who has been covering football continuously since 1996. Wahl was detained a day earlier in Qatar for wearing a rainbow shirt in support of the LGBTQ community. Earlier this week, Mr Wahl was presented with an award by Brazilian football legend Ronaldo for reporting on eight consecutive World Cups - his first was in the US in 1994.

Qatar:
➢ Capital: Doha
➢ Currency: Qatari Riyal
➢ President: Tamim bin Hamad Al Thani
➢ Official language: Arabic

Veteran Economist Y K Alagh dies at 83

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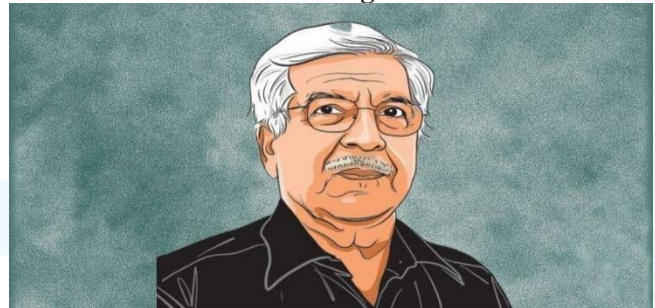
Yoginder K Alagh, a noted economist and former Union minister, passed away at the age of 83. Yoginder Alagh was an emeritus professor at the Sardar Patel Institute of Economic and Social Research, Ahmedabad. Born in Chakwal (now in Pakistan), Alagh studied at the University of Rajasthan. He completed his doctorate at the University of Pennsylvania and went on to teach at IIM-Calcutta. Later, he also served as the Vice Chancellor at the Jawaharlal Nehru University in Delhi. Between 1996-98, Alagh served as minister of power, planning, and programme implementation in the Government of India. He was also a member of the Planning Commission. Alagh was a Rajya Sabha member from Gujarat.

India'City of Joy' author Dominique Lapierre dies aged 91
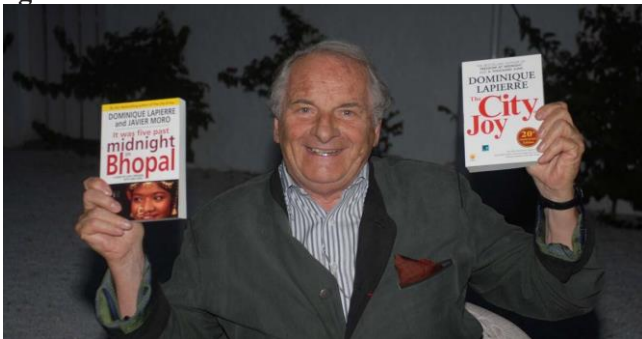
Dominique Lapierre, the French author who wrote City of Joy a book on Kolkata died at the age of 91. Born on July 30, 1931, at Chatelaillon in France, Lapierre began his career as a reporter for Paris-Match. Author of several books, including Freedom at Midnight and The City of Joy which was published in 1985. The City of Joy was adapted as a film which was directed by Roland Joffé in 1992 and starred Patrick Swayze, Om Puri, Shabana Azmi and Pauline Collins. An American doctor, a British nurse, and an illiterate Indian farmer join together to transform a Calcutta ghetto in this uplifting, inspirational movie. Dominique Lapierre had a special connection with India, and in 1981 and the Lapierre's founded the City of Joy Aid, a non-profit humanitarian organization based in Kolkata. Dominique Lapierre was awarded the Padma Bhushan, India's third-highest civilian award in 2008.

> "You Are Never Too Old To Set Another Goal Or To Dream A New Dream."

China: Former President Jiang Zemin (1993-2003) dies at 96

Former Chinese leader Jiang Zemin – the first Chinese President to visit India, dies at 96 China's former leader Jiang Zemin. He was the first Chinese President to visit India in 1996 when India and China moved towards normalizing the bilateral ties. Jiang, who was China's president from 1993-2003. Under Jiang's leadership, a peaceful handover of Hong Kong to China took place in 1997 and China joined the World Trade Organization which laid the base for China to become the world's second-largest economy with high-speed growth.

China:
➤ President: Xi Jinping
➤ Capital: Beijing
➤ Currency: Renminbi

'Die Hard & 'Top Gun' actor Clarence Gilyard Jr passes away at 66
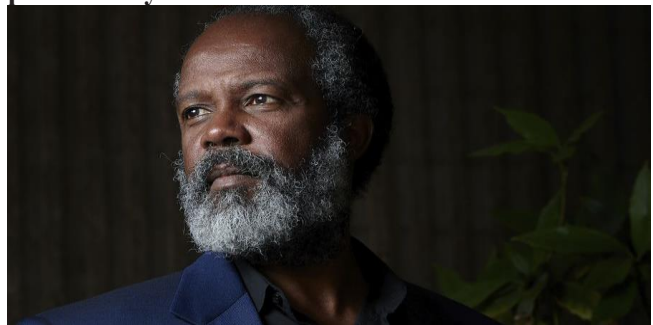
Clarence Gilyard Jr., a popular supporting actor whose credits include the blockbuster films "Die Hard" and "Top Gun" and the hit television series "Matlock" and "Walker, Texas Ranger," has died at age 66. He had a prolific career as an actor, starting in the 1980s with appearances in "Diff'rent Strokes," "The Facts of Life" and other shows. He then appeared in two of the biggest movies of the decade: "Top Gun," in which he played Sundown, a radar intercept officer, and "Die Hard."

Vikram Kirloskar, Vice Chairman of Toyota Kirloskar Motor, passes away aged 64

Vice Chairman of Toyota Kirloskar Motor (TKM), Vikram Kirloskar passed away at the age of 64. Vikram played a key role in the foundation of the Toyota Kirloskar Motor joint venture and the success of the brand in India since its inception in India in 1997.

The Kirloskar group was started back in 1888, it was in 1997 that the partnership with Toyota was cemented. Since then, the company has managed to produce many successful models like Qualis, Innova, Camry and Fortuner. Apart from this, he was also serving as the Chairman of Confederation of Indian Industry (CII) Manufacturing Council. During his illustrious career, Vikram Kirloskar was also the President of the Automotive Research Association of India (ARAI) and the Society of Indian Automobile Manufacturers (SIAM).

Kirloskar Group:
➢ Founder: Laxmanrao Kirloskar
➢ Headquarters: Pune
➢ Founded: 1888
➢ Subsidiary: Toyota Kirloskar Motor

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03 DECEMBER

WORLD DAY OF THE HANDICAPPED

Inception: 1992

Importance: To mark the proclamation by UNGA in 1992 to promote an understanding of disability issues and mobilize support for the dignity, rights and well-being of persons with disabilities.

Motto: To increase awareness from the integration of persons with disabilities in every aspect of political, social, economic and cultural life.

2022 Theme: Transformative solutions for inclusive development: the role of innovation in fuelling an accessible and equitable world

Note:
- It was originally called "International Day of Disabled Persons"
- Also known as the International Day of People with Disability (IDPwD).

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04 DECEMBER

INDIAN NAVY DAY

Importance: To commemorate the Operation Trident on 4 Dec 1971, in which Indian Navy attacked Karachi harbour during 1971's Indo-Pakistan war.

Motto: To recognize the achievements and role of the Indian Navy to the country

Indian Navy Facts:
- President is the Commander-in-Chief of Indian Navy.
- Chhatrapati Shivaji Bhosle is considered as the "Father of the Indian Navy".
- Navy Day does not commemorate the day the Indian Navy was founded. Ezhimala Naval Academy in Kerala is the largest naval academy in Asia.
- INS Viraat was the navy's 1st aircraft as well as carrier and the oldest aircraft carrier in the world.

"Failure Will Never Overtake Me If My Determination To Succeed Is Strong Enough."

"Knowing Is Not Enough; We Must Apply. Wishing Is Not Enough; We Must Do."

aarambh
Current Affairs By Mayank Ojha

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Miscellaneous Events

PhonePe fully separated from its parent company Flipkart

Flipkart, an e-commerce giant has announced the full ownership separation of the digital payments platform PhonePe. Following the partial separation which was announced in December 2020, Flipkart and PhonePe are now established as separate entities. The PhonePe Group was acquired by the Flipkart Group in 2016. As part of this transaction, existing Flipkart Singapore and PhonePe Singapore shareholders, led by Walmart, have purchased shares directly in PhonePe India. Walmart will remain the majority shareholder of both business groups. With over 400 million registered users, more than one in four Indians are now using PhonePe.

Since its launch, PhonePe has digitised more than 35 million offline merchants spread across tier 2, 3, and 4 cities, and beyond.

Flipkart:
- Founders: Binny Bansal, Sachin Bansal
- Founded: October 2007, Bangalore
- Parent organization: Walmart
- CEO: Kalyan Krishnamurthy
- Subsidiaries: Myntra, Ekart, Cleartrip, PhonePe, Mallers, Inc.

Amazon head of Prime Video, Twitch and gaming retires again

Jeff Blackburn, head of Amazon's media and entertainment businesses, is retiring from the company for a second time. Blackburn joined Amazon in 1998 after helping guide the company through its IPO at Deutsche Bank. Blackburn returned to Amazon in May of last year to lead its media and entertainment businesses (Prime Video and Amazon Studios, Music, Podcasts/Wondery, Audible, Games and Twitch). Mike Hopkins, who leads Prime Video, Amazon Studios, and MGM, will continue to lead these teams and report to Jassy directly. Steve Boom, who has been leading Music and Podcasting teams, will also now oversee Audible, Twitch, and Games businesses and report to Jassy.

Amazon Inc
- Formerly: Cadabra, Inc. (1994–1995)
- Founded: 5 July 1994
- Founder: Jeff Bezos
- Executive Chairman: Jeff Bezos
- President and CEO: Andy Jassy

WhatsApp Pay India head Vinay Choletti quits after 4 months

WhatsApp Pay's India Vinay Choletti has resigned just after four months he was elevated to the position. After Ajit Mohan, WhatsApp India head Abhijit Bose and Meta India Public Policy Head Rajiv Aggarwal also resigned from the company last month. Vinay Choletti shared an update on exiting WhatsApp on Linkedin. He joined WhatsApp from Amazon in October 2021 to head Merchant Payments vertical WhatsApp Pay.

WhatsApp:
- Founded: 2009
- CEO: Will Cathcart

UIDAI topped the Grievance Redressal Index for the fourth consecutive month in November

The Unique Identification Authority of India (UIDAI) has once again secured the first rank among all Group A Ministries, Departments and Autonomous Bodies for resolution of public grievances in the ranking report published by the Department of Administrative Reforms and Public Grievances (DARPG) for November 2022. This is the fourth month in a row that UIDAI has topped the said rankings.

UIDAI:
The Unique Identification Authority of India (UIDAI) is a statutory authority established under the provisions of the Aadhaar Act, 2016. The UIDAI is mandated to assign a 12-digit unique identification (UID) number (Aadhaar) to all the residents of India.

Nirmala Sitharaman among 6 Indians on Forbes list of world's most powerful women

Forbes released its annual list of the 100 Most Powerful Women in the World, 2022, in which six women from India feature. It includes Finance Minister Nirmala Sitharaman along with Biocon Executive Chairperson Kiran Mazumdar-Shaw, HCL Tech Chairperson Roshni Nadar Malhotra and Nykaa CEO Falguni Nair along with two more names. The Finance Minister of India has been included in this list for the fifth time in

a row. This list also includes 39 CEOs and 10 heads of state, apart from this it includes 11 billionaires, whose total assets are $ 115 billion. Union Finance Minister Nirmala Sitaraman - ranked 36, is on the list for the fourth time in a row. Roshini Nadar Malhotra, Chairperson of HCLTech - ranked 53rd. Madhabi Puri Buch, Chairperson of the Securities and Exchange Board of India (SEBI) -ranked 54th. Soma Mondal, Chairperson of the Steel Authority of India - ranked 67. Mazumdar-Shaw, executive chairperson and founder of Biocon Limited and Biocon Biologics Limited - ranked 72. Falguni Sanjay Nayar, the founder and CEO of the beauty and lifestyle retail company Nykaa - ranked 89th.

Top 3 women in the world in Forbes list:
The list was topped by European Commission President Ursula von der Leyen, who played a key role in handling COVID -19 crisis, the Russia-Ukraine war, etc. European Central Bank President Christine Lagarde stood at second position on the list.
US Vice President Kamala Harris ranked third on the list. Iran's Zina "Mahsa" Amini was posthumously ranked 100th on the influential list.

Gautam Adani, Shiv Nadar and Ashok Soota in the Forbes Asia Heroes of Philanthropy list

Gautam Adani emerged as one of the three Indian billionaires being featured in Forbes' philanthropy list this year. Shiv Nadar, and Ashok Soota, as well as Malaysian-Indian businessman Brahmal Vasudevan and his lawyer wife Shanthi Kandiah, joined Adani in the 16th edition of Forbes Asia's Heroes of Philanthropy list released. Adani's Rs 60,000 crore pledge when he turned 60 in June this year makes him one of India's most generous philanthropists. The money will address healthcare, education, and skill development and will be channelled through the family's Adani Foundation, which was founded in 1996. Each year, the foundation helps nearly 3.7 million people across India. Self-made billionaire Shiv Nadar is also one of the top donors in India, having channelled close to $1 billion over a few decades to various social causes through the eponymous Shiv Nadar Foundation. This year he donated Rs 11,600 crore to the foundation he established in 1994, intending to create an equitable, merit-based society by empowering individuals through education. Nadar, who cofounded HCL Technologies has helped set up educational institutions such as schools and universities via the foundation, which also promotes art and culture.

Priyanka Chopra, Sirisha Bandla, Geetanjali Shree and Sneha Jawale included in the BBC's list of 100 influential women of 2022

In the annual BBC(British Broadcasting Services) '100 influential Women of the year 2022 list' four India's women , Priyanka Chopra Jonas, aeronautical engineer Sirisha Bandla, Booker-winning author Geetanjali Shree and social worker Sneha Jawale have been included. Priyanka Chopra is a former Miss World (2000) and a leading Bollywood actress. Geetanjali Shree is the first Indian to win the International Booker Prize award 2022 for her Hindi novel "Ret Samadhi," or 'Tomb of the Sand'. Sirisha Bandla was part of Virgin Galactic's first fully crewed sub-orbital spaceflight in 2021. The mission was known as Unity 22 mission. She is the second Indian born woman after Kalpana Chawla to go into space. Till date three Indian origin women have gone to space but astronaut Sunita Williams, who is an American of Indian descent was born in the United States of America. Sneha Jawale, the fourth Indian on the list, is a domestic abuse victim turned social worker.

India Jumps to 48th Rank in Global Aviation Safety Ranking

India has jumped to the 48th position in the global aviation safety ranking by the International Civil Aviation Organization (ICAO), according to DGCA officials. Four years ago, the country was ranked at the 102nd position. In the ranking, Singapore is at the top, followed by the UAE and South Korea at the second and third positions, respectively. China is at the 49th place. Under its Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach, an ICAO Coordinated Validation Mission (ICVM) was undertaken from November 9 to 16. DGCA chief Arun Kumar told PTI that the regulator has worked tirelessly to upgrade India's safety ranking and the results are there. The country's score in terms of effective implementation of key safety elements has improved to 85.49 per cent. On November 16, the Directorate General of Civil Aviation (DGCA) said the audit was conducted in the areas of legislation, organisation, personal licensing, operations, airworthiness and aerodromes.

Vodafone CEO Nick Read to step down from the post by end of month

The chief executive of Vodafone Nick Read would step down at the end of the month. The mobile group's chief financial officer Margherita Della Valle will take over as interim group chief executive. Read led the former mobile telecoms market leader through the pandemic. Read has been a cheerleader for consolidation in Vodafone's major European markets, including Britain, Spain, Italy and Portugal, but has struggled to turn intention into action. In February he rejected an offer of more than 11 billion euros ($11.15 billion) for its Italian business from Iliad and Apax Partners, and in July two of its rivals in Spain – Orange and MasMovil – agreed a $19 billion merger.

Vodafone:
➢ Headquarters: Berkshire, United Kingdom
➢ CEO: Nick Read
➢ Founded: 17 July 1984
➢ Subsidiaries: Vodafone Germany, Vodafone UK, Vodafone Egypt
➢ Founders: Gerry Whent, Ernest Harrison

Serum Institute, Byju's top Burgundy-Hurun unlisted companies list

Serum Institute of India and edtech firm Byju's have topped the list of India's most valuable unlisted companies, according to the 2022 Burgundy Private Hurun India 500 study. The Pune-based vaccine producer's value has increased 20 per cent to Rs 2.2 trillion in the past one year. Byju's market value has grown 35 per cent to Rs 1.82 trillion, replacing the country's top bourse, National Stock Exchange (NSE), as the second-most valuable company on the list. NSE has seen its market value erode 17 per cent to Rs 1.39 trillion. Among the top 10 unlisted companies, Swiggy, Parle Products, Razorpay, and Ola have seen their market value double. The most-valuable industrial group in the list is Tata Group with Rs 20 trillion market value, only slightly ahead of the Adani group, which is valued at Rs 19.8 trillion. Mukesh Ambani-led Reliance Industries continued to top the list of most-valuable companies in India, followed by Tata Consultancy Services (TCS) and HDFC Bank, with a valuation of Rs 11.6 trillion and Rs 8.3 trillion, respectively. Tech giant Infosys is at fourth place, followed by ICICI bank, Bharti Airtel, HDFC, and ITC.

India's 100 Richest 2022: Gautam Adani tops Forbes rich list

American business magazine Forbes has released the list of the 100 richest Indians for 2022. The total wealth of India's 100 richest people jumped by 25 $billion to reach $800 billion, while the combined wealth of India's 10 richest people stood at $385 billion, according to Forbes India's list released. Gautam Adani is in the first position, while Mukesh Ambani has got the second position on the Forbes list. India's 10 richest people have a net worth of $385 billion with the first-ranked Bhartiya Dhankuber having a net worth of $150 billion. Forbes India has estimated the net worth of the richest woman at $16.4 billion, which includes nine women. Those with a net worth of at least $1.9 billion have been included in the list. According to the Forbes India 2022 list, Adani Group Chairman Gautam Adani's total net worth is 12,11,460.11 crore in first place. Adani's wealth has tripled in 2021. He became India's richest person for the first time in 2022. Mukesh Ambani, Chairman, and MD of Reliance Industries Limited (RIL) at number two with a net worth of 7,10,723.26 crore, has slipped to the second spot in the list for the first time since 2013.

Senior journalist Ravish Kumar resigns from NDTV following Adani acquisition

Ramon Magsaysay award-winning journalist Ravish Kumar has resigned from NDTV. The senior jounalists resignation come after the news channel was acquired by the Adani Group, and holds 29.18% stake in the news channel. Ravish Kumar has been an integral part of NDTV for more than two decades. He used to host a number of programs including Ravish ki Report, Prime Time, Hum Log and Des Ki Baat. Recently Prannoy Roy and his wife Radhika Roy had resigned as Directors on the Board of RRPR Holding Private Limited. The board of RRPR Holding has approved the appointment of Sudipta Bhattacharya, Sanjay Pugalia and Senthil Sinniah Chengalvarayan as Directors on its board with immediate effect.

NDTV:
➢ Founders: Prannoy Roy, Radhika Roy
➢ Founded: 1988
➢ Headquarters: New Delhi
➢ Subsidiaries: NDTV Networks Limited, NDTV News Limited

Defence Exercise of the Month

Harimau Shakti 2022

India-Malaysia joint military Exercise Harimau Shakti-2022 started at Pulai Klang in Malaysia. The military exercise will culminate on the 12th of next month. HARIMAU SHAKTI will enhance the defence cooperation between Indian Army and the Malaysian Army. Combat troops of the Garhwal Rifles Regiment of the Indian Army and the Royal Malay Regiment of the Malaysian Army are participating in the exercise.
The military exercise will enhance interoperability in planning and execution of various operations in jungle terrain. During the exercise, emphasis will be made on developing tactical skills and enhancing interoperability between the two forces. HARIMAU SHAKTI is an annual training event between Indian and Malaysian armies which has been conducted since 2012.

Malaysia
➢ Capital: Federal Territory of Kuala Lumpur
➢ Prime minister: Anwar Ibrahim
➢ Official language: Malay

Austra Hind 2022

The inaugural edition of the bilateral military exercise Austra Hind 2022, between contingents of the Indian and the Australian armies begun at the Mahajan Field Firing Ranges in Rajasthan and will comprise joint training operations in semi-desert terrain under the United Nations (UN) peace enforcement mandate. The exercise will conclude on December 11. This is the first exercise in the series of Austra Hind with participation of all arms and services contingents from both armies. Exercise Austra Hind will be a yearly event that will be conducted alternatively in India and Australia. The aim of the exercise is to build positive military relations, imbibe each other's best practices and promote the ability to operate together while undertaking multi-domain operations in semi-desert terrain. This joint exercise will enable the two armies to share best practices in tactics, techniques and procedures for conducting tactical operations at company and platoon levels for neutralising hostile threats. The joint exercise includes use of new-generation equipment and specialised weapons, including snipers, and deployment of surveillance and communication equipment to achieve a high degree of situational awareness apart from casualty management, casualty evacuation and planning logistics at the battalion and company levels.

Surya Kiran

Nepal and India are all set to conduct the 16th edition of Surya Kiran, the joint military training exercise between the two South Asian nations. The exercise, which will focus on counter-terrorism, martial arts, humanitarian aid, natural disasters, environmental protection, will take place at the Integrated Military Training Centre in Saljhandi, Rupandehi district. According to the Nepal Army, the Surya Kiran is a 14-day long joint training based on counter-insurgency operations in the jungle and mountainous terrain. The forces share their experiences drawn from several counter-insurgency operations during the exercise. Both armies familiarize themselves with each other's weapons, equipment, tactics, techniques and operating procedures in a counter-insurgency environment. A team of the Indian Army has already arrived in Rupandehi. As many as 350 army personnel will take part in the joint exercise from both sides, according to the Nepal Army. It will conclude on December 29. The joint exercise first started in 2011. The 15th edition of Surya Kiran had taken place on September 20, 2021, in Pithoragarh, Uttarakhand.

Nepal:
➢ Capital: Kathmandu
➢ Currency: Nepalese Rupee
➢ Prime minister: Pushpa Kamal Dahal

KAZIND - 2022

The 6th Edition of Indo - Kazakhstan joint training exercise "KAZIND-22" is scheduled to be conducted at Umroi, Meghalaya from 15 to 28 December 2022. Troops of the Kazakhstan Army, including troops from the regional command, 11 Gorkha Rifles and troops from the Indian Army will participate in the exercise. Aim of the exercise is to build positive military relations, imbibe each other's best practices and promote the ability to operate together while undertaking counter terrorist operations in semi urban / jungle scenario, under a UN peace enforcement

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mandate. This joint exercise will enable the two armies to train, plan and execute a series of combined tactical drills for neutralising of likely threats that may be encountered in UN peacekeeping operations. The scope of this exercise involves a Command Post Exercise (CPX) at the Battalion level and Company level Field Training Exercise (FTX) on sub-conventional operations. During the exercise, participants will engage in a variety of missions ranging from joint planning, joint tactical drills, basics of special arms skills, HADR and raiding a hostile target.

KAZIND:

Joint annual training exercise with the Kazakhstan Army was instituted in 2016 as Exercise Prabal Dostyk, which was later upgraded to a company level exercise and renamed as Ex Kazind in 2018.

IND-INDO CORPAT

The 39th edition of India-Indonesia Coordinated Patrol (IND-INDO CORPAT) between the Indian Navy and the Indonesian Navy is conducted. It is will be conducted from 08 – 19 December 2022. The CORPAT will be executed along the International Maritime Boundary Line (IMBL) from 15 to 16 December 2022 and will conclude at Port Blair, Andaman and Nicobar. Along with INS Karmuk, L-58 (indigenously built Landing Craft Utility vessel) and Dornier Maritime Patrol Aircraft will be participating in the CORPAT. KRI Cut Nyak Dien, a Kapitan Pattimura Class Corvette, would represent the Indonesian side.

Coordinated Patrol

India conducts Coordinated Patrol with the navies of Bangladesh, Myanmar, Thailand, Indonesia and France. The main aim of conducting the coordinated petrol between two navies is to strengthen mutual understanding and enhanced interoperability between both the navies in countering transnational maritime threats at sea.

International Fleet Review (IFR)

The Indian Navy delegation led by Vice Admiral Biswajit Dasgupta, the Flag Officer Commanding-in-Chief, Eastern Naval Command and three warships of the Indian Navy participated in the maiden International Fleet Review (IFR) hosted by Bangladesh at Cox's Bazar. With three ships, the Indian Navy contingent was the largest amongst the participating foreign navies in this IFR. The other five participating ships were from China, Malaysia, Myanmar, Thailand and the USA. The three ships representing the Indian Navy, the Guided Missile Destroyer INS Kochi, Anti-Submarine Warfare Corvette INS Kavaratti and Offshore Patrol Vessel Sumedha are all indigenously designed and constructed warships. This was the first International Fleet Review to be hosted by Bangladesh. The IFR complements the celebrations of 50 years of liberation of Bangladesh and the 'Swarnim Vijay Varsh' as well as the 'Maitri Diwas' celebrated on 06 December every year, marking the establishment of formal diplomatic relations between India and Bangladesh. The presence of the Indian Navy at the maiden International Fleet Review (IFR) hosted by Bangladesh was thus an apt reiteration of strong bilateral relations between India and Bangladesh and the role of the Indian Navy in strengthening defence cooperation in the maritime domain.

Sangam exercise

The 7th edition of Exercise Sangam, a joint Naval Special Forces exercise between Indian Navy MARCOs and US Navy SEALs commenced at Goa. Exercise Sangam was first conducted in 1994 and is an important military and diplomatic initiative between the two nations, reflective of the trust and friendship between them. The present edition will see personnel from SEAL Team Five based at San Diego, USA and Indian Navy MARCOs from INS Abhimanyu. It aims to exchange ideas and experiences on various aspects of Maritime Special Operations. A joint exercise among US SEALs, MARCOs and other participating nations' Naval Special Forces is held annually as part of Exercise Malabar. The Sangam exercise is a bilateral exercise purely between the US and Indian Special Forces. The exercise will be for a duration of three weeks, in which the personnel will be trained in Maritime Interdiction Operations, Direct Action Missions, Combat Free Fall Jumps, Special Heliborne Operations and other skill drills.

Indian Navy MARCOs:

MARCOS was raised in the year of 1985 as the Indian Maritime Special Force (IMSF). 2 Years later, MARCOS were renamed as the Marine Commando Force (MCF) with the deadliest motto "The Few The Fearless".

Agni Warrior Exercise

The 12th Edition of Exercise Agni Warrior, a bilateral exercise between the Singapore & Indian Army, which concluded at Field Firing Ranges, Devlali. Exercise Agni Warrior, involved showcasing joint firepower planning, execution and use of New Generation Equipment by the Artillery arm of both armies. Exercise also included participation by both sides in a joint computer war-game as part of joint planning process. Both sides utilised niche technology and Artillery Observation Simulators as part of joint training phase. Expert academic discussions were conducted on modern trends in Artillery and refinement of Artillery planning process. Indigenously manufactured Artillery guns and howitzers also participated during the final phase of the exercise.

The exercise achieved its aim of enhancing mutual understanding of drills & procedures and improving interoperability between the two armies.

Singapore:
- President: Halimah Yacob
- Prime Minister: Lee Hsien Loong
- Currency: Singapore dollar

Samanvay 2022

Indian Air Force conducted the Annual Joint Humanitarian Assistance and Disaster Relief (HADR) Exercise "Samanvay 2022" at Air Force Station in Agra. The exercise aims to provide a unique platform for the exchange of domain knowledge, experience, and best practices with the participating Association of Southeast Asian Nations (ASEAN) member countries.

Strengthening the institutional mechanism:

The aim of the exercise includes assessing the efficacy of institutional Disaster Management structures and contingency measures. To build a deep understanding of it, a seminar on Disaster Management, a 'Multi-Agency Exercise' involving static and flying displays of various HADR assets, and a 'Tabletop Exercise' will be held. In India various national and regional stakeholders are involved in Disaster Management. The exercise will promote a synergistic approach by involving various institutions like the Armed Forces, National Disaster Management Authority (NDMA), National Disaster Response Force (NDRF), Defence Research and Development Organisation (DRDO), Border Roads Organisation (BRO), India Meteorological Department (IMD) and the Civil Administration. The exercise would aid in the evolution of institutional frameworks for effective communication, interoperability, cooperation, and their application for the successful conduct of HADR.

Disaster Management in India:

In India, NDMA is the apex statutory body for disaster management. It was formally constituted on 27th September 2006, by the Disaster Management Act, 2005 with Prime Minister as its Chairperson.

Exercise Garuda Shakti 2022

The 8th edition of the India-Indonesia bilateral joint training exercise 'Garuda Shakti' began at the Sangga Buana training centre in Karawang, west Java, Indonesia. A contingent of Indian Special Forces troops is currently participating in this intensive 13-day training program in Karawang with Indonesian Special Forces.

Exercise Garuda Shakti 2022:

Exercise Garuda Shakti 2022 is a part of military-to-military exchange programs. It seeks to improve understanding, cooperation, and interoperability between the special forces of the two armies. Given that India and Indonesia are maritime neighbours and strategic partners, both nations made progress toward ensuring regional security with this exercise. Note: The first edition of Exercise Garuda Shakti was conducted in 2012 in India.

Veer Guardian 23

India and Japan are set to conduct their first-ever bilateral combat air exercise over 10 days in Japan next month. The exercise named 'Veer Guardian 23' will be conducted from January 16 to January 26. The Japan Air Self-Defence Force (JASDF) will conduct a bilateral fighter training with the Indian Air Force (IAF). The exercise aims to promote mutual understanding and strengthen defence cooperation between the air forces. IAF will be fielding its Russian-origin Sukhoi-30MKI aircraft drawn from a squadron under the Western Air Command. The fighter jets on their journey from India to Japan will be re-fuelled mid-air using the IL-78 planes of the IAF. Japan will field its F-2 jets which are derivatives of the F-16 plane of the US. The exercise will at Hyakuri Air Base north-west of Tokyo.

Important Days of the Month

Date	Observed As	Importance/Motto
January 1	Global Family Day	To promote the idea that the Earth is one Global family and we should live in peace
January 4	World Braille Day	To mark the birth anniversary of Louis Braille.
January 9	NRI Day	To mark the contribution of the overseas Indian community towards the development of India.
January 10	World Hindi Day	To mark the birth anniversary of first World Hindi Conference which was held in 1975.
January 12	National Youth Day	To mark the birth anniversary of the Swami Vivekananda.
January 15	Army day	Field Marshal K. M. Cariappa became the first Indian Army Chief of Independent India on 15 January 1949.
January 24	National Girl Child Day	To increase awareness among the people and ensure every girl gets equal importance as their counterparts.
January 25	National Voters day	To mark the foundation day of the Election Commission of India (ECI)
January 26	India's Republic Day	To mark the Declaration of Indian Independence that was proclaimed by the Indian National Congress.
January 27	International Holocaust Remembrance Day	To commemorate the tragedy of the Holocaust that occurred during the Second World War.
January 30	Martyrs' Day	To mark the assassination of Mohandas Karamchand Gandhi Ji.

Trending Topic of the Month

FIFA World Cup 2022

The 2022 FIFA World Cup was an international football tournament contested by the men's national teams of FIFA's member associations and 22nd edition of the FIFA World Cup. It took place in Qatar from 20 November to 18 December 2022, making it the first World Cup held in the Arab world and Muslim world, and the second held entirely in Asia after the 2002 tournament in South Korea and Japan. France were the defending champions, having defeated Croatia 4–2 in the 2018 final. At an estimated cost of over $220 billion, it is the most expensive World Cup ever held to date; this figure is disputed by Qatari officials.

Host country: Qatar
Dates: 20 November – 18 December
Teams: 32
Champions: Argentina (3rd title)
Runners-up: France
Third place: Croatia
Fourth place: Morocco
Top scorer(s): Kylian Mbappé (8 goals)
Best player(s): Lionel Messi
Best young player: Enzo Fernández
Best goalkeeper: Emiliano Martínez
Fair play award: England

Prize money

In April 2022, FIFA announced the prizes for all participating nations. Each qualified team received $1.5 million before the competition to cover preparation costs with each team receiving at least $9 million in prize money. This edition's total prize pool was $440 million, $40 million greater than the prize pool of the previous tournament.

Place	Teams	Amount (in millions)
Champions	1	$42	$42
Runners-up	1	$30	$30
Third place	1	$27	$27
Fourth place	1	$25	$25

Officiating

For the first time women referees officiated games at a major men's tournament. France's Stéphanie Frappart, Salima Mukansanga from Rwanda, and Yoshimi Yamashita from Japan became the first female referees to be appointed to a men's World Cup. On 15 December 2022, FIFA announced that Polish referee Szymon Marciniak would adjudicate the final.

Mascot

The tournament's official mascot was unveiled on 1 April 2022, during the group stage draw. Its name is La'eeb, which is an Arabic word meaning "super-skilled player".

Match ball

The official match ball, "Al Rihla", was unveiled on 30 March 2022. It was mainly inspired by the culture, architecture, iconic boats and flag of Qatar. In Arabic, the word Al Rihla means "the journey". The ball was designed with sustainability as a priority, making it the first ever official match ball created with water-based glues and inks. As "the game is getting faster" and "speeds up", the Adidas ball has internal electronic sensors, allowing detection of its speed and position, updated 500 times per second and it has to be charged before each game. Two of the match balls were sent and returned from space by FIFA and Qatar Airways on a SpaceX falcon 9 suborbital mission for promoting the world cup

About FIFA 2022 Finals

Capping off the World Cup career of arguably football's greatest player, Lionel Messi finally hoisted the trophy after a breathtaking victory over France on penalties. In a battle of the titans at Lusail Stadium, Messi scored two goals for the Argentinian side, while Kylian Mbappe carried France with a hat trick, keeping his side in the match right to the penalties, with the score 3-3 at the end of extra time. Argentina dominated the first half of a match that seemed like the team would effortlessly steamroll over a sleepwalking French side, with two unanswered goals going into the half. But Mbappe came to life in the second half, scoring his first goal in the 80th minute from the penalty spot and his second within another two minutes, bringing the sides even through the end of regulation time. The action didn't stop through extra time, with Messi putting his second goal past French keeper Hugo Lloris in the 108th minute, only to be answered by Mbappe from the penalty spot in the 118th minute, sending the match to penalty kicks. Argentina won the shootout 4-2 after a spot-kick by Gonzalo Montiel, ending a run of four straight World Cup wins by European teams. The last time a South American team won the World Cup was Brazil in 2002.

Awards:

The following World Cup awards were given at the conclusion of the tournament. The Golden Boot (top scorer), Golden Ball (best overall player) and Golden Glove (best goalkeeper) awards were all sponsored by Adidas.

Award	Person/Team
Golden Ball	Lionel Messi
Silver Ball	Kylian Mbappé
Bronze Ball	Luka Modrić
Golden Boot	Kylian Mbappé
Silver Boot	Lionel Messi
Bronze Boot	Olivier Giroud
Golden Glove	Emiliano Martínez
FIFA Young Player Award	Enzo Fernández
FIFA Fair Play Trophy	England

Players that broke records at the 2022 World Cup
1. Lionel Messi

✓ Most Man of the Match awards won in FIFA World Cup history – 8
✓ First person to assist at five different FIFA World Cups
✓ Most FIFA World Cup appearances as captain: 19
✓ Most appearances in FIFA World Cup tournaments by a player

✓ Only player to win two Golden Balls [Best player of the tournament] – 2014, 2022
✓ The most number of minutes played in the World Cup with 234 minutes, surpassing Paolo Maldini.
✓ Most goal contributions in a World Cup – 21 total (13 goals and 8 assists)
✓ Most appearances in FIFA World Cups – 26
✓ Most goals at World Cup for an Argentina player – 13

2. Kylian Mbappe

✓ Most goals by a player aged 23 or younger in a single World Cup all-time – 8
✓ Most World Cup knockout stage goals aged 23 or younger in a World Cup- 7
✓ Most goals scored at a World Cup final than any other player – 4
✓ The second player to score a hat-trick in the men's World Cup final

3. Cristiano Ronaldo

The first footballer to score at five World Cups

4. Manuel Neuer
Most appearances for a goalkeeper in World Cup history – 19

5. Olivier Giroud

Most goals for France -52

6. Leandro Paredes

Most passes completed by a substitute in a World Cup match -77

7. Jamal Musiala

Most dribbles in a World Cup match by a teenager -12, vs. Costa Rica

Collegium system Vs NJAC: A judicial tussle between SCI & Central Govt.

The recent attacks on the collegium system and the Supreme Court are disconcerting as they come from the Law Minister and the Vice-President. The collegium system has been criticised in the past and so has the Supreme Court for having struck down the 99th constitutional amendment that created the National Judicial Appointments Commission (NJAC) and was voted almost unanimously in both Houses of Parliament.

But very few critics understand that the constitutional amendment and the NJAC Act, 2014 was so badly drafted that the NJAC would have collapsed under its own contradictions. All the counsels who argued against the amendment, including Fali Nariman, the late Anil Divan, the late Ram Jethmalani and this writer, had repeatedly informed the Supreme Court that they had no objection to the NJAC replacing the collegium provided judges, sitting or retired, were in a clear majority in the Commission. But the Union of India refused to relent and the 99th amendment was eventually struck down as being violative of the basic structure.

A simple analysis of the appointment process shows that it was unworkable. Under Article 124A, the NJAC oddly had an even number of six members but the Chairperson, the Chief Justice of India, had no casting vote. What would happen if there was a tie and, therefore, a deadlock? No answer.

What is Collegium System?

It is a system under which appointments and transfers of judges are decided by a forum of the Chief Justice of India and the four senior-most judges of the Supreme Court. The collegium will recommend the names of the candidates to the Central Government. Also, the central government will send the names of the proposed candidates for consultation. The appointment process takes a long time since there isn't a fixed time limit for it. If the Collegium resends the same name again then the government has to give its assent to the names.

Note: The Collegium System faced a lot of criticism not only from the government but also from civil society due to its Lack of Transparency and Accountability. This led to the 99th Constitutional Amendment Act, 2014 the National Judicial Commission Act (NJAC) to replace the collegium system for the appointment of judges.

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Composition of Collegium System
✓ The SC collegium is headed by the CJI (Chief Justice of India) and comprises four other senior most judges of the court.
✓ A High Court collegium is led by the incumbent Chief Justice and two other senior most judges of that court.
✓ Judges of the higher judiciary are appointed only through the collegium system and the government has a role only after names have been decided by the collegium.

What is National Judicial Appointment Commission?
The NJAC Act and the amendment leave the power of judicial appointments, in the hands of the executive almost in its entirety. Judicial appointments have always been associated with the independence of Judiciary, which has time and again been recognized to be part of the basic structure of the Constitution.

Composition of NJAC
✓ The Chief Justice of India
✓ 2 senior-most judges of the Supreme Court
✓ The Law Minister of India
✓ 2 eminent members that are chosen by the Selection Committee

Irony Behind
Strangely, to select Supreme Court or high court judges, the eminent person needed no connection with the law. In fact, during the arguments, the response of the Union of India was categorical: The eminent members need have no knowledge of law or the functioning of the courts. It was stated that even M S Swaminathan, the renowned agricultural scientist, could be a member. Thus, one-third of the NJAC could be constitutionally and blissfully unaware of the functioning of the Supreme Court or the high courts and yet decide the destiny of our higher judiciary.

The NJAC Act, 2014, which prescribed the procedure for appointment and transfer of judges, was riddled with contradictions and absurdities. Section 5(1) required the NJAC to recommend the senior-most judge of the Supreme Court as the Chief Justice of India "if he is considered fit to hold the office". Neither the 99th Amendment nor the NJAC Act had any prescribed criteria of what constituted fitness to hold office. On what ground could the senior-most judge become "unfit"? No answer.

A shocking provision was the veto power: No recommendation could be made by the NJAC if any two of the six members disagreed. There could not be a more blatant method of frustrating the appointment process and enabling the executive to completely dominate the judiciary.

And now comes the worst blow. The NJAC had the power to frame regulations laying down the criteria of suitability, and the procedure of appointing judges of the Supreme Court and the High Courts. These regulations had to be tabled before both Houses of Parliament. Under section 13, Parliament had the power to nullify these regulations or modify them. This single fatal section made a complete mockery of the appointment process. The present collegium system, despite its drawbacks, is a far better method of selecting Supreme Court and High Court judges.

"You Are Never Too Old To Set Another Goal Or To Dream A New Dream."

"The Future Belongs To The Competent. Get Good, Get Better, Be The Best!"

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What is carbon capture, utilization, and storage? Explained
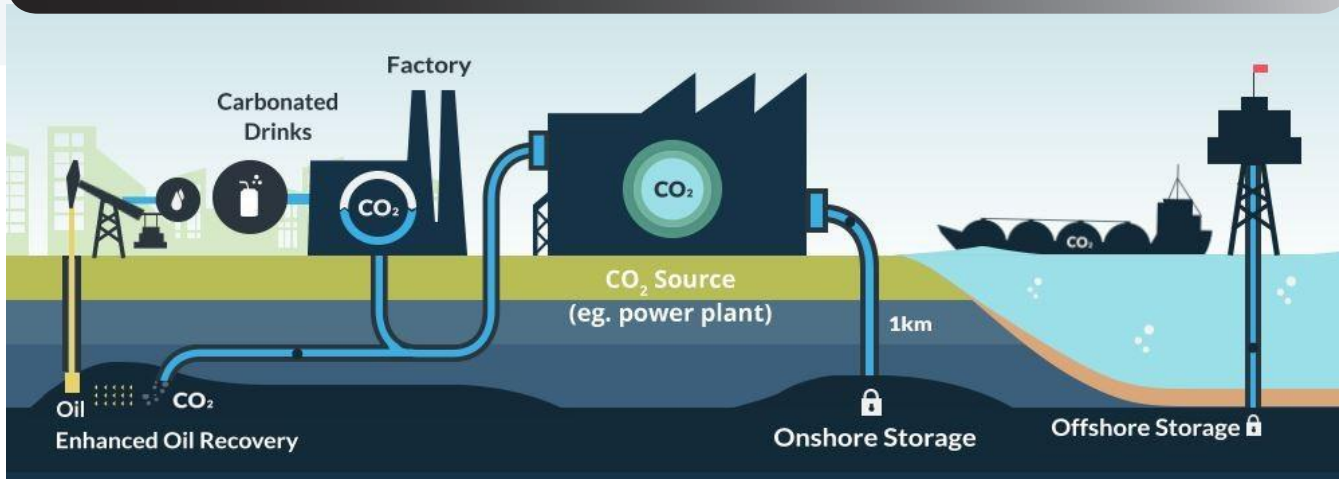
Carbon capture, utilization, and storage (CCUS) is the process of capturing carbon dioxide emissions and either using them to make things such as building materials (utilization) or permanently storing them thousands of feet below the surface (storage).

Capturing carbon dioxide from industrial operations before it has a chance to enter the atmosphere helps reduce emissions, as does removing it directly from the air. The carbon dioxide is then reused or sent through an injection well deep underground where it is locked away safely and permanently.

It's a straightforward concept that takes infrastructure and policy considerations to implement.

Why CCUS is important?

CCUS helps reduce the carbon intensity of industrial operations and is a critical component of meeting the global net-zero ambitions of the Paris Agreement.

In fact, the Intergovernmental Panel on Climate Change notes in its Global Warming of 1.5 °C report that achieving net-zero emissions by 2050 isn't possible without ambitious mitigation actions that could include large-scale deployment of carbon dioxide removal technologies like CCUS.

Because we are committed to advancing a lower carbon future, deploying CCUS to lower the carbon intensity of our existing assets and growing our CCUS business targeting third-party emitters as partners and customers.

Industrial Applications of CCUS
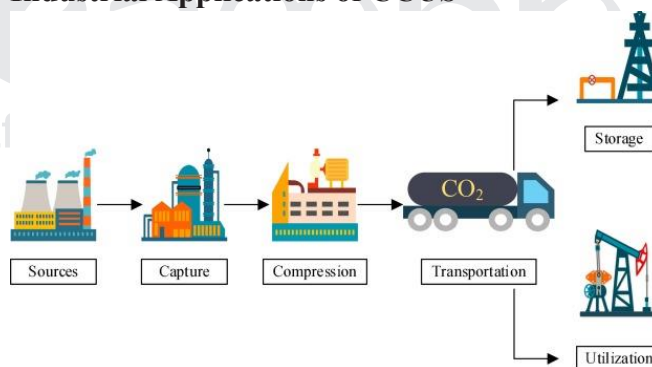
In the cement and concrete industrial sectors, large amounts of CO_2 are released during the firing of limestone and clay that splits the materials into CO_2 and calcium oxide (CAO). To address this challenge, research projects are advancing worldwide to pilot new technologies that recover and recycle the CO_2 generated in this process as well as develop new concrete products that actively absorb CO_2 from the atmosphere and capture it inside the concrete when the concrete hardens. In the fuel and basic chemicals industrial sectors, there is an urgent need to promote of bio-jet fuel to help the aviation industry reduce its carbon footprint. One potential solution is new technology that produces synthetic gas from various carbon sources such as

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recovered CO₂. When combined with chemical processes and biotechnology based on catalytic reactions and microorganismsm, this synthetic gas can now be used to produce synthetic fuels and basic chemicals that can contribute to decarbonization in these sectors.

Although the potential for absolute CO₂ emissions reduction is relatively small compared to other industrial sectors because of low production volumes, innovations in the fine chemicals sector do offer opportunities to make a meaningful environmental impact. There is a growing body of research worldwide focused on technologies that can convert CO₂ and biomass into oxygenated compounds such as high-functional plastics.

Why in News

India released its 'Carbon Capture, Utilisation, and Storage Policy Framework and its Deployment Mechanism in India'. The report explores the importance of Carbon Capture, Utilisation, and Storage as an emission reduction strategy to achieve deep decarbonization from the hard-to-abate sectors. The report outlines broad level policy interventions needed across various sectors for its application. As, India has updated its NDC targets for achieving 50% of its total installed capacity from non-fossil-based energy sources, 45% reduction in emission intensity by 2030 and taking steps towards achieving Net Zero by 2070, the role of Carbon Capture, Utilisation, and Storage (CCUS) becomes important as reduction strategy to achieve decarbonization from the hard-to abate sectors. CCUS projects will also lead to a significant employment generation. It estimates that about 750 mtpa of carbon capture by 2050 can create employment opportunities of about 8-10 million on full time equivalent (FTE) basis in a phased manner. The report indicates that CCUS can provide a wide variety of opportunities to convert the captured CO2 to different value-added products like green urea, food and beverage form application, building materials (concrete and aggregates), chemicals (methanol and ethanol), polymers (including bio-plastics) and enhanced oil recovery (EOR) with wide market opportunities in India, thus contributing substantially to a circular economy.

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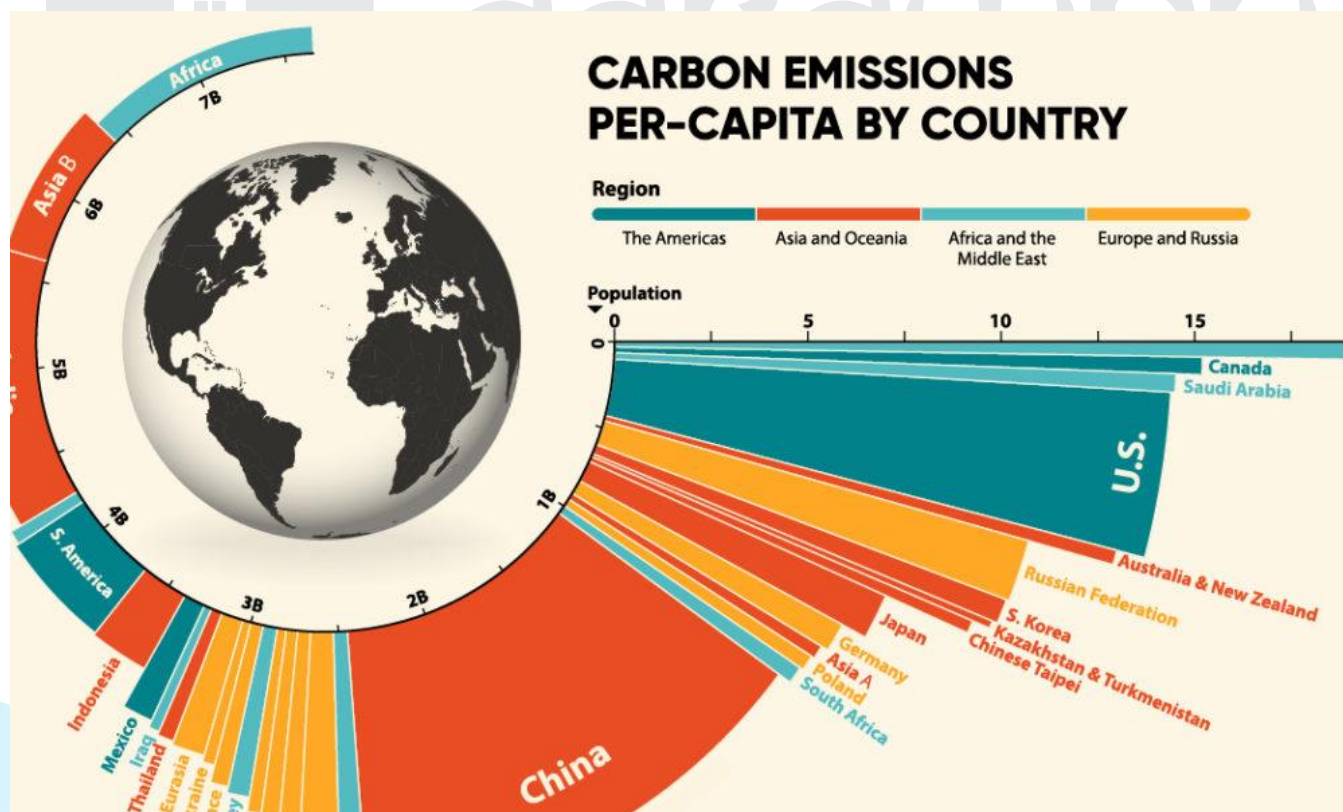
GS Question Bank(250 Que include)

Statement Based Current Affairs

1. Consider the following statements regarding to Permanent settlement system:
1. This arrangement was on 19% of British India. Applicable in Bengal, Bihar, Orissa, Varanasi in Uttar Pradesh and North Karnataka.
2. Under this, the zamindar retained 10 / 11th part of the realization of land revenue from his areas and deposited the remaining part (1 / 11th) with the company.
Which of the statements given above is/are correct?
(A) 1 only **(B)** 2 only
(C) Both 1 and 2 **(D)** Neither 1 nor 2

2. Consider the following statements regarding to Ryotwari System:
1. In this method, the farmer had to pay between 20% and 30% to the renting company.
2. In 1792 AD, Captain Reid introduced the Ryotwari System first in Baramhal district of Tamil Nadu.
Which of the statements given above is/are not correct?
(A) 1 only **(B)** 2 only
(C) Both 1 and 2 **(D)** Neither 1 nor 2

3. Consider the following statements:
1. The Rashtrakutas considered themselves descendants of Satyaki.
2. The Kailash Temple at Ellora was built by the Rashtrakuta King Krishna I.
Which of the statements given above is/are correct?
(A) 1 only **(B)** 2 only
(C) Both 1 and 2 **(D)** Neither 1 nor 2

4. Consider the following correct statements.
1. Kharif crops, which are also known as monsoon crops, are the crops which are grown during the monsoon or rainy season (June to October).
2. The major Kharif crop in India is wheat, followed by barley, mustard, sesame and peas.
(A) only 1 **(B)** Only 2
(C) both 1 and 2 **(D)** none of these

5. Consider the following correct statements.
1. Mumbai Port Trust, abbreviated as JNPT, also known as Nhava Sheva, is the largest container port in India.

2. Government of India plans to modernise all ports and has approved a project called Sagarmala.
(A) only 1 **(B)** Only 2
(C) both 1 and 2 **(D)** none of these

6. Consider the following correct statements.
1. Jim Corbett National Park is the oldest national park in India and was established in 1936 as Hailey National Park to protect the endangered Bengal tiger.
2. Kanhna national park was the first to come under the Project Tiger initiative.
3. Sundarbans National Park is densely covered by mangrove forests, and is one of the largest reserves for the Bengal tiger.
(A) only 1 **(B)** Only 2
(C) both 1,2 and 3 **(D)** none of these

7. Consider the following correct statements.
1. The Gulf Stream is a warm and swift Atlantic Ocean current that originates in the Gulf of Mexico and stretches to the tip of Florida.
2. Labrador current is cold current of Arctic Ocean, which flows along the eastern coast of Canada.
3. Canary Current, also known as the Black Current or the Black Stream,
(A) only 1 **(B)** Only 2
(C) both 1 and 2 **(D)** none of these

8. Consider the following statements:
1. The salaries and allowances of the Speaker of Legislative Assembly and Chairman of Legislative Council shall be determined by the State Legislature.
2. The emoluments, allowances and privileges of the Governor shall be determined by the State Legislature.
Which of the statements given above is/are correct?
(A) 1 only **(B)** 2 only
(C) Both 1 and 2 **(D)** Neither 1 nor 2

9. Consider the following statements:
1. The District Judges and Magistrate of the Civil Courts shall be appointed by the Governor.
2. The Guwahati High Court has territorial jurisdiction over five number of States.

Which of the statements given above is/are not correct?
(A) 1 only   (B) 2 only
(C) Both 1 and 2   (D) Neither 1 nor 2

10. Consider the following statements:
1. The Constitution of 1950 envisaged a Supreme Court with one Chief Justice and 7 puisne Judges.
2. The number of SC judges was increased by the Parliament and currently, there are 34 judges including the Chief Justice of India (CJI).
Which of the statements given above is/are not correct?
(A) 1 only   (B) 2 only
(C) Both 1 and 2   (D) Neither 1 nor 2

11. Consider the following statements:
1. Supreme Court and high court judges are not appointed to various posts in tribunals and commissions, after their retirement.
2. President can remove a judge when parliament approves with a majority of the total membership of each house in favour of impeachment.
Which of the statements given above is/are not correct?
(A) 1 only   (B) 2 only
(C) Both 1 and 2   (D) Neither 1 nor 2

12. Which of the following statements is true?
I. The Balance of Payments (BOP) is an overall statement of a state's economic transactions.
II. Globalization is the shift towards a more united and interdependent world economy.
Select the correct option.
(A) Only I   (B) Only II
(C) Both I & II   (D) Neither I nor II

13. Which of the following statements is true?
I. EXIM Policy is the export-import policy of the government that is announced every five years.
II. The three major international economic institutions are WTO, IMF, World Bank.
Select the correct option.
(A) Only I   (B) Only II
(C) Both I & II   (D) Neither I nor II

14. Which of the following statements is true?
I. World Trade Organization (WTO) was established in 1998 to replace GATT (General Agreement on Tariffs and Trade.

II. International Monetary Fund (IMF) consists of 189 countries that work in collaboration to foster global monetary cooperation.
Select the correct option.
(A) Only I   (B) Only II
(C) Both I & II   (D) Neither I nor II

15. Which of the following statements is true?
I. Liberalization was brought about with an idea that any regulations or restrictions that were imposed on free trade.
II. Privatization refers to giving more opportunities to the all sector.
Select the correct option.
(A) Only I   (B) Only II
(C) Both I & II   (D) Neither I nor II

16. Which of the following statement (s) is true?
I. Movement of a fan is an example of a non-uniform accelerated motion.
II. Glass is a bad thermal conductor.
Select the correct option.
(A) Only I   (B) Only II
(C) Both I & II   (D) Neither I nor II

17. Which of the following statement (s) is true?
I. According to kepler's first law, a moving planet follows circle path.
II. Newton's law of gravitation, states that any particle of matter in the universe attracts any other with a force.
Select the correct option.
(A) Only I   (B) Only II
(C) Both I & II   (D) Neither I nor II

18. Which of the following statement (s) is true?
I. Meter in a vehicle that calculates distance covered by the vehicle is called odometer.
II. Throttle Valve for regulating the supply of a fluid (as steam) to an engine.
Select the correct option.
(A) Only I   (B) Only II
(C) Both I & II   (D) Neither I nor II

19. Which of the following statement (s) is true?
I. A stone of same size has more inertia
II. Reflection from a smooth surface like that of a mirror is called regular.
Select the correct option.
(A) Only I   (B) Only II

(C) Both I & II   **(D)** Neither I nor II

20. Which of the following statements is true?
I. Oxidation process by which electric current is passed through a substance to effect a chemical change.
II. precipitation is any product of the condensation of atmospheric water vapour.
Select the correct option.
(A) Only I   **(B)** Only II
(C) Both I & II   **(D)** Neither I nor II

21. Which of the following statements is true?
I. Redox reactions are oxidation-reduction chemical reactions.
II. Salt (NaCl), sodium chloride, mineral substance of great importance to human and animal health.
Select the correct option.
(A) Only I   **(B)** Only II
(C) Both I & II   **(D)** Neither I nor II

22. Which of the following statements is true?
I. Sulphate ion is a Cation.
II. Chlorine oxide is not a component of Smog.
Select the correct option.
(A) Only I   **(B)** Only II
(C) Both I & II   **(D)** Neither I nor II

23. Consider the following correct statements.
1. Biochemistry: the study of the material substances that make up living things
2. Evolutionary biology: the study of the basic cellular units of living things
(A) only 1   **(B)** Only 2
(C) Both 1 and 2   **(D)** Neither 1 nor 2

24. Consider the following correct statements.
1. Cancer is a disease of abnormal and uncontrolled cell growth and proliferation.
2. Asthma is a condition in which your airways narrow and swell and produce extra mucus.
(A) Only 1   **(B)** Only 2
(C) Both 1 and 2   **(D)** Neither 1 nor 2

25. Which of the following statements is true?
I. World Trade Organization (WTO) was established in 1998 to replace GATT (General Agreement on Tariffs and Trade.
II. International Monetary Fund (IMF) consists of 189 countries that work in collaboration to foster global monetary cooperation.
Select the correct option.
(A) Only I   **(B)** Only II
(C) Both I & II   **(D)** Neither I nor II

Statement Based General Awareness

1. Recently, the 2022 Forest Declaration Assessment has published.
In India, the problem of soil erosion is associated with which of the following?
(1) Terrace cultivation
(2) Deforestation
(3) Increased pollution
Which of the above is/are correct?
(A) Only (1) and (3)   **(B)** Only (2) and (1)
(C) Only (3) and (2)   **(D)** None of the above

2. Recently, Jharkhand chief minister who was an accused of holding an office of profit, pleaded to government to make his crime public as well as grant him punishment at the earliest.
Consider the following statements -
(1) The Parliament (Prevention of Disqualification) Act, 1959 exempts several posts from disqualification on the grounds of 'Office of Profit'.

(2) The above-mentioned Act was amended five times.
(3) The term 'Office of Profit' is well-defined in the Constitution of India.
Which of the above is/are correct?
(A) Only (1) and (2)   **(B)** Only (2) and (3)
(C) Only (3) and (1)   **(D)** All are correct

3. The Reserve Bank of India (RBI) injected Rs 72,860.7 crore of liquidity into the banking system in October 2022.
The RBI decides to adopt an expansionist monetary policy, which of the following would it not do?
(1) Cut and optimize the Statutory Liquidity Ratio
(2) Increase the Marginal Standing Facility Rate
(3) Cut the Bank Rate and Repo Rate
Which of the above is/are correct?
(A) Only (2)   **(B)** Only (2) and (3)
(C) Only (3)   **(D)** All are correct

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2023
CALENDAR

JANUARY

MON	TUE	WED	THE	FRI	SAT	SUN
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

FEBRUARY

MON	TUE	WED	THE	FRI	SAT	SUN
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

MAY

MON	TUE	WED	THE	FRI	SAT	SUN
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JUNE

MON	TUE	WED	THE	FRI	SAT	SUN
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

SEPTEMBER

MON	TUE	WED	THE	FRI	SAT	SUN
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

OCTOBER

MON	TUE	WED	THE	FRI	SAT	SUN
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

MARCH

MON	TUE	WED	THE	FRI	SAT	SUN
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL

MON	TUE	WED	THE	FRI	SAT	SUN
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

JULY

MON	TUE	WED	THE	FRI	SAT	SUN
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST

MON	TUE	WED	THE	FRI	SAT	SUN
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

NOVEMBER

MON	TUE	WED	THE	FRI	SAT	SUN
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER

MON	TUE	WED	THE	FRI	SAT	SUN
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

4. Recently, the Centre approved changes to the scheme for the development of a semiconductor and display manufacturing ecosystem.
With reference to solar power production in India, consider the following statements -
(1) Silicon wafers are thin slices of semiconductor, such as a crystalline Silicon.
(2) China is by far the world's largest producer of Silicon, followed by USA.
(3) The solar power tariffs are determined by the Solar Energy Corporation of India.
Which of the above is/are correct?
(A) Only (1) and (3)   **(B)** Only (2) and (1)
(C) Only (3) and (2)   **(D)** None of the above

5. Make in India completes eight years of path-breaking reforms and annual FDI doubles to USD 83 billion in 2022.
What is/are the recent policy initiative(s)of Government of India to promote the growth of manufacturing sector?
(1) Setting up of National Investment and Manufacturing Zones
(2) Providing the benefit of 'single window clearance'
(3) Establishing the Technology Acquisition and Development Fund
Which of the above is/are correct?
(A) Only (1) and (2)   **(B)** Only (2) and (3)
(C) Only (3) and (1)   **(D)** All are correct

6. In the Mekong-Ganga Cooperation, an initiative of six countries, which of the following is/are not a participant/ participants?
(1) Bangladesh
(2) Cambodia
(3) China
(A) Only (1) and (2)   **(B)** Only (2) and (3)
(C) Only (3) and (1)   **(D)** All are correct

7. Recently, Kerala Governor has warned ministers regarding to lower the dignity of the Governor's office.
Consider the following Constitutional Provisions Related to the Governor -
(1) Article 153 says that there shall be a Governor for each State.
(2) A Governor is appointed by the Council of Ministers.
(3) Articles 157 and 158 specify eligibility for the post of governor.

Which of the above is/are correct?
(A) Only (1) and (3)   **(B)** Only (2) and (1)
(C) Only (3) and (2)   **(D)** None of the above

8. Recently, The World Health Organisation released the first-ever list of fungal infections (Priority Pathogens) that can be a threat to public health.
Consider the following statements regarding WHO -
(1) It began functioning on April 7, 1945.
(2) 7 April is celebrated every year as World Health Day.
(3) There are only six regional offices.
Which of the above is/are correct?
(A) Only (1) and (2)   **(B)** Only (2) and (3)
(C) Only (3) and (1)   **(D)** All are correct

9. On National Unity Day 2022, the Union Home Minister of India remembered Sardar Vallabhbhai Patel on his 147th birth anniversary.
Consider the following statements -
(1) It is also known as Rashtriya Ekta Diwas.
(2) It was celebrated for the first time in 2014.
(3) 'Run For Unity' - a nationwide marathon organised in Uttar Pradesh every year.
Which of the above is/are correct?
(A) Only (1) and (2)   **(B)** Only (2) and (3)
(C) Only (3) and (1)   **(D)** All are correct

10. Recently, the Chief Election Commissioner addressed an international conference for Election Management Bodies (EMBs) hosted by ECI.
Consider the following statements -
(1) Section 126 of the Representation of the People Act, 1951 prohibits displaying any election matter.
(2) Section 126A of the Representation of the People Act, 1951 prohibits conduct of exit poll.
(3) Section 127A of the Representation of the People Act, 1951 prohibits incurring of expenditure on
advertisement without the authority.
Which of the above is/are correct?
(A) Only (1) and (3)   **(B)** Only (2) and (1)
(C) Only (3) and (2)   **(D)** None of the above

11. India is not on track to achieve the 2030 targets for eradicating hunger, food insecurity and malnutrition.
Consider the following statements -

(1) POSHAN Abhiyaan was launched to ensure a "Malnutrition Free India" by 2022.
(2) Anemia Mukt Bharat Abhiyan was launched in 2018.
(3) The National Food Security Act (NFSA) was launched in 1975.
Which of the above is/are correct?
(A) Only (1) and (2)   **(B)** Only (2) and (3)
(C) Only (3) and (1)   **(D)** All are correct

12. Recently, China hosted a meeting of the Shanghai Cooperation Organisation (SCO) Heads of Government
Consider the following statements regarding Shanghai Cooperation Organisation -
(1) It is a permanent intergovernmental international organisation.
(2) It was created in 2002.
(3) The SCO Charter was signed in 2002, and entered into force in 2003.
Which of the above is/are correct?
(A) Only (1) and (2)   **(B)** Only (2) and (3)
(C) Only (3) and (1)   **(D)** All are correct

13. Recently, some parts of Kerala reported Tomato Flu among children under five years of age.
Consider the following statements regarding Chikungunya -
(1) Chikungunya is a housefly-borne viral disease.
(2) It was first described during an outbreak in southern Tanzania in 1952.
(3) National Vector Borne Disease Control Programme is a comprehensive programme for prevention and control of vector borne diseases.
Which of the above is/are correct?
(A) Only (1) and (3)   **(B)** Only (2) and (1)
(C) Only (3) and (2)   **(D)** None of the above

14. The Indo-Russian joint venture "Indo-Russian Rifles Private Ltd (IRRPL)" will be manufacturing over 6.1 lakh AK-203 assault rifles costing over ₹5,000 crore in Amethi, Uttar Pradesh.
Consider the following statements regarding India and Russia -
(1) The Rs 5,124 crore deal was signed between India and Russia in December 2021.
(2) Both countries regularly conduct the Tri-Services exercise 'DHANUSH'.
(3) Indian Navy's first submarine, 'Foxtrot Class' came from Russia.
Which of the above is/are correct?

(A) Only (1) and (2)   **(B)** Only (2) and (3)
(C) Only (3) and (1)   **(D)** All are correct

15. Recently, the Union Minister for Fisheries launched the Online Market Place feature, Aqua Bazar, in the MatsyaSetu mobile app during the ninth general body meeting of the National Fisheries Development Board.
Consider the following statements regarding Indian Council of Agricultural Research -
(1) The Indian Council of Agricultural Research (ICAR) was established on 16 July 1929.
(2) It is an autonomous organisation under the Department of Agricultural Research and Education.
(3) With 102 ICAR institutes and 71 agricultural universities, it is one of the largest national agricultural systems in the world.
Which of the above is/are correct?
(A) Only (1) and (2)   **(B)** Only (2) and (3)
(C) Only (3) and (1)   **(D)** All are correct

16. Recently, the World Bank released a report titled 'Striving for Clean Air: Air Pollution and Public Health in South Asia'.
In the cities of our country, which among the following atmospheric gases are normally considered in calculating the value of Air Quality Index?
(1) Carbon dioxide
(2) Carbon monoxide
(3) Nitrogen dioxide
Which of the above is/are correct?
(A) Only (1) and (3)   **(B)** Only (2) and (1)
(C) Only (3) and (2)   **(D)** None of the above

17. Open Network for Digital Commerce (ONDC) will charge a "small fee" from platforms that will contribute towards "maintenance and development" of the network.
Consider the following -
(1) Aarogya Setu
(2) DigiLocker
(3) DIKSHA
Which of the above are built on top of open-source digital platforms?
(A) Only (1) and (2)   **(B)** Only (2) and (3)
(C) Only (3) and (1)   **(D)** All are correct

18. Recently, a Kerala-based organisation, Thanal launched the Ikki Jathre or the Festival of Rice in

tribal parlance whereby 300 climate-resilient varieties of traditional rice were planted at Panavally, Wayanad.

System of Rice Intensification" of cultivation, in which alternate wetting and drying of rice fields is practiced, results in -
(1) Reduced seed requirement
(2) Reduced methane production
(3) Reduced electricity consumption
Which of the above is/are correct?
(A) Only (1) and (2)   (B) Only (2) and (3)
(C) Only (3) and (1)   (D) All are correct

19. According to the United Nations Environment Programme has released Adaptation Gap Report, 2022.
Consider the following statements regarding United Nations Environment Programme -
(1) Major Reports: Emission Gap Report, Global Environment Outlook, Frontiers, Invest into Healthy Planet.
(2) Major Campaigns: Beat Pollution, UN75, World Environment Day, Wild for Life.
(3) Headquarters: Geneva, Switzerland
Which of the above is/are correct?
(A) Only (1) and (3)   (B) Only (2) and (1)
(C) Only (3) and (2)   (D) None of the above

20. Recently, Elaben Bhatt, renowned founder of the Self-Employed Women's Association (SEWA), passed away.
Consider the following statements regarding Elaben Bhatt -
(1) She was a noted Gandhian, leading women's empowerment activist.
(2) Elaben was conferred with Bharat Ratna.
(3) She joined the Textile Labour Association in 1955.
Which of the above is/are correct?
(A) Only (1) and (2)   (B) Only (2) and (3)
(C) Only (3) and (1)   (D) All are correct

21. Mauna Loa, the largest active volcano in the world, may erupt in the near future.
Consider the following statements regarding Mauna Loa-
(1) Mauna Loa is one of five volcanoes that together make up the Big Island of Hawaii.
(2) It is the southernmost island in the Hawaiian archipelago.

(3) It sits immediately north of Kilauea volcano, which is currently erupting from its summit crater.
Which of the above is/are correct?
(A) Only (1) and (2)   (B) Only (2) and (3)
(C) Only (3) and (1)   (D) All are correct

22. Recently, 12 MLAs from the Maharashtra legislative assembly have gone to the Supreme Court against their year-long suspension from the Assembly.
Consider the following statements regarding Provisions for Suspension of a Member of Parliament -
(1) Rules 373, 374, and 374A of the Rules of Procedure and Conduct of Business in Lok Sabha provide for the withdrawal of a member.
(2) The maximum suspension as per these Rules is "for five consecutive sittings or the remainder of the session, whichever is less".
(3) The maximum suspension for Rajya Sabha under Rules 255 and 256 also exceed the remainder of the session.
Which of the above is/are correct?
(A) Only (1) and (3)   (B) Only (2) and (1)
(C) Only (3) and (2)   (D) None of the above

23. Recently, India successfully carried out the night trials of the Agni-5 nuclear-capable ballistic missile.
With reference to Agni-IV Missile, which of the following statements is/are correct?
(1) It is a surface-to-surface missile.
(2) It is fuelled by liquid propellant only.
(3) It can deliver one-tonne nuclear warheads about 4,000 km away.
Which of the above is/are correct?
(A) Only (1) and (3)   (B) Only (2) and (1)
(C) Only (3) and (2)   (D) None of the above

24. Recently a study states that low nitrogen oxide pollution and warming wetlands likely drove global methane emissions to record high levels in 2020.
Consider the following statements regarding deposits of "methane hydrate"?
(1) Global warming might trigger the release of methane gas from these deposits.
(2) Large deposits of "methane hydrate" are found in Arctic Tundra and under the sea floor.
(3) Methane in atmosphere oxidizes to carbon dioxide after a decade or two.
Which of the above is/are correct?

(A) Only (1) and (2)   **(B)** Only (2) and (3)
(C) Only (3) and (1)   **(D)** All are correct

25. Recently a study states that, Global methane emissions reached roughly 15 parts per billion (ppb) in 2020 from 9.9 ppb in 2019.
Consider the following -

(1) Methane   (2) Carbon monoxide
(3) Ozone   (4) Sulphur dioxide
Which of the above are released into atmosphere due to the burning of crop/biomass residue?
(A) Only (1) and (2)   **(B)** Only (2) and (3)
(C) Only (3) and (1)   **(D)** All are correct

Current Affairs

1. What will be the new applicable percentage of Quota for economically weaker section (EWS) announced by the SCI recently?
(A) 10%   **(B)** 15%
(C) 12%   **(D)** 8%

2. Which of the following Indian shooter has not won a gold medal in the P3 team event at the Para Shooting World Championship in Al Ain, United Arab Emirates?
(A) Sinharaj   **(B)** Deepak Sharma
(C) Rahul Jakhar **(D)** Nihal Singh

3. How much fund has announced by Spain in the recently launched International Drought Resilience Alliance at the COP27?
(A) 3 Million Euro   **(B)** 4 Million Euro
(C) 5 Million Euro   **(D)** 7 Million Euro

4. Name the Indian-American professor, who receives Amazon Research Award to study evolving machine learning systems?
(A) Kiran Desai   **(B)** Khushwant Singh
(C) Sanjay Gupta   **(D)** Pavithra Prabhakar

5. Which state government has signed a MoU with Ashok Leyland for development, management and operation of three new Institutes of Driving Training and Research (IDTR)?
(A) Odisha   **(B)** West Bengal
(C) Andhra Pradesh   **(D)** Assam

6. Recently how much fund has been allocated for the action plan for 'Early Warnings for All' was launched at the United Nations' Climate Summit — COP27?
(A) $2.1 Billion   **(B)** $3.1 Billion
(C) $3.5 Billion   **(D)** $2.6 Billion

7. This year which eminent personalities has been feliciated with the Uttarakhand Gaurav Samman?
(A) Ajit Doval   **(B)** Bipin Rawat
(C) Manoj Pande   **(D)** Girish Chandra Tiwari

8. Who has been appointed as the new chairperson of Law Commission of India after a gap of 4 years?
(A) Justice P. V. Sanjay Kumar
(B) Justice Prakash Shrivastava
(C) Justice Aravind Kumar
(D) Justice Ritu Raj Awasthi

9. Who has been taken over as Southern Command Chief?
(A) Ajai Kumar Singh   **(B)** Manoj Pande
(C) Upendra Dwivedi   **(D)** Yogendra Dimri

10. Which country has recently launched "Mengtian", the last module its permanent space station?
(A) USA   **(B)** China
(C) Japan   **(D)** Russia

11. Who has conferred with Karnataka Ratna Award posthumously?
(A) Ashwini Revanath   **(B)** Raghavendra Singh
(C) Puneeth Rajkumar   **(D)** Darshan Thoog

12. Mangarh Dham is located in which state, which has been declared as National Monument recently?
(A) Uttarakhand   **(B)** Punjab
(C) Gujarat   **(D)** Uttar Pradesh

13. Which ministry has established a Carbon Credit Market to help the country meet its Nationally Determined Contributions?
(A) Ministry for Power
(B) Ministry of Coal

(C) Ministry of Defence
(D) Ministry of Mines

14. Recently, the third edition of the National Tribal Dance Festival has inaugurated on the foundation day of which state?
(A) Telangana   (B) Chhattisgarh
(C) Tripura   (D) Maharashtra

15. Which country has recently assumed the rotating monthly Presidency of the United Nations Security Council?
(A) Ghana   (B) Cuba
(C) Mali   (D) Senegal

16. Who has become the first woman director of ICAR-SBI?
(A) KC Alexander   (B) Dr A Ramesh
(C) Dr G Sundar   (D) Dr G Hemaprabha

17. India's first floating financial literacy camp was organized recently by which payment bank?
(A) Fino Payments Bank
(B) Airtel Payment Bank
(C) NSDL Payment Bank
(D) India Post Payments Bank

18. President Droupadi Murmu has recently inaugurated the viaduct "Atal Setu" that connects Sikkim with which state/country?
(A) Ladakh   (B) Tibbet
(C) Nepal   (D) West Bengal

19. Who will head the committee formed by Government of India to strengthen assessment of higher educational institutions?

(A) K Radhakrishnan   (B) G Bhootlingam
(C) Sujoy Dantwala   (D) Vinoh Hazari

20. Name the India's first "eye in the sky" satellite which has recently crashed in Indian ocean?
(A) RISAT-2   (B) RISAT-2B
(C) RISAT-1   (D) EOS-01

21. Rising Sun Water Fest-2022 has recently held at Umiam Lake (manufactured reservoir). The lake is located in which state?
(A) Meghalaya   (B) Tripura
(C) Mizoram   (D) Sikkim

22. Which state has undertaking four-day Tokhu Emong Bird Count?
(A) Manipur   (B) Nagaland
(C) Mizoram   (D) Meghalaya

23. The Vice President of India Jagdeep Dhankhar has recently inaugurated the 15th CII Agro Tech - 2022 in which city?
(A) New Delhi   (B) Gurugram
(C) Chandigarh   (D) Lucknow

24. Who has been awarded by the Kerala Jyothi award 2022?
(A) Hariharan Reddy
(B) M T Vasudevan Nair
(C) Vaikom Basheer
(D) Ottaplakkal Kurup

25. Who has been honoured with a member of the Order of Australia Award?
(A) Yashwant Sinha   (B) Amit Dasgupta
(C) Vashu Bhagnani   (D) Sajeev Koshy

History

1. Which of the following was obtained from the remains of the Cro-Magnon human?
(A) Australia
(B) France
(C) Germany
(D) Britain

2. The relic of Homo sapiens human beings find from which place?
(A) Central Asia   (B) Eastern Europe
(C) Australia   (D) East Africa

3. Which mughal ruler is known to have installed a 'Bell of Justice' to facilitate his subjects in getting their cries for justice to be heard?
(A) Akbar   (B) Jahangir
(C) Aurangzeb   (D) Humayun

4. Whose reign was called the Golden age of Mughal Era?
(A) Akbar   (B) Jahangir
(C) Shahjahan   (D) Humayun

5. Who wrote Panchatantra?
   (A) Sudraka   (B) Vishnu Gupta
   (C) Vishnu Sharma   (D) Bharata Muni

6. The Cellular Jail built by Britishers in the Andaman and Nicobar Islands is known by which of the following name?
   (A) Maut Ka Kuan   (B) Kala Pani
   (C) Antim Yatra   (D) Band Darwaja

7. How was the Gomati River known In the Vedic period?
   (A) Kabul River   (B) Kurram
   (C) Gomal   (D) Swat

8. What was the capital of the Anga Mahajanapada?
   (A) Varanasi   (B) Shravasti
   (C) Champa   (D) Rajgir

9. What was the capital of the Shurasen Mahajanapadas?
   (A) Virat Nagar   (B) Takshashila
   (C) Ujjain   (D) Mathura

10. What was the capital of Gandhar Mahajanapadas?
    (A) Kushawati   (B) Kaushambi
    (C) Takshashila   (D) Hatak

11. Ibn Battuta came to India during reign of the following?
    (A) Devaraya I
    (B) Jalaluddin
    (C) Muhammad Tughlaq
    (D) Krishnadevaraya

12. Ralph Fisch came to India during whose reign?
    (A) Jahangir   (B) Akbar
    (C) Humayun   (D) Shah jahan

13. Peter Mundy came to India during whose reign?
    (A) Jahangir   (B) Akbar
    (C) Humayun   (D) Shah jahan

14. People who discover historical facts by Excavation is called -
    (A) Scientist   (B) Historian
    (C) Archaeologist   (D) Geologist

15. Mesopotamian civilization was flourished on-

(A) Along the banks of the river Nile
(B) Along the bank of river Indus
(C) Along the bank of dajla farat river
(D) The edge of Yangtisiviyang river valley

16. The number of Vedas is-
    (A) One   (B) Two
    (C) Three   (D) Four

17. Kalibanga is located in the site related to the Harappan civilization-
    (A) In Gujarat   (B) In Rajasthan
    (C) In Uttar Pradesh (D) In Bengal

18. Who was the 24th Tirthankar of Jainism-
    (A) Rishabh dev   (B) Mahavir Swami
    (C) Parshvanath   (D) Aristhenemi

19. Dahir was the ruler of which of the following?
    (A) Multan   (B) Kabul
    (C) Sindh   (D) Balochistan

20. Which Muslims invaded India first?
    (A) Turk   (B) Arab
    (C) Khurasani   (D) Mamaluk

21. Who got the title of Jahansoz?
    (A) Mahmud Ghazni   (B) Sabuktagin
    (C) Sultan alauddin (D) khwarezm shah

22. Jaypal fought the war against whom?
    (A) Mahmud Ghazni   (B) alpatgin
    (C) Sabuktagin   (D) Muhammad Ghori

23. When was the second battle of tarain fought?
    (A) 1192   (B) 1526
    (C) 1556   (D) 1761

24. The Gandhara art - a style of Buddhist visual art that developed between 1st century BCE and the 7th century CE, flourished largely during the ____ dynasty.
    (A) Kushan   (B) Gupta
    (C) Pallava   (D) Maurya

25. Which ruler of Bengal had relations with China?
    (A) Ghiyasuddin Azamshah
    (B) Sikandar Shah
    (C) Nusrat Shah
    (D) Hussein Shah

Geography

1. Which three continents of the world are called new worlds?
   (A) Australia   (B) South America
   (C) Europe   (D) North America

2. Which of the following ocean is triangular in shape?
   (A) Indian Ocean   (B) Pacific Ocean
   (C) Atlantic Ocean   (D) Arctic Ocean

3. The world's busiest ocean is which of the following?
   (A) Pacific Ocean   (B) Atlantic Ocean
   (C) Indian Ocean   (D) Arctic Ocean

4. Which of the following is not a Rabi crop?
   (A) Mustard   (B) Gram
   (C) Wheat   (D) Peanut

5. Which of the following is not a kharif crop?
   (A) Grain   (B) Barley
   (C) Maize   (D) Cotton

6. Which country has first cultivated cotton seeds on the moon?
   (A) USA   (B) Germany
   (C) China   (D) India

7. Where is the International Rice Research Institute located?
   (A) Brazil   (B) India
   (C) Philippines   (D) Kenya

8. Which of the following regions receives rainfall throughout the year?
   (A) Tundra   (B) Monsoon
   (C) Mediterranean   (D) Equatorial

9. How long does the sun's light reach the earth?
   (A) 8 seconds   (B) 8 minutes
   (C) 9 minutes   (D) 80 seconds

10. Which asteroids are found between the orbits of the planets?
    (A) Earth, Mars   (B) Uranus, Neptune
    (C) Mercury, Venus   (D) Mars, Jupiter

11. Who is the head of the solar system?
    (A) Earth   (B) Saturn
    (C) Moon   (D) The sun

12. What is the latitude of the tropic of cancer line?
    (A) 0^0 latitude
    (B) $23 \frac{1}{2}^0$ South latitude
    (C) $23 \frac{1}{2}^0$ northern latitude
    (D) $66 \frac{1}{2}^0$ Northern latitude

13. What is the shape of the earth?
    (A) Oval   (B) Sphere
    (C) Geoids   (D) None of these

14. "Incredible India" is the tagline of which organization?
    (A) Indian Railways
    (B) Swachh Bharat Abhiyan
    (C) Indian Tourism
    (D) Air India

15. The festival of 'Bihu' is traditionally celebrated in which state?
    (A) Bihar   (B) Panjab
    (C) Keral   (D) None of these

16. Baghdad is the capital of which country?
    (A) Thailand   (B) Mongolia
    (C) Iraq   (D) Somalia

17. Which one of the following gases in our atmosphere absorbs the harmful UV rays of the Sun?
    (A) Methane   (B) Ozone
    (C) Helium   (D) Neon

18. Which of the following animal sanctuaries is home of Asiatic Lions?
    (A) Kaziranga   (B) Corbett
    (C) Gir   (D) Bharatpur

19. Kaziranga National Park is famous for which of these animal species?
    (A) Asiatic Lion   (B) Rhinoceros
    (C) Panda   (D) Hippopotamus

20. Perihelion which is the earth's position closest to the sun takes place on_____.
    (A) 3 January   (B) 21 December

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(C) 4 July   (D) 23 May

21. Which of the following cities is not situated on the river bank?
(A) Agra   (B) Patna
(C) Bhopal   (D) Kolkata

22. The planet is closest to the Sun-
(A) Earth   (B) Mars
(C) Mercury   (D) Venus

23. What is the international date line-
(A) 180-degree longitude line

(B) 0 degrees longitude line
(C) The part of 0 degrees to 180 degrees east longitude
(D) The part of 0 degrees to 180 degrees west longitude

24. Which planet is called blue planet -
(A) Sun   (B) Earth
(C) Moon   (D) Venus

25. Aryabhata was-
(A) Astronomer   (B) historian
(C) Playwright   (D) Archaeologist

Polity

1. Protection of Monuments and places and objects of National Importance deals in which article of constitution?
(A) 48   (B) 48
(C) 49   (D) 50

2. The Balwant Rai Mehta Committee was associated with-
(A) Industrial Policy   (B) Banking Reforms
(C) Panchayati Raj   (D) Centre-State relations

3. Who among the following was the first Indian to get selected in ICS (Indian Civil Services)?
(A) Ravindra nath Tagore
(B) SatyendraNath Tagore
(C) Bankim Chandra Chatterjee
(D) Surendranath Banerjee

4. Prevention of cruelty to animals" is listed in the _____ list given in the Seventh Schedule in the Constitution of India.
(A) Union   (B) State
(C) Global   (D) Concurrent

5. _____ makes laws on matters included in Union List and Concurrent List.
(A) Parliament
(B) Ministry of Defense
(C) Prime Minister's Office
(D) High court of India

6. "Cultivation, manufacture, and sale for export, of opium" is listed in the _____ list given in the Seventh Schedule in the Constitution of India.
(A) Union   (B) State

(C) Globa   (D) Concurrent

7. There are total _____ parliamentary seats (Lok Sabha constituency) in West Bengal.
(A) 42   (B) 2
(C) 14   (D) 40

8. Whose recommendation is mandatory to impeach the President of India from his office before the completion of his/her term?
(A) The Governor of states
(B) The Speaker of the Rajya Sabha
(C) The Chief Justice of India
(D) The two houses of the parliament

9. International Day of Democracy is celebrated on?
(A) 12 September   (B) 13 September
(C) 14 September   (D) 15 September

10. Which of the following Constitutional Amendment acts was said to be a 'Mini Constitution'?
(A) 42nd   (B) 44th
(C) 46th   (D) 50th

11. The authorization for the withdrawal of funds from the consolidated fund of India must come from?
(A) President of India
(B) Parliament of India
(C) Prime minister of India
(D) Union finance minister

12. The 42nd Constitutional Amendment Act amended the Preamble for the first time in 1976

and added some terms to it. Select the correct sequence of the terms introduced in the Preamble by this Amendment:
(A) Secular, Socialist and Integrity
(B) Integrity, Socialist and Secular
(C) Socialist, Secular and Integrity
(D) Secular, Integrity and Socialist

13. The 79th Amendment of the Indian Constitution is related to:
(A) Centre-State relations.
(B) Establishment of two political parties.
(C) Fundamental Rights.
(D) Reservation of SCs and STs in the Lok Sabha and State Assemblies.

14. According to the Constitution of the National Human Rights Commission of India, how many full-time Members does the Commission consist of?
(A) Four   (B) Eleven
(C) Nine   (D) Seven

15. Who among the following is collectively responsible to the Lok Sabha and is obliged to resign on losing the confidence of the Lok Sabha?
(A) Chief Ministers of different states
(B) Council of Ministers
(C) Cabinet Ministers
(D) MP's of Rajya Sabha

16. In how many years, may a person be legally declared dead in absentia or legal presumption of death despite the absence of direct proof of the person's death?
(A) 5 years   (B) 7 years
(C) 4 years   (D) 6 years

17. Which of the following is the subject matter of Article 11 of the Indian Constitution?

(A) Uniform civil code for the citizens.
(B) Organization of village panchayats.
(C) Parliament has powers to enact laws on citizenship.
(D) Protection against arrest and detention in certain cases.

18. In which year did Ranchi city become the capital of the state of Jharkhand?
(A) 2002   (B) 1999

(C) 2000   (D) 2001

19. The Prime Minister of India is_____.
(A) Elected by the Lok Sabha.
(B) Elected by the Parliament.
(C) Appointed by the President.
(D) Nominated by the party who has the majority in Lok Sabha.

20. Who has been sworn in as the Chief Minister of Madhya Pradesh on the 17th of December 2018?
(A) Kamal Nat
(B) Bhupesh Baghel
(C) Shivraj Singh Chouhan
(D) Digvijaya Singh

21. Under Section 66 of the Information Technology Act 2000, what is the penalty for "computer related offences" (that is, penetrating a computer system by exploiting security vulnerability)?
(A) Imprisonment up to one year or/and fine up to Rs.300,000.
(B) Imprisonment up to three years or/and fine up to Rs.500,000.
(C) Imprisonment up to one year or/and fine up to Rs.100,000.
(D) Imprisonment up to six months or/and fine up to Rs.300,000.

22. Which among the following article states that there should be no discrimination on grounds of caste, religion, race, sex, place of birth?
(A) Article 15   (B) Article 21
(C) Article 25   (D) Article 30

23. Who among the following is constitutionally empowered to alter Scheduled Area?
(A) Supreme Court of India
(B) High Court of State
(C) Prime Minister of India
(D) President of India

24. With respect of Article 371A of the constitution of India, the Governor of which one of the following states has special responsibility with respect to law and order of the State?
(A) Assam   (B) Manipur
(C) Nagaland   (D) Andhra Pradesh

25. The post of Vice President is described in which article of the Constitution?

(A) Article 65
(B) Article 64

(C) Article 63
(D) Article 62

Economics

1. The short-run marginal cost curve is _____ shaped.
   (A) U **(B)** V
   (C) X **(D)** W

2. What is MCX-SX?
   (A) Online trading market dealing only in Gold.
   (B) A new life insurance company
   (C) This is online banking system issued by RBI
   (D) This is Third national stock exchange in India

3. Open market operations are related to -
   (A) Fiscal policy
   (B) Monetary policy
   (C) Small Weaver policy
   (D) Agricultural policy

4. Karl Marx's book Das capital was published in which year?
   (A) 1866 **(B)** 1867
   (C) 1868 **(D)** 1869

5. Who is the chairman of the 15th Finance Commission?
   (A) Nand Kishore Singh **(B)** A. M. Khusro
   (C) Dr. Vijay L. Kelkar **(D)** Dr. Y. V. Reddy

6. What is the record of all economic transactions of a country in a particular period called?
   (A) Balance of Payment
   (B) Fiscal Deficit
   (C) Current Account Deficit
   (D) Balance of trade

7. The government proposed the merger of which of the three banks aimed at creating the country's third-biggest lender?
   (A) Bank of Baroda, Vijaya Bank and Dena Bank
   (B) Bank of India, Axis bank and Syndicate bank
   (C) Bank of Maharashtra, HDFC bank and ICICI bank
   (D) Panjab national bank, Bank of India and Vijaya bank

8. Which is India's place in the Human Development Index released in 2019 by U.N.D.P.?
   (A) 129 **(B)** 133
   (C) 135 **(D)** 138

9. The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation is a subregional grouping comprising seven countries of South Asia and South East Asia. Where is its headquarters?
   (A) Dhaka **(B)** New Delhi
   (C) Kathmandu **(D)** Mumbai

10. NEFT is used for Electronic Transfer of Funds between any bank branch to any individual having an account with any other bank branch. What is the full form of NEFT?
    (A) Networked Electronic Funds Transfer, MICR Code.
    (B) Networked Electronic Funds Transfer, IFS Code.
    (C) National Electronic Funds Transfer, MICR Code.
    (D) National Electronic Funds Transfer, IFS Code.

11. To address consumer queries on digital payments, which toll-free helpline number did the Government of India launch in 2017?
    (A) 109 **(B)** 911
    (C) 14444 **(D)** 18888

12. Which of the following nations and India upgraded their existing Comprehensive Economic Partnership Agreement (CEPA) in 2018?
    (A) Indonesia **(B)** South Korea
    (C) Iceland **(D)** Taiwan

13. Which Committee recommended discontinuance of a separate Railway Budget?
    (A) Committee headed by Shri Arvind Panagariya
    (B) Committee headed by Shri Suresh Prabhu
    (C) Committee headed by Shri Arvind Subramanian
    (D) Committee headed by Shri Bibek Debroy

14. Which of the following is expected to be boosted by Project 'Chaman'?
(A) Fisheries   (B) Crop Insurance
(C) Soil Research   (D) Horticulture

15. NITI Aayog has been formed to replace which of the following institution?
(A) Planning Commission
(B) Finance Commission
(C) DRDO
(D) ISRO

16. Which one of the following issues the 'Global Economic Prospects' report periodically?
(A) The Asian Development Bank
(B) The European Bank for Reconstruction and Development
(C) The US Federal Reserve Bank
(D) The World Bank

17. When the Reserve Bank of India reduces the Statutory Liquidity Ratio by 50 basis points, which of the following is likely to happen?
(A) India's GDP growth rate increases drastically
(B) Foreign Institutional Investors may bring more capital into our country
(C) Scheduled Commercial Banks may cut their lending rates
(D) It may drastically reduce the liquidity to the banking system

18. Which of the following is the maximum population density in the continent?
(A) Africa   (B) Europe
(C) North America (D) Asia

19. Rourkela steel plant was developed in collaboration with which of the following countries?
(A) Russia   (B) Japan
(C) Germany   (D) United Kingdom

20. Rourkela steel plant is located in which state?
(A) Maharashtra   (B) Odisha
(C) Jharkhand   (D) Karnataka

21. Rourkela Steel Plant was established in which year?
(A) 1950   (B) 1955
(C) 1959   (D) 1964

22. Bhilai Steel Plant is situated in which state?
(A) Uttar Pradesh (B) Jharkhand
(C) Chhattisgarh (D) West Bengal

23. With the help of which country, the Bhilai Steel Plant was established and when?
(A) Germany, 1952 (B) U.K., 1955
(C) Japan, 1957   (D) Russia, 1955

24. Bokaro Steel Plant was established in collaboration with which country?
(A) Germany   (B) Russia
(C) U.S.A.   (D) Canada

25. In which of the following places was the first nuclear power station established?
(A) Kalpakkam
(B) Ranapratap Sagar
(C) Narora
(D) Tarapur

Physics

1. Which of the following is not a vector?
(A) Energy   (B) Force
(C) Momentum   (D) Acceleration

2. "All planets move about the Sun in elliptical orbits, having the Sun is at the focus". This is known as-
(A) Newton's first law (B) Ohm's first law
(C) Kepler's first law (D) Lenz's first law

3. Who given the name of Gamma rays based on their relatively strong penetration of matter?

(A) Ernest Rutherford   (B) Henri Becquerel
(C) W Rontgen   (D) none of these

4. The temperature at which Fahrenheit and Celsius's scales are same –
(A) 40   (B) -40
(C) -34   (D) -140

5. Ram is not seen clearly above 15 meters. He is suffering from which eye decease?
(A) Hypermetropia (B) Myopia
(C) Presbyopia   (D) Astigmatism

6. Which of the following is not an Output device?
   (A) Monitor (B) Projector
   (C) Keyboard (D) Mother board

7. Which one among the following given processes cannot be demonstrated with the sound wave?
   (A) Refraction (B) Polarization
   (C) Interference (D) Transmission

8. Energy-mass relation is related to.
   (A) Quantum theory
   (B) Theory of relativity
   (C) Law of motion
   (D) Law of gravitation

9. Sound of frequency greater than 20000 Hz known as .....
   (A) Sonic (B) Infrasonic
   (C) Ultrasonic (D) None of the above

10. The unit to measure the speed of ships is-
    (A) Mile (B) Meter
    (C) Knot (D) Mph

11. The temperature of the stars can be estimated by.
    (A) Wien's displacement law
    (B) Rayleigh-Jeans law
    (C) Faraday's law
    (D) Coulomb's law

12. In electric supply lines in India, which parameter is kept constant?
    (A) Voltage (B) Current
    (C) Frequency (D) Power

13. Sun appears reddish during the rising and setting time, because.
    (A) The atmosphere absorbs short wavelength more than long wavelengths.
    (B) Red light is emitted in a huge amount by it
    (C) The atmosphere absorbs long wavelength more than short wavelengths.
    (D) Light of shorter wavelengths are scattered to a greater extent than the longer wavelengths by the atmosphere.

14. In RADAR we use-
    (A) Ultrasonic waves
    (B) Infra sonic waves
    (C) Radio waves
    (D) Audible waves

15. If the distance between two objects is doubled, the force of attraction between them will,
    (A) Become ¼ times
    (B) Become 2 times
    (C) Become 1/8 times
    (D) Remains same

16. A body has a mass of 6 kg on the earth, when measured on the moon, its mass would be.
    (A) Nearly 1 kg (B) Less than 1 kg
    (C) Less than 6 kg (D) 6 kg

17. The minority charge carriers in N-type semiconductor is?
    (A) Electron (B) Hole
    (C) Proton (D) Neutron

18. During cold weather, touch the iron cube and the wooden cube in the morning, then the iron cube is colder because.
    (A) The temperature of the iron cube is less than the wood cube.
    (B) Iron is a good conductor of heat than wood cube.
    (C) Iron cube is a poor conductor of heat compared to wood cube.
    (D) The iron cube is heavier than the wood cube.

19. What is a transformer?
    (A) Converts DC into AC.
    (B) Used to reduce and increase AC voltage.
    (C) Converts AC voltage to DC voltage.
    (D) Converts electrical energy into mechanical energy.

20. Who invented Velcro?
    (A) Thomas Edison (B) William Harvey
    (C) George de Mestral (D) Robert Boyles

21. In Microsoft Word, _____ allows us to move selected paragraphs to the right.
    (A) Decrease Indent (B) Increase Indent
    (C) Double Indent (D) Single Indent

22. The incident ray, the _____ at the point of incidence and the reflected ray all lie in the same plane.
    (A) Surface (B) Tangent
    (C) Normal (D) Angle of reflection

23. What is the unit of Electric conductivity?
    (A) Siemens per meter (B) Ohm per meter

(C) Kilogram per meter
(D) Newton per meter

(C) 149 6.Million km
(D) 14 7.4Million km

24. Which of the following is the distance between Sun and Earth?
(A) 144.6Million km
(B) 14 3.6Million km

25. How many kilometers in one mile?
(A) 1.524534   **(B)** 1.609344
(C) 0.539478   **(D)** 2.035355

Chemistry

1. Vinegar contains acetic acid
(A) 5-20%   **(B)** 100%
(C) 7-8%   **(D)** 25%

2. The chemical formula of the plaster of Paris is _____.
(A) $CaSO_4.5H_2O$ **(B)** $CaSO_4. 1/2H_2O$
(C) $(CaSO_4)2. 2H_2O$ **(D)** $CaSO_4. MgO$

3. The maximum penetration power of which of the following invisible radiations emitting from the nucleus ___.
(A) Alpha rays   **(B)** Beta rays
(C) Gamma rays   **(D)** None of these

4. Which of the following is not the isotope of hydrogen?
(A) Protium   **(B)** Deuterium
(C) Tritium   **(D)** Iterium

5. How many is the number of isotopes in the hydrogen?
(A) 2   **(B)** 3
(C) 4   **(D)** 5

6. In the following reaction, fill in the blank.
Acid + Base → _____ + Water
(A) Carbon dioxide   **(B)** Metal Oxide
(C) Hydrogen Gas   **(D)** Salt

7. Galvanic cell is converted into -
(A) Electrical energy in chemical energy
(B) Chemical energy in electrical energy
(C) Light energy in electrical energy
(D) Electrical energy in light energy

8. Which one of the following conditions does not contain chemical reactions?
(A) Table salt comes in contact with air
(B) Coal burns in the air

(C) Sodium is poured into water
(D) Iron is kept in humid air

9. Who invented optical fiber?
(A) Narinder Singh Kapany
(B) Jagdish Chandra Basu
(C) C.V. Raman
(D) Bramha Gupta

10. When a burning matchstick is exposed to hydrogen gas, then.
(A) The match's flame burns steadily fast.
(B) The matchstick consistently burns with slow blue flame.
(C) The matchstick is extinguished and gas is burned with sound 'pop'.
(D) None of the above.

11. Electroplating does not help _____.
(A) In giving shining appearance.
(B) In protecting the metal against corrosion.
(C) In making the metal hard.
(D) In giving fine finish to the surface.

12. There are two gases that used in industrial production of sulfuric acid:
(A) Carbon dioxide and oxygen
(B) Sulfr dioxide and hydrogen
(C) Sulfur dioxide and oxygen
(D) Sulfur dioxide and chlorine

13. Which acid is used in car battery?
(A) Nitric acid
(B) Hydrochloric acid
(C) Caronic acid
(D) Sulphuric acid

14. Which of the following statement is false?
(A) Polystyrene was discovered in 1839 by Edward Simon.

(B) It is used for making plastics and CD cases.
(C) It is not bio-degradable.
(D) None of these.

15. Which of the following does the Nucleus of an atom consist of?
(A) Protons and neutrons
(B) Protons and electrons
(C) Electrons
(D) Protons

16. Which of the following is the second largest source of global energy?
(A) Fossil fuel
(B) Nuclear Energy
(C) Renewable Energy
(D) None of these

17. In the dry cell, which of the following is used as electrolyte?
(A) Ammonium chloride and zinc chloride
(B) Sodium chloride and calcium chloride
(C) Magnesium chloride and zinc chloride
(D) Ammonium chloride and calcium chloride

18. The constituents of a mixture are not uniformly mixed and the composition varies throughout mixture are called-
(A) Element   (B) Metalloids
(C) Homogeneous   (D) Heterogeneous

19. Such physical state of the substance which has a definite volume but indefinite size is called-
(A) Ice   (B) Water
(C) Vapor   (D) All of the above

20. Which of the following substance has an indefinite volume and indefinite size -
(A) Wood   (B) Alcohol
(C) Oxygen   (D) All of the above

21. Such physical state of the substance which has definite volume and definite size is called-
(A) Solid
(B) Liquid
(C) Gas
(D) None of the above

22. The process of converting a liquid into its vapour by heating and the subsequent condensation of the vapour back into the original liquid is called-
(A) Distillation   (B) Sedimentation
(C) Decantation   (D) Diffusion

23. Which of the following metal (shown by its symbol) is generally used for making filaments of bulb?
(A) Cu   (B) Pb
(C) W   (D) Ag

24. Which amongst the following is not a Cation?
(A) Potassium ion   (B) Sodium ion
(C) Hydrogen ion   (D) Sulphate ion

25. Process of gaining electrons is known as ___.
(A) Reduction   (B) Oxidation
(C) Both oxidation and reduction
(D) None of the above

Biology

1. Iron contain present in Hemoglobin is -
(A) Haematin   (B) Aluminium
(C) Lead   (D) Calcium

2. Male mosquitoes usually feed on-
(A) Seawage water   (B) Human blood
(C) Flower sap   (D) Algae

3. The heart of a normal adult human being weighs about _____.
(A) 200gms   (B) 300gms
(C) 400gms   (D) 500gms

4. What is age of women when woman stops producing mature eggs and ceases her menstrual cycle?
(A) 30-40 years   (B) 25-35 years
(C) 35-45 years   (D) 42-56 years

5. In the context of an ecosystem, Primary Production is defined as-
(A) The amount of biomass produced per unit area over a time period by plants during photosynthesis.
(B) The amount of oxygen produced per unit area over a time period by plants during photosynthesis.

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(C) The amount of inorganic matter produced per unit area over a time period by plants during photosynthesis.
(D) The amount of food produced per unit area over a time period by all living organisms residing in that ecosystem.

6. In human for generation of artificial pulse we use?
(A) Crescograph   (B) Pacemaker
(C) Hydrometer   (D) Bolometer

7. DPT vaccine is given to infants to immunize them against -
(A) Diphtheria, Whooping cough and Typhoid
(B) Diarrhoea, Pneumonia and Tuberculosis
(C) Diphtheria, Whooping Cough and Tetanus
(D) Diphtheria, Pneumonia and Typhoid

8. In cockroach's air enters the body through?
(A) Lungs   (B) Gills
(C) Spiracles   (D) Skin

9. Who was discovered the pH value?
(A) Carl Landsteiner (B) William Harvey
(C) Sorensen   (D) Joseph Priestley

10. The volume of the urine produced in an adult human every 24 hours is
(A) 0.5 Litre   (B) 1.4 litre
(C) 1 Litre   (D) 5.0 litre

11. The rate at which the heart beats per minute in an adult average-
(A) 60   (B) 72
(C) 84   (D) 96

12. What is the scientific name of Cucumber?
(A) Cucumis sativus (B) Cucumis melon
(C) Pyrus malus   (D) Cocos nucifera

13. Which of the following decease is spread through Protozoa?
(A) Rinderpest   (B) Blue tounge
(C) Tricomoniasis   (D) Rabies

14. Which of the following decease is spread through Virus?
(A) Thelariosis   (B) Anaplasmosis
(C) Histoplasmosis   (D) Ephermeral Fever

15. Bleeding and rupturing of blood vessels is prevented by-
(A) Vitamin A   (B) Vitamin C

(C) Vitamin E   (D) Vitamin K

16. Digestive gland of prawn is-
(A) Hepatopancreas   (B) Liver
(C) Thyroid   (D) Pancreas

17. Omasum is absent in-
(A) Goat   (B) Cow
(C) Camel   (D) Buffalo

18. Acidity in the stomach involves-
(A) A headache
(B) Stomach aches
(C) Asthma
(D) Due to Hormonal deficiency

19. Biological names are generally derived from which language?
(A) French   (B) Latin
(C) Mexican   (D) German

20. What Does Stand For DNA?
(A) Double nitrogen argon
(B) Dioxide nickel acid
(C) Deoxyribonucleic acid
(D) Deoxy nuclides acid

21. A few organisms can tolerate and thrive in a wide range of temperatures. Such organisms are called _____.
(A) Osmotic   (B) Eurythermal
(C) Stenothermal   (D) Hydrothermal

22. The yellow colour of urine is due to the presence of ____.
(A) Bile   (B) Lymph
(C) Cholesterol   (D) Urochrome

23. The energy of food is measured in _____.
(A) Calories   (B) Celsius
(C) Kelvin   (D) All of the above

24. Numismatics is the study of ____.
(A) Coins   (B) Birds
(C) Stamps   (D) Bones

25. Which of the following is estimated by the radio carbon dating?
(A) Age of the Plant kingdom
(B) Age of the fossils
(C) Disease of the human body
(D) Purity of the metals

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Answer key

Statement Based Current Affairs

1-(A)	2-(D)	3-(C)	4-(A)	5-(C)
6-(C)	7-(C)	8-(A)	9-(B)	10-(D)
11-(A)	12-(B)	13-(C)	14-(B)	15-(C)
16-(B)	17-(B)	18-(C)	19-(C)	20-(C)
21-(C)	22-(B)	23-(A)	24-(C)	25-(B)

Polity

1-(C)	2-(C)	3-(B)	4-(D)	5-(A)
6-(B)	7-(A)	8-(D)	9-(D)	10-(A)
11-(B)	12-(C)	13-(D)	14-(A)	15-(B)
16-(B)	17-(C)	18-(C)	19-(C)	20-(A)
21-(B)	22-(A)	23-(D)	24-(C)	25-(C)

Statement Based General Awareness

1-(C)	2-(A)	3-(A)	4-(A)	5-(D)
6-(C)	7-(A)	8-(B)	9-(A)	10-(B)
11-(A)	12-(C)	13-(C)	14-(C)	15-(D)
16-(C)	17-(D)	18-(D)	19-(B)	20-(C)
21-(D)	22-(B)	23-(A)	24-(D)	25-(D)

Economics

1-(A)	2-(D)	3-(B)	4-(B)	5-(A)
6-(A)	7-(A)	8-(A)	9-(A)	10-(D)
11-(C)	12-(B)	13-(D)	14-(D)	15-(A)
16-(D)	17-(C)	18-(D)	19-(C)	20-(B)
21-(B)	22-(C)	23-(D)	24-(B)	25-(D)

Current Affairs

1-(A)	2-(B)	3-(C)	4-(D)	5-(A)
6-(B)	7-(C)	8-(D)	9-(A)	10-(B)
11-(C)	12-(D)	13-(A)	14-(B)	15-(A)
16-(D)	17-(D)	18-(D)	19-(A)	20-(A)
21-(A)	22-(B)	23-(C)	24-(B)	25-(B)

Physics

1-(A)	2-(C)	3-(A)	4-(B)	5-(A)
6-(C)	7-(A)	8-(B)	9-(C)	10-(C)
11-(B)	12-(C)	13-(D)	14-(C)	15-(A)
16-(A)	17-(A)	18-(B)	19-(B)	20-(C)
21-(B)	22-(C)	23-(A)	24-(C)	25-(B)

History

1-(B)	2-(D)	3-(B)	4-(C)	5-(C)
6-(B)	7-(C)	8-(C)	9-(D)	10-(C)
11-(C)	12-(B)	13-(D)	14-(C)	15-(C)
16-(D)	17-(B)	18-(B)	19-(C)	20-(B)
21-(C)	22-(C)	23-(A)	24-(A)	25-(A)

Chemistry

1-(A)	2-(B)	3-(C)	4-(D)	5-(B)
6-(D)	7-(B)	8-(A)	9-(A)	10-(A)
11-(B)	12-(C)	13-(D)	14-(D)	15-(A)
16-(C)	17-(A)	18-(D)	19-(B)	20-(C)
21-(A)	22-(A)	23-(C)	24-(D)	25-(A)

Geography

1-(D)	2-(B)	3-(B)	4-(D)	5-(B)
6-(C)	7-(C)	8-(D)	9-(B)	10-(D)
11-(D)	12-(C)	13-(B)	14-(C)	15-(D)
16-(C)	17-(B)	18-(C)	19-(B)	20-(A)
21-(C)	22-(C)	23-(B)	24-(B)	25-(A)

Biology

1-(A)	2-(C)	3-(B)	4-(D)	5-(C)
6-(B)	7-(C)	8-(C)	9-(C)	10-(B)
11-(B)	12-(A)	13-(C)	14-(D)	15-(D)
16-(A)	17-(C)	18-(B)	19-(B)	20-(C)
21-(B)	22-(D)	23-(A)	24-(A)	25-(B)

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SBI PO Prelims Solved Paper

Direction (01-05): In the following passage, some of the words have been left out and replaced by a blank represented by a letter. First read the passage and try to understand what it is about. Then fill in the blanks as per the questions given.

The yellow-beaked, doe-eyed mynah took off from the windowsill of my flat and dived ___(1)___ into the gulmohars and rain trees, triggering fond memories of the canopy of rain trees that shaded the road from my house to the institute where I worked for 25 years in Mumbai. The ___(2)___ beauty of nature inscribed itself all over the campus, spread over 120 acres, 40 kilometres from the din of South Mumbai. Nature expressed itself fully only after the institute landscaped it. Birds, reptiles, humans and other creatures ___(3)___ in the middle of ___(4)___ nature. The lakeside was home to migratory birds in winter. Baby crocodiles cockily sunned themselves on the dry lakebed in summer. Snakes ___(5)___ across the quiet roads, undisturbed by traffic. In such mesmerising natural surroundings, there was not a soul who didn't walk, jog or run.

1. 　　(A) gruesomely　　(B) emanating
　　(C) nimbly　　(D) fickle
　　(E) lively

2. 　　(A) mesmerise　　(B) riveting
　　(C) opulence　　(D) exquisitely
　　(E) exacting

3. 　　(A) coincide　　(B) collated
　　(C) collective　　(D) cohabits
　　(E) coexisted

4. 　　(A) paltry　　(B) prudently
　　(C) petty　　(D) pristine
　　(E) propel

5. 　　(A) slithered　　(B) dawdle
　　(C) drawled　　(D) drawn
　　(E) silently

Direction (06-10): In the question below, a sentence is given, divided into parts which when arranged will form a logical and coherent sentence. One of the parts does not belong to the sentence. Identify the part that does not belong to the sentence and rearrange the remaining parts to form a meaningful sentence. Choose the option that represents the correct arrangement and mark the option accordingly.

6. instead focus on water and energy conservation and improving (A)/ on the finances of the Centre and in States, (B)/ Telangana and Andhra Pradesh do need to consider (C)/ given the adverse impact of the COVID-19 pandemic (D)/ these alternatives and low-cost options (E)
　　(A) DBAE　　　　(B) CABD
　　(C) DBCE　　　　(D) CAEB
　　(E) DABC

7. while daily vaccination rates will see spikes (A)/ concerns over a third wave have been voiced but (B)/ campaigns are necessary to boost (C)/ vaccination, as was seen in end June (D)/ and dips, aggressive publicity measures and (E)
　　(A) AECD　　　　(B) ABCD
　　(C) BAED　　　　(D) AEBD
　　(E) BDCE

8. onus on States for planning but (A)/ the Centre continues to put the (B)/ does not address a concern (C)/ of inadequate Covaxin supplies (D)/ economic activity appears to have near-normalised (E)
　　(A) DBAE　　　　(B) DEAC
　　(C) BDEC　　　　(D) BACD
　　(E) BEDA

9. faced systemic discrimination and violence (A)/ in Canada has put the spotlight back on its (B)/ after another indigenous organisation discovered the remains (C)/ the recent discovery of hundreds of graves (D)/ dark past, when indigenous people (E)
　　(A) BEDC　　　　(B) BDCA
　　(C) DCBE　　　　(D) DCAB

(E) DBEA

10.   students and teachers not being able to (A)/ use computers and the Internet is acknowledged (B)/ to be a form of deprivation, (C)/ especially during the pandemic (D)/ the inability to attend in-person classes is another (E)
       (A) ABCD   **(B)** AEDB
       (C) BCDA   **(D)** BEDA
       (E) ACBE

Direction (11-13): In the given sentence, a blank is given indicating that something is missing. From the given options, a combination of words would fit the blank thereby making it grammatically and contextually correct.

11.   A/ an _____ has been launched after three train carriages ran out of control before smashing through buffers and derailing yards from a busy line.
       1. Implication
       2. Investigation
       3. Probe
       (A) Only 3   **(B)** Only 1 and 2
       (C) Only 1 and 3   **(D)** Only 2 and 3
       (E) All 1, 2 and 3

12.   Initial police reports _____ that he jumped the ticket barrier and ran onto the train.
       1. Suggested
       2. Indicated
       3. Proposed
       (A) Only 1   **(B)** Only 1 and 2
       (C) Only 1 and 3   **(D)** Only 2 and 3
       (E) All 1, 2 and 3

13.   Mr. Robinson felt _____ that something serious was about to take place, so he took to his heels and ran for it.
       1. convinced
       2. evinced
       3. incensed
       (A) Only 1   **(B)** Only 1 and 2
       (C) Only 1 and 3   **(D)** Only 2 and 3
       (E) All 1, 2 and 3

Direction: (14-18): In the following question, a sentence is given, divided into 5 parts. Part (1) is grammatically correct. Out of the other four parts, one part contains an error. Mark the option containing the part with the error. If none of the parts have errors, mark 'No error' as your answer.

14.   **Rare bird species, (1)**/ including wading birds such (A)/ as the curlew, lapwing and snipe, (B)/ would also be reintroduce to (C)/ the site under the plans. (D)
       (A) A   **(B)** B
       (C) C   **(D)** D
       (E) No error

15.   **His concern was that the (1)**/ website were anonymous and (A)/ there was the danger that (B)/ people would queue up to (C)/ make snide and nasty remarks. (D)
       (A) A   **(B)** B
       (C) C   **(D)** D
       (E) No error

16.   **Animal trainers defended (1)**/ the role of the sniffer dog (A)/ and said a machine (B)/ would never be able (C)/ to take over completely. (D)
       (A) A   **(B)** B
       (C) C   **(D)** D
       (E) No error

17.   **His academic reputation (1)**/ remain unsullied by deeds (A)/ that would have (B)/ seen him fired in (C)/ any other establishment. (D)
       (A) A   **(B)** B
       (C) C   **(D)** D
       (E) No error

18.   **The book was aimed (1)**/ at putting an end to Confucian (A)/ scholars' misunderstanding of (B)/ Buddhism and informing (C)/ they of the true meaning. (D)
       (A) A   **(B)** B
       (C) C   **(D)** D
       (E) No error

Direction (19-26): Read the following passage carefully and answer the questions.

Even though email has been around since the dawn of the internet, it remains, to this day, one of its most widely used applications. Even though we often complain about having to deal with its ever-increasing volumes, email

remains the single most widely used means of communication on the planet. The ability to exchange messages between different computer systems was made possible shortly after Massachusetts Institute of Technology developed the Compatible Time Sharing System that allowed multiple users to log into a central system. In those days, to send a message, you had to use the File Transfer Protocol to append text at the end of a private 'mailbox' file. This file could only be read by the person for whom the message was intended, and so, in order to check the messages other people sent them, users had to log on to the server and open this file. A messaging system like this could only be used to exchange messages between computers within the same closed environment, either on the same corporate network, or, in some cases, one using the same operating system. As one can well imagine, this was a significant constraint, and had this remained the only way that messages were exchanged between computers, email might never have proliferated to the extent it has.

In 1971, Ray Tomlinson developed a messaging protocol that identified the recipient of electronic messages with reference to a given user at a specified computer location. He adopted the now ubiquitous '@' sign as a means to distinguish between the user and the computer system on which that user's mailbox file resided. Precisely because the messaging system he had built used an open, interoperable protocol that was independent of the underlying operating technology, it was widely adopted, allowing electronic messages to be freely exchanged over the internet. This is how the Simple Message Transfer Protocol became the standard transport layer for messages over the internet, regardless of the operating system or email client that you used. There is probably no better example of how the decision to use open, interoperable protocols resulted in the widespread adoption of a foundational technology.

Much of the core infrastructure of the internet has been designed in this fashion, using open interoperable protocols that have, in turn, been used to build the various services that make up our current internet experience. However, despite the fact that many of these services are built on open protocols, a majority, if not all them, are only accessible within tightly controlled, closed environments. This includes not just the purely digital spaces through which we receive information and entertainment, but also extends to the many digital interfaces through which we access offline services, such as the applications we use for shopping, transportation, banking and healthcare. Since all these digital on-ramps to the offline world were built by corporate entities, the singular focus of all these endeavours has been the customer. As a result, they have for the most part overlooked the need to build open digital systems for the entire industry. A whole generation of online interactions has, as a result, taken place in silos, and the lack of interoperability is starting to adversely affect the next stage of our digital evolution.

Banks were early adopters of digital technologies offering online banking facilities long before other sectors even started to come to grips with all that digital tools had to offer. However, they focused chiefly on providing digital services to their customers, and as a consequence completely overlooked the necessity to build digital bridges within the financial services ecosystem. As an upshot, despite all the remarkable improvements we have witnessed in digital transactions between banks and their customers, transactions that involve multiple banks remain painfully analogue to this day. Take loans, for example. Notwithstanding all our advances in online banking and digital payments, the process for availing a loan remains unbearably cumbersome. All the data necessary to comply with Know-Your-Customer obligations or to evaluate a customer's eligibility for a loan already resides with some entity or the other within the ecosystem. Had we put in place data-sharing protocols, it would have been trivial to share that data with any other entity within the ecosystem that was permitted to access it. This would have greatly simplified many of the processes for which we still rely on paper-based mechanisms for data transfers. Countries around the world are waking up to the urgent need to enable open interoperable

protocols. The Consumer Data Rights initiative in Australia and the Data Governance Act in Europe are but two examples of regulatory measures being put in place to enable data-sharing protocols. Since there are no pre-existing protocols, we are being forced to build them from scratch, so that the various bespoke systems that banks have built can operate with one another. As we start filling in the missing pieces of our digital infrastructure, I can't help but reflect on how much easier all this would've been had we used open protocols in the first place.

19. Why are a majority of services that make up our current internet experience only accessible within closed environments?
1. Data security laws require some services to be operated in a tightly controlled environment.
2. These are made by corporate organisations that overlooked the need to build open digital systems as their sole focus was on the customer.
3. Organisations desist from using open interoperable protocols in order to limit threats from cybercriminals.
(A) Only 1 and 2   **(B)** Only 2 and 3
(C) Only 2   **(D)** Only 1 and 3
(E) All 1, 2 and 3

20. It is difficult to get loans from banks as _____.
(A) they require a borrower to pledge an asset as a collateral before disbursing loans
(B) one needs to have a high credit score and a proof of income, but people working in the unorganised sector are not able to furnish these
(C) they can take legal action against the borrower if the loan is not repaid on time
(D) there is huge competition between borrowers and only those with the best credentials are able to secure a loan
(E) it involves paperwork for evaluating a customer's eligibility and establishing his identity which makes the process cumbersome

21. Which of the following can be inferred from the given passage?

(A) Interfaces offering offline services are protected from the lack of interoperability in data transfer protocols.
(B) Massachusetts Institute of Technology is counted among the world's best universities.
(C) Money transfers between different banks are more difficult than transactions between banks and their customers.
(D) Simple Message Transfer Protocol is the latest protocol used all over the world to transfer data over the internet.
(E) None of the above

22. Which of the following is/ are true according to the passage?
1. Ray Tomlinson developed the Compatible Time Sharing System that allowed multiple users to log into a central system.
2. Banks were the pioneers of digital technologies.
3. Countries have started the process of adopting interoperable protocols.
(A) Only 3   **(B)** Only 1 and 3
(C) Only 1 and 2   **(D)** Only 2 and 3
(E) All 1, 2 and 3

23. Which of the following best describes the difference between the Simple Message Transfer Protocol (SMTP) and the File Transfer Protocol (FTP) as mentioned in the passage?
(A) SMTP can be used to send a message over the internet, regardless of the operating system but FTP can only be used to exchange messages within the same closed network.\
(B) SMTP can be used in the command line whereas FTP cannot use the command line.
(C) SMTP was developed at Massachusetts Institute of Technology whereas FTP was developed at Caltech.
(D) The data connection is persistent in SMTP where it is non-persistent in FTP.
(E) SMTP was developed at Harvard whereas FTP was developed at Massachusetts Institute of Technology.

24. Which of the following is a suitable title for the passage?
(A) Current issues in the banking and finance sectors

(B) A case for adopting interoperable systems across the web

(C) How E-mail evolved into its current form

(D) Why data transfer between organisations needs to be checked

(E) Who owns the data transmitted over the internet?

25. Which of the following words is closest in meaning to the word 'interoperable' as used in the passage?
(A) steadfast   (B) aberrant
(C) tenuous   (D) congruent
(E) annexe

26. Which of the following words is opposite in meaning to the word 'upshot' as used in the passage?
(A) eminent   (B) antecedent
(C) earshot   (D) imminent
(E) downcast

Direction (27-28): In the question below, a sentence is given, four words have been highlighted in bold, one of which might be grammatically or contextually inappropriate. From the given options, choose the one that provides the correct replacement for the incorrect word.

27. The Ganga might have stood **witness** to many stages of India's civilisation, as Mahatma Gandhi once **noted**, but in recent decades it has become a **collude** for sewage, solid waste, industrial **effluents** and other pollutants.
(A) witness -- alibi   (B) noted -- noticed
(C) collude - conduit   (D)   effluents -   affluents
(E) None of the above

28. Plastic waste around the world is **threatening** the food web and the **crevice** demands a new global treaty **modelled** on the Montreal Protocol and the Paris Agreement and India needs to **demonstrate** that it is serious about a clean-up at home.
(A) threatening -- approving
(B) crevice -- crisis
(C) modelled -- meddled
(D) demonstrate -- remonstrate
(E) None of the above

Direction (29-30): In the following question, a sentence is given with three words highlighted in bold. From the options, choose the one that provides the correct arrangement of words in the sentence.

29. Medieval Europeans awoke to the possibility of (A) **impossibly** African wealth when reports reached them of an (B) **untold** magnificent (C) **expedition** mounted by an emperor of Mali.
(A) ACB   (B) BCA
(C) BAC   (D) CAB
(E) None of the above

30. The (A) **tapping** of directly (B) **skirting** African gold by (C) **prospect** the traders of North Africa was certainly high on Henry the Navigator's list.
(A) ACB   (B) BAC
(C) CAB   (D) ABC
(E) None of the above

Quantitative Aptitude

Direction (31-36): Answer the questions based on the information given below.

The given table shows the ratio of number of mixers to juicers sold, sum of the number of juicers and grinders sold and difference between number of grinders and mixers sold i.e. (mixers – grinders) sold, by four sellers.

Note: Number of articles sold by each seller = Number of (mixers + juicers + grinders) sold.

Seller	Number of (mixer:juicer) sold	Number of (juicer + grinders) sold	Number of (mixers – grinders) sold
A	8:5	1400	160
B	2:1	760	320
C	3:5	700	100
D	4:1	650	100

31. Find the ratio of number of mixers sold by sellers 'A' and 'B', together to number of grinders sold by seller 'A'.
(A) 12:5   (B) 21:10
(C) 13:8   (D) 24:11
(E) 20:9

32. Find the average number of grinders sold by sellers 'B' and C'.
(A) 300   (B) 240
(C) 320   (D) 250
(E) 360

33. 'C' sold each juicer for ₹120 and each grinder for ₹300. If he earned ₹180000 on selling all the articles, then find the price at which he sold each mixer.
(A) ₹160   (B) ₹320
(C) ₹240   (D) ₹150
(E) ₹200

34. The number of juicers sold by seller 'B' is how much percent more/less than that by seller 'D'?
(A) 150%   (B) 200%
(C) 140%   (D) 120%
(E) 160%

35. If the ratio of number of grinders sold by sellers 'D' and 'E' is 4:5, respectively, then find the difference between number of grinders sold by seller 'E' and number of mixers sold by seller 'D'.
(A) 25   (B) 40
(C) 15   (D) 30
(E) 45

36. Find 40% of number of juicers sold by sellers 'A' and 'C', together.
(A) 360   (B) 640
(C) 440   (D) 320
(E) 550

Directions (37-41): Answer the questions based on the information given below.

The given pie-chart shows the percentage distribution of number of people (male + female) who participated in yoga workshop organised at five different places. Total number of people who participated in the yoga workshop at given five places is 8400.

"You Are Never Too Old To Set Another Goal Or To Dream A New Dream."

Percentage distribution of number of people who participated in yoga workshop at five different places

Chennai 10%
Delhi 15%
Jammu 25%
Patna 20%
Bhopal 30%
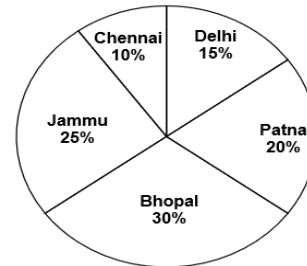
37. Find the ratio of total males who participated in yoga workshop at Delhi and Bhopal together and number of females who participated in yoga workshop at Jammu.
(A) 23:12   (B) 15:8
(C) 26:9   (D) 25:7
(E) 19:4

38. At Patna, the fee for each male and each female to attend the yoga workshop was Rs.10 and Rs.5, respectively. Find the total amount collected for the yoga workshop at Patna.
(A) Rs.10200   (B) Rs.9800
(C) Rs.15400   (D) Rs.7500
(E) Rs.12000

39. Number of females who attended the yoga workshop at Delhi and Bhopal, together is how much percent more/less than the number of males who attended the yoga workshop at Chennai?
(A) 195%   (B) 210%
(C) 175%   (D) 245%
(E) 180%

40. Find the average number of people who attended the yoga workshop at Delhi, Bhopal and Chennai.
(A) 1490   (B) 1710
(C) 1620   (D) 1540
(E) None of these

41. If total number of people who participated in the yoga workshop at another place i.e. Haridwar is 150% more than number of females who participated in the Yoga workshop at Jammu, then find the total number of people who participated in the yoga workshop at Haridwar.
(A) 2320   (B) 2250
(C) 2480   (D) 2160

(E) 2080

Direction (42-46): Answer the questions based on the information given below.

A shopkeeper sold two types of SIMs i.e. 4G and 5G. Number of 4G SIM sold on Monday is [A] which is 120 more than number of 5G SIM sold on same day. Number of 4G SIM sold on Tuesday is [B] which is 40% less than that on Monday and number of 5G SIM sold on Tuesday is [C]. Total SIM sold on Tuesday is 32% less than that on Monday while total SIM sold on Tuesday is 1224. Number of 5G SIM sold on Wednesday is [D] which is 30% more than number of 4G SIM sold on same day. Ratio of total SIM sold on Monday to Wednesday is 75:46.

42. Ratio of number of 4G to number of 5G SIM sold on Tuesday is:
(A) 8:9   **(B)** 4:5
(C) 6:7   **(D)** 11:12
(E) None of these

43. Find the value of '[A] – [D]'.
(A) 356   **(B)** 384
(C) 336   **(D)** 396
(E) None of these

44. Total number of SIM sold on Wednesday is:
(A) 1212   **(B)** 1224
(C) 1484   **(D)** 1104
(E) None of these

45. [C] is what percent of total number of SIM sold on Monday?
(A) 32%   **(B)** 36%
(C) 40%   **(D)** 30%
(E) None of these

46. Difference between number of 4G and 5G SIM sold on Wednesday is:
(A) 144   **(B)** 154
(C) 124   **(D)** 184
(E) None of these

Direction (47-49): What will come in place of the question mark (?) in the following series?

47. 48, 72, ?, 88, 16, 104

(A) 56   **(B)** 60
(C) 40   **(D)** 32
(E) 36

48. 7, 20, 63, 224, 900, ?
(A) 4094.5   **(B)** 4064.5
(C) 4084.5   **(D)** 4054.5
(E) 4024.5

49. 149, ?, 271, 344, 425, 514
(A) 202   **(B)** 208
(C) 206   **(D)** 200
(E) 216

Direction (50-51): What approximate value will come in place of the question mark (?) in the following question?
(Note: You are not expected to calculate the exact value.)

50. $359.89 \div \sqrt{8.99} + ?\%$ of $119.78 = (29.89 \times 5.15)$
(A) 10   **(B)** 25
(C) 40   **(D)** 60
(E) 80

51. $(7.89 \div 3.89)^2 + 31.89\%$ of $499.78 = ? + (319.77 \div 5.25)$
(A) 20   **(B)** 40
(C) 100   **(D)** 120
(E) 140

Direction (52-54): In the question, two equations I and II are given. You have to solve both the equations to establish the correct relation between x and y and choose the correct option.

52. I. $5x^2 – 11x + 6 = 0$ II. $25y^2 – 35y + 12 = 0$

(A) x > y   **(B)** x < y
(C) x = y or the relationship cannot be established
(D) x ≥ y   **(E)** x ≤ y

53. I. $x^2 – 3x – 108 = 0$ II. $y^2 – 6y – 91 = 0$
(A) x > y   **(B)** x < y
(C) x = y or the relationship cannot be established
(D) x ≥ y   **(E)** x ≤ y

54. I. $x^2 – 28x + 192 = 0$ II. $y^2 – 23y + 132 = 0$

(A) x > y   **(B)** x < y
(C) x = y or the relationship cannot be established
(D) x ≥ y   **(E)** x ≤ y

55. 'A', 'B' and 'C' have certain sum in the ratio 5:20:9, respectively. 'B' gives certain sum to 'A' such that he is left with triple the sum with 'A' now. If 'C' has ₹144 with him, then find the sum given by 'B' to 'A'.
(A) ₹20   **(B)** ₹16
(C) ₹40   **(D)** ₹24
(E) ₹30

56. The average age of a group of 12 people, in 2002 was 24 years. In 2006, a person of age 28 years was replaced by three people of age 14 years, 18 years and 10 years. Find the average age of the group in 2013.
(A) 30 years   **(B)** 35 years
(C) 32 years   **(D)** 29 years
(E) 26 years

57. In a test, Ajay got 24% of total marks and failed by 40 marks while Vinay got 48% of total marks which is 20 more than passing marks. Find the total marks of the test.
(A) 320   **(B)** 400
(C) 250   **(D)** 300
(E) None of these

58. The ratio of the cost price and marked price of an article is 5:8, respectively. The article is sold at 12% profit. If the discount offered on the article is ₹600, then find the difference between amount by which the article is marked up above its cost price and discount offered.
(A) ₹300   **(B)** ₹360
(C) ₹200   **(D)** ₹150
(E) ₹280

59. 6 men and 3 boys can complete a work in 6 days while 5 men and 8 boys can complete the same work in 5 days. In how many days 3 men and 6 boys can complete the same work?
(A) 4.5 days   **(B)** 12 days
(C) 7.5 days   **(D)** 9 days
(E) 6 days

60. To cover a distance of 162 km, a bus takes 45 minutes more than the time taken by a car to cover a distance of 216 km. If speed of car is 12 km/h more than the speed of bus, then find the distance travelled by the bus in 4 hours.
(A) 96 km   **(B)** 72 km
(C) 144 km   **(D)** 192 km
(E) None of these

61. A bag contains 24 balls i.e. red, pink and blue. Number of pink balls is 4 more than red balls and twice more than the number of blue balls. Three balls are drawn one by one at random, without replacement. Find the probability that each ball is of different colour.
(A) 30/253   **(B)** 48/253
(C) 10/253   **(D)** 12/253
(E) None of these

62. The sum of the 7th and 9th term of an arithmetic progression is 140. If the 15th term of the arithmetic progression is 84, then find the 1st term of the arithmetic progression.
(A) 56   **(B)** 72
(C) 64   **(D)** 60
(E) 70

63. Time taken by a boat to cover 54 km in upstream is 45 minutes more than time taken by it to cover 45 km in downstream. Find the time taken by boat to cover 144 km in still water if difference between speed of boat in upstream and downstream is 24 km/h.
(A) 2.75 hours   **(B)** 3 hours
(C) 3.25 hours   **(D)** 3.5 hours
(E) None of these

64. Area of a rhombus whose one of the diagonals (d_1) is 45 cm, is 540 cm². Each side of a square paper is 24 cm more than other diagonal (d_2) of the rhombus. Find the cost (in Rs.) of painting the square paper from both the surfaces at the rate of ₹0.25/cm².
(A) 1152   **(B)** 1240
(C) 1080   **(D)** 1324
(E) None of these

65. ₹x when invested at r% p.a. compound interest, compounded annually amounts to ₹7500 in 6 years and to ₹10800 in 8 years. Find the amount received when ₹7500 is invested at (r – 4)% p.a. simple interest for 8 years.
(A) ₹14000   **(B)** ₹18500

(C) ₹15300   **(D)** ₹16400
(E) ₹17100

Reasoning Aptitude

Direction (66-70): Answer the questions based on the information given below.

Seven persons P, Q, R, S, T, U and V work in an ABC restaurant. Each of them works on different posts in the order of precedence i.e. Manager, Assistant Manager(AM), Chef, Kitchen Manager(KM), Line Cook(LC), Bartender and Waiter such that Manager has a better/higher post than AM, AM has a better/higher post than Chef and so on. Each of them joined on 8th October in different years among 1990, 1991, 1992, 1993, 1994, 1995 and 1996.
S joined 2 years after P. R works as Line Cook. Only two persons have better post than that of V. Person joined in 1996 does not have better post than R. AM joined in 1991. At least 5 persons joined before the one, who is a Waiter. S is neither manager nor bartender. Q joined in 1994 but not as bartender. At least three persons joined after T, who is not an AM. R joined in odd numbered year.

66. Who among the following is a waiter?
     (A) S   **(B)** U
     (C) T   **(D)** R
     (E) P

67. Who joined in 1991?
     (A) T   **(B)** S
     (C) R   **(D)** P
     (E) V

68. How many persons have joined after S?
     (A) Five   **(B)** One
     (C) Two   **(D)** Four
     (E) Three

69. S is the _____.
     (A) Bartender   **(B)** Kitchen Manager
     (C) Line Cook   **(D)** AM
     (E) Manager

70. In which year did T join?
     (A) 1992   **(B)** 1990
     (C) 1993   **(D)** 1991

(E) Cannot be determined

Direction (71-75) Answer the questions based on the information given below:
There are eight shelves A, B, C, D, E, F, G and H in an Almirah. Each shelf contains different items (Flowers, Ornaments, Clothes, Bags, Books, Fruits, Pens, Vegetables). The bottommost shelf is numbered 1 and the topmost shelf is numbered 8. No two shelves with names starting with consecutive alphabets are adjacent to each other.
C is three shelves below the shelf containing flower. Shelf containing Fruit is immediately above A.
A is at least two shelves above the shelf containing flower. B contains Vegetables. C is a prime numbered shelf. G is two shelves above D, which contains Pens. Shelf containing Clothes is two shelves above E. H is above the shelf containing Books but not the 5th shelf. E contains neither Books nor Ornaments.

71. _____ shelves are above F.
     (A) Four   **(B)** Two
     (C) Three   **(D)** Five
     (E) None of the above

72. 7th shelf contains _____.
     (A) Books   **(B)** Bags
     (C) Vegetables   **(D)** Ornaments
     (E) None of the above

73. Which among the following shelves are not prime numbered?
     I. H   II. F   III. B
     (A) Only III   **(B)** Only I and II
     (C) Only II and III   **(D)** Only II
     (E) Only I

74. Shelf containing ___ is immediately above E.
     (A) Flowers   **(B)** Clothes
     (C) Ornaments   **(D)** Vegetables
     (E) None of the above

75. There are more than three shelves between ___ and ___.
     (A) G, B   **(B)** F, C
     (C) A, E   **(D)** H, D
     (E) D, A

Direction (76-80): Answer the questions based on the information given below.

12 persons A, B, C, D, E, F, G, H, I, J, K and L take leave on 11th, 15th, 20th and 24th of different months (January, February and March) in the same year.

K takes leave on one of the days in February.

B takes leave immediately after E but not on 24th (of any month). Two persons take leave between B and A. A doesn't take leave on 11th (of any month).

J takes leave immediately after G but in different months. Four persons take leave between E and K.

H takes leave immediately after J. I takes leave immediately before C but not on 24th January. L takes leave before F, who takes leave before D.

76. ___ takes leave on 24th January.
(A) G
(B) L
(C) F
(D) J
(E) A

77. Who takes leave immediately after L?
(A) G
(B) E
(C) F
(D) I
(E) None of the above

78. Two persons take leave between D and ___.
(A) G
(B) F
(C) L
(D) K
(E) None of the above

79. Which among the following statements is/are true?
(A) G takes leave in January
(B) L doesn't take leave in February
(C) A takes leave on 15th March
(D) K takes leave on 24th February
(E) None of the statements is true

80. Four persons join between ___ and ___.
(A) L, K
(B) E, G
(C) B, A
(D) D, H
(E) I, F

81. In a certain code of language, 'SOCIETY' is coded as 'RQBKGSX' and 'PROJECT' is coded as 'OQQIGBS' then what is the code of 'FLORENCE'?
(A) DKRQGMBH
(B) EKQPGMBG
(C) ELQQHNBG
(D) EKQQGMBG
(E) None of the above

82. Six persons A, B, C, D, E and F have different weights. C is lighter than only F. A is heavier than at least two persons. B is heavier than D and E. D is not the lightest. Who among the following is 3rd heaviest?
(A) A
(B) B
(C) C
(D) D
(E) Cannot be determined

83. How many pairs of letters are there in the word "JEOPARDY" which has as many letters between them in the word as in the alphabetical series?
(A) Four
(B) Two
(C) Three
(D) One
(E) None of the above

84. Answer the questions based on the information given below.
7 5 3 6 8 2 3 5 7 3 6 8 9 2 6 2 6 7 8 5 8 3 2 2 5 6
What is the sum of 3rd prime number from right end and 2nd even number from left end?
(A) 12
(B) 5
(C) 10
(D) 8
(E) 7

Directions (85-87): Answer the questions based on the information given below.

If '<' is denoted as '1'
'>' is denoted as '2'
'=' is denoted as '3'
'≤' is denoted as '4'
And '≥' is denoted as '5'

85. **Statements:** M2Q5N; V3N; S1V5Y
Conclusions: I. Q2S   II. Y1M
        III. S2Y
(A) Only conclusion I is true
(B) Only conclusions I and II are true
(C) Only conclusion III is true
(D) All conclusions I, II and III are false
(E) Only conclusions II and III are true

86. **Statements:**
L3K4C1J; W2U2J; G5I5L
Conclusions: I. G2U   **II.** W3L
          III. W2K
(A) Only conclusion I is true
(B) Only conclusions I and III are true
(C) Only conclusion III is true
(D) All conclusions I, II and III are false
(E) Only conclusions II and III are true

87. **Statements:**
O5C2H2X; Z3S1X; Z2D
Conclusions: I. O5D   **II.** Z1C   **III.** H3Z
(A) Only conclusion II is true
(B) Only conclusions I and III are true
(C) Only conclusion I is true
(D) All conclusions I, II and III are false
(E) Only conclusions II and III are true

Direction (88-89): Answer the questions based on the information given below.

A @ B means A is mother of B
A $ B means A is sister of B
A % B means A is daughter of B
A # B means A is son of B

88. In the expression 'P%H$R@K#V' how is V related to H?
(A) Brother – in- law   (B) Son- in-law
(C) Mother-in-law   (D) Son
(E) Father-in-law

89. In expression 'D@N@Y%S#P' how is P related to N?
(A) Mother-in-law   (B) Aunt
(C) Nephew   (D) Father
(E) Can't be determined

Direction (90-91): Answer the questions based on the information given below:
Seven points are drawn on a sheet of paper such that A is 8cm north of C. E is 5cm west of B. F is 3cm east of C. B is 2cm north of D. F is 5cm south of E. D is 4cm west of G.

90. What is the direction of D with respect to the point, which is in south west of E?
(A) North east   (B) South west
(C) North west   (D) South east

(E) None of the above

91. What is the shortest distance between A and G?
(A) 15 cm   (B) 13 cm
(C) 12 cm   (D) 16 cm
(E) None of the above

92. In the question below there are three statements followed by three conclusions I, II and III. You have to take the three given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the three statements disregarding commonly known facts.
Statements: Some white are black.
Some blue are white.
Only blue is green.
Conclusions: I. Some blue are black.
II. Some white are green.
III. All blue are white.
(A) Only conclusion I and conclusion II follow.
(B) Only conclusion I follows.
(C) Only conclusion II and conclusion III follow.
(D) Only conclusion III follows.
(E) None of the conclusions I, II and III follows.

Direction (93-97): Answer the questions based on the information given below.

Nine persons, A, B, C, D, E, F, G, H, and I are sitting in a straight row facing south.
Note: The left and right ends are as per the south direction.
A is sitting 3rd from one of the extreme ends. Two persons are sitting between A and B. H is sitting adjacent to B. I is sitting 2nd to the right of H. D is sitting immediate right of G. Two persons are sitting between D and C. C is not sitting adjacent to H. E is not sitting 2nd from any extreme end of the row. F is not sitting adjacent to I.

93. _____ is sitting at the extreme right end.
(A) D   (B) I
(C) F   (D) Either (A) or (B)
(E) None of the above

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94. How many persons are sitting in the left of E?
(A) 2 (B) 4
(C) None (D) 3
(E) 1

95. ____ is sitting 3rd to the right of ____.
(A) C, H (B) B, I
(C) G, C (D) H, E
(E) None of the above

96. How many persons are sitting between I and E?
(A) 2 (B) 3
(C) 1 (D) 5
(E) 4

97. ____ is sitting 4th from the left end.
(A) H (B) E
(C) B (D) I
(E) None of the above

Directions: (98-100): Answer the questions based on the information given below.

Seven persons A, B, C, D, E, F and G are sitting around the circular table facing towards the center. Each of them likes different colours among Red, Pink, Black, White, Yellow, Orange and Blue.

G sits immediate right of F but not adjacent to D. C sits third to the right of D, who likes White colour. One person sits between C and E. Person immediate right of E likes Red colour. A likes Black and is not adjacent to G. Person, who likes blue is immediate right of one, who likes Yellow. Persons adjacent to A do not like blue.

98. Who among the following sits second to the left of D?
(A) F (B) G
(C) E (D) A
(E) C

99. Who among the following likes Orange color?
(A) F (B) G
(C) E (D) C
(E) Cannot be determined

100. G likes _____ colour.
(A) Red (B) Black
(C) Yellow (D) Blue
(E) Pink

Solution

English Language

1. **Answer: (C)**
We need an adverb to modify the verb DIVED. NIMBLY (with quick and light movement) will fit here as the sentence tells us how the mynah took off from the windowsill and dived quickly into the rain trees. Thus, (c) is the right answer.
Gruesomely – in a way that inspires horror or repulsion. Emanating (verb) – giving out or emitting.
Fickle (adjective) – changing frequently. Lively (adjective) – full of energy.

2. **Answer: (B)**
We need an adjective to modify the noun BEAUTY. RIVETING (extremely exciting) will fit here as the sentence tells us how the fascinating beauty of nature marked itself all over the campus. Thus, (b) is the right answer.

Mesmerise (verb) – to have someone's attention completely. Opulence (noun) – wealth.
Exquisitely (adverb) – beautifully. Exacting – demanding or challenging.

3. **Answer: (E)**
It is clear that the passage is in the past indefinite tense. We need a second form verb to link the subject CREATURES to the object NATURE. COEXISTED (lived in the same place) will fit here as the sentence tells us how different creatures lived together in the middle of nature. Thus, (e) is the right answer.
Coincide (base form verb) – occur at the same time. Collated – collected and combined information.
Collective (adjective) – done by people acting as a group. Cohabits (third person singular verb) – lives together.

4. **Answer: (D)**

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We need an adjective to modify the noun NATURE. PRISTINE (in original condition) will fit here as the sentence tells us how different creatures lived together in the middle of unspoiled nature. Thus, (d) is the right answer.

Paltry – meagre or insignificant. Prudently (adverb) – in a way that shows thought for future.

Petty – worthless. Propel (verb) – set in motion.

5. **Answer: (A)**

It is clear that the given passage is in the past indefinite tense. We need a second form verb to link the subject SNAKES to the object ROADS. SLITHERED (moved smoothly over a surface in a twisting motion) will fit here as the sentence tells us how snakes moved across the quiet roads. Thus, (a) is the right answer.

Dawdle (base form verb) – delay or waste time. Drawled – spoke in a lazy way.

Drawn (past participle form verb) – attracted. Silently (adverb) – without making any sound.

6. **Answer: (C)**

DBCE is the final order, and A is the odd part. D begins the sentence by establishing the surrounding context - given the adverse impact of the pandemic. B follows by telling us what the pandemic has impacted - the finances of the government. CE proceeds as a pair by telling us what must be done - Telangana and AP need to consider the alternatives and low-cost options. A is the odd part as it talks about the need to focus on water and energy conservation, which does not establish continuity with the context. Thus, (c) is the right answer.

7. **Answer: (A)**

AECD is the final order, and B is the odd part. A begins the sentence by establishing the surrounding context - daily vaccination rates will see spikes and dips. EC follow as a pair by establishing the subject - aggressive publicity measures and campaigns. It tells us how they are necessary. D concludes by telling us the purpose behind these campaigns - they will boost vaccination. B is the odd part as it talks about concerns about a third wave of the illness, which does not establish continuity with the context. Thus, (a) is the right answer.

8. **Answer: (D)**

BACD is the final order, and E is the odd part. B begins the sentence by establishing the subject - the Centre. A follows by telling us how the Centre puts the onus on States for planning. CD concludes as a pair by telling us how the centre does not address the problem of vaccine supply shortage. E is the odd part as it talks about normalisation of economic activity, which does not establish continuity with the context. Thus, (d) is the right answer.

9. **Answer: (E)**

DBEA is the final order, and C is the odd part. D begins the sentence by establishing the subject - the recent discovery of hundreds of graves. B follows by telling us where the graves have been discovered - in Canada. EA concludes as a pair by telling us how the discovery highlighted the dark past of the country when indigenous people faced systemic discrimination and violence. C is the odd part as it talks about the discovery of remains by an indigenous organisation, which does not link itself with any of the remaining parts. Thus, (e) is the right answer.

10. **Answer: (A)**

ABCD is the final order, and E is the odd part. AB begins the sentence as a pair by establishing the subject - students and teachers not being able to use computers and the Internet. C follows by telling us how this is considered to be a form of deprivation. D tells us how this is especially true during the pandemic. E is the odd part as it talks about the inability to attend offline classes, which is not related to the context. Thus, (a) is the right answer.

11. **Answer: (D)**

We need a noun to be modified by the indefinite article A/ AN. INVESTIGATION and PROBE mean an examination into events, and will fit here as the sentence tells us how a train crash has spurred an examination. Thus, (d) is the right answer.

Implication - an indirect suggestion.

12. **Answer: (E)**

We need a verb here to agree with the subject REPORTS. The sentence tells us how the initial police reports demonstrate that he jumped the ticket barrier and boarded the train. All the three words can fit here to convey the

requisite meaning, which will make (e) the right answer.

13.   Answer: (A)
We need an adjective to modify the proper noun Mr. Robinson. CONVINCED (certain) will fit here as the sentence tells us how Mr. Robinson was sure that something serious was about to happen. Thus, (a) is the right answer. Evinced indicated. Incensed enraged.

14.   Answer: (C)
In C, replace the base form verb REINTRODUCE with REINTRODUCED as the passive voice construction WOULD + BE + VERB will take the past participle form of the verb. Thus, (c) is the right answer.

15.   Answer: (A)
In A, replace the plural verb WERE with the singular WAS as the subject WEBSITE is singular. Thus, (a) is the right answer.

16.   Answer: (E)
The sentence is grammatically correct and free of error. Thus, (e) is the right answer.

17.   Answer: (A)
In A, replace the plural verb REMAIN with the singular REMAINS as the subject REPUTATION is singular. Thus, (a) is the right answer.

18.   Answer: (D)
In D, replace the subject pronoun THEY with the object pronoun THEM as we need an object pronoun to form the object of the verb INFORMING. Thus, (d) is the right answer.

19.   Answer: (C)
2 is correct. Refer to the lines: "Despite the fact that many of these services are built on open protocols, a majority, if not all them, are only accessible within tightly controlled, closed environments… …Since all these digital on-ramps to the offline world were built by corporate entities, the singular focus of all these endeavours has been the customer. As a result, they have for the most part overlooked the need to build open digital systems for the entire industry". Thus, (c) is the right answer.
None of the other options are correct as they have not been mentioned in the passage.

20.   Answer: (E)
E is correct. Refer to the lines: "Notwithstanding all our advances in online banking and digital payments, the process for availing a loan remains unbearably

cumbersome… …This would have greatly simplified many of the processes for which we still rely on paper-based mechanisms for data transfers". Thus, (e) is the right answer.
None of the other options are correct as they have not been mentioned in the passage.

21.   Answer: (C)
C is correct. The passage tells us how transactions involving multiple banks are cumbersome, which is in contrast to the transactions between banks and their customers due to advances in technology. The author believes that a lack of open interoperable protocols is responsible for this. Refer to the line: "Despite all the remarkable improvements we have witnessed in digital transactions between banks and their customers, transactions that involve multiple banks remain painfully analogue to this day". Thus, (c) is the right answer.
A is incorrect. Refer to the lines: "Despite the fact that many of these services are built on open protocols, a majority, if not all them, are only accessible within tightly controlled, closed environments. This includes not just the purely digital spaces through which we receive information and entertainment, but also extends to the many digital interfaces through which we access offline services, such as the applications we use for shopping, transportation, banking and healthcare".
B is incorrect. The information in the passage is insufficient to conclude this.
D is incorrect according to the information given in the passage as the SMTP was developed in 1971.

22.   Answer: (D)
2 is correct. Refer to the line: "Banks were early adopters of digital technologies offering online banking facilities long before other sectors even started to come to grips with all that digital tools had to offer".
3 is correct. Refer to the line: "Countries around the world are waking up to the urgent need to enable open interoperable protocols. The Consumer Data Rights initiative in Australia and the Data Governance Act in Europe are but two examples of regulatory measures being put in place to enable data-sharing protocols". Thus, (d) is the right answer.

1 is incorrect. Refer to the line: "The ability to exchange messages between different computer systems was made possible shortly after Massachusetts Institute of Technology developed the Compatible Time Sharing System that allowed multiple users to log into a central system".

23. **Answer: (A)**
A is correct. Refer to the lines: "In those days, to send a message, you had to use the File Transfer Protocol to append text at the end of a private 'mailbox' file. A messaging system like this could only be used to exchange messages between computers within the same closed environment" and "This is how the Simple Message Transfer Protocol became the standard transport layer for messages over the internet, regardless of the operating system or email client that you used". Thus, (a) is the right answer.
None of the other options are correct as they have not been mentioned in the passage.

24. The passage revolves around the idea that open interoperable protocols for sharing of data help in innovation and evolution of digital services. It gives the example of SMTP that helped in sending messages over the internet, regardless of the operating system or email client since it was built using an open, interoperable protocol. It also mentions how the banking industry is suffering from a lack of open data-sharing protocols. B best sums up the idea. Thus, (b) is the right answer.
A is incorrect as the passage does not focus on the issues of the banking sector.
C is incorrect. The author's purpose behind telling us about the development of e-mail was to highlight the importance of open interoperable protocols.
D is incorrect as it runs counter to the idea expressed in the passage.
E is incorrect as the passage does not discuss the ownership of data.

25. **Answer: (D)**
INTEROPERABLE means compatible. CONGRUENT (in agreement or harmony) is similar in meaning to the given word. Thus, (d) is the right answer.
Steadfast – immovable or firmly fixed in place. Aberrant – departing from an accepted

standard. Tenuous – very weak or fragile. Annexe – an addition to a document.

26. **Answer: (B)**
UPSHOT means the result or outcome of a series of events. ANTECEDENT (the cause or origin of something) is opposite in meaning to the given word. Thus, (b) is the right answer.
Eminent – respectable. Earshot – the distance over which one can be heard. Imminent – likely to occur at any moment. Downcast – discouraged or disheartened.

27. **Answer: (C)**
The sentence tells us how the Ganga might have stood witness (seen proof of) to many stages of India's civilisation as Gandhi once noted (observed), but recently, it has become a channel for sewage, solid waste and industrial effluents (harmful chemicals). COLLUDE (to cooperate in a secret or unlawful manner) is inapt in the context and should be replaced with CONDUIT (channel). Thus, (c) is the right answer.
Alibi - the explanation given by a person accused of a crime that he or she was somewhere else when the crime was committed. Noticed - saw. Affluent - wealthy.

28. **Answer: (B)**
The sentence tells us how plastic waste is threatening (endangering) the food web on a global scale, and the problem demands a new global treaty modelled (designed) on the Montreal Protocol and the Paris Agreement, and India needs to demonstrate (show) that it is serious about this goal. CREVICE (small crack or opening) is inapt in the context and should be replaced with CRISIS (disaster). Thus, (b) is the right answer.
Approving - accepting as satisfactory. Meddled - interfered. Remonstrate - protest.

29. **Answer: (C)**
The sentence tells us how medieval Europeans awoke to the possibility of untold (existing in extremely large amounts) African wealth when reports reached them of an impossibly (extremely or unusually) magnificent expedition (journey) mounted by an emperor of Mali. We need an adverb (IMPOSSIBLY) to modify the adjective MAGNIFICENT. BAC is the correct order of words in the sentence. Thus, (c) is the right answer.

30. **Answer: (C)**

The sentence tells us how the prospect (likelihood or possibility) of directly tapping (exploiting) African gold by skirting (avoiding) the traders of North Africa was certainly high on Henry the Navigator's list. We need a noun (PROSPECT) to be modified by the definite article THE. CAB is the correct order of words in the sentence. Thus, (c) is the right answer.

Quantitative Aptitude

Directions sol: (31-36):
For seller 'A':
Let the number of mixers and juicers sold be 8x and 5x, respectively
Number of grinders sold = 1400 – 5x
According to the question,
8x – (1400 – 5x) = 160
Or, 13x = 1560
Or, x = 120
Therefore, number of mixers sold = 8x = 960
Number of juicers sold = 5x = 600
Number of grinders sold = 8x – 160 = 800
Similarly,

Seller	Number of mixers sold	Number of juicers sold	Number of grinders sold
A	960	600	800
B	720	360	400
C	300	500	200
D	600	150	500

31.   Answer: (B)
Required ratio = (960 + 720):800 = 1680:800 = 21:10

32.   Answer: (A)
Required average = (400 + 200)/2 = 300

33.   Answer: (E)
Total price of all the mixers sold = 180000 – {(120 × 500) + (200 × 300)} = ₹60000
Therefore, price at which each mixer is sold = 60000/300 = ₹200

34.   Answer: (C)
Required percentage = {(360 – 150)/150} × 100 = 140%

35.   Answer: (A)
Number of grinders sold by seller 'D' = 500 × (5/4) = 625
Required difference = 625 – 600 = 25

36.   Answer: (C)

Required number of juicers sold = 0.4 × (600 + 500) = 440

Directions sol: (37-41):
At Delhi:
Number of people who participated in the yoga workshop = 0.15 × 8400 = 1260
Number of males who participated in yoga workshop = 960
Number of females who participated in yoga workshop = 1260 – 960 = 300
Similarly,

Place	Total people who participated	Number of males who participated	Number of females who participated
Delhi	1260	960	300
Patna	1680	720	960
Bhopal	2520	1640	880
Jammu	2100	1200	900
Chennai	840	400	440

37.   Answer: (C)
Required ratio = (960 + 1640):900 = 2600:900 = 26:9

38.   Answer: (E)
Amount collected from males = 720 × 10 = Rs.7200
Amount collected from females = 960 × 5 = Rs.4800
Total amount collected = 7200 + 4800 = Rs.12000

39.   Answer: (A)
Number of females who attended the yoga workshop at Delhi and Bhopal, together = 300 + 880 = 1180
Required percentage = {(1180 – 400)/400} × 100 = 195%

40.   Answer: (D)
Required average = (1260 + 2520 + 840)/3 = 4620/3 = 1540

41.   Answer: (B)
Desired number = 2.50 × 900 = 2250

Directions sol: (42-46):
Total number of SIM sold on Monday = 1224/0.68 = 1800
Number of 4G SIM sold on Monday = [A] = (1800 + 180)/2 = 960
Number of 5G SIM sold on Monday = 1800 – 960 = 840
Number of 4G SIM sold on Tuesday = [B] = 0.60 × 960 = 576

Number of 5G SIM sold on Tuesday = [C] = 1224 – 576 = 648
Total number of SIM sold on Wednesday = (46/75) × 1800 = 1104
Number of 4G SIM sold on Wednesday = 1104/2.3 = 480
Number of 5G SIM sold on Wednesday = [D] = 1104 – 480 = 624

Days	Number of 4G SIM sold	Number of 5G SIM sold	Total number of SIM sold
Monday	960	840	1800
Tuesday	576	648	1224
Wednesday	480	624	1104

42. **Answer: (A)**
Desired ratio = 576:648 = 8:9

43. **Answer: (C)**
[A] – [D] = 960 – 624 = 336

44. **Answer: (D)**
Total number of SIM sold on Wednesday = 1104

45. **Answer: (B)**
Desired percentage = (648/1800) × 100 = 36%

46. **Answer: (A)**
Desired difference = 624 – 480 = 144

47. **Answer: (D)**
48 + 8 × 3 = 72
72 – 8 × 5 = 32
32 + 8 × 7 = 88
88 – 8 × 9 = 16
16 + 8 × 11 = 104

48. **Answer: (D)**
7 × 2.5 + 2.5 = 20
20 × 3 + 3 = 63
63 × 3.5 + 3.5 = 224
224 × 4 + 4 = 900
900 × 4.5 + 4.5 = 4054.5

49. **Answer: (C)**
$12^2 + 5 = 149$
$14^2 + 10 = 206$
$16^2 + 15 = 271$
$18^2 + 20 = 344$
$20^2 + 25 = 425$
$22^2 + 30 = 514$

50. **Answer: (B)**
$359.89 \div \sqrt{8.99}$ + ?% of 119.78 = (29.89 × 5.15)
360 ÷ 3 + ?% of 120 ~ 30 × 5
120 + ?% of 120 ~ 150
?% of 120 ~ (150 – 120)
? ~ (30/120) × 100
? ~ 25

51. **Answer: (C)**
$(7.89 \div 3.89)^2$ + 31.89% of 499.78 = ? + (319.77 ÷ 5.25)
$(8 \div 4)^2$ + 32% of 500 = ? + (320 ÷ 5)
? = 4 + 0.32 × 500 – 64
? = 4 + 160 – 64
? = 100

52. **Answer: (A)**
From I:
$5x^2 – 11x + 6 = 0$
$5x^2 – 5x – 6x + 6 = 0$
$5x(x – 1) – 6(x – 1) = 0$
$(5x – 6)(x – 1) = 0$
x = 6/5, 1
From II:
$25y^2 – 35y + 12 = 0$
$25y^2 – 20y – 15y + 12 = 0$
$5y(5y – 4) – 3(5y – 4) = 0$
$(5y – 3)(5y – 4) = 0$
y = 3/5, 4/5

X	Relation	Y
6/5	>	3/5
6/5	>	4/5
1	>	3/5
1	>	4/5

So, x > y

53. **Answer: (C)**
From I:
$x^2 – 3x – 108 = 0$
$x^2 + 9x – 12x – 108 = 0$
$x(x + 9) – 12(x + 9) = 0$
$(x + 9)(x – 12) = 0$
x = -9, 12
From II:
$y^2 – 6y – 91 = 0$
$y^2 + 7y – 13y – 91 = 0$
$y(y + 7) – 13(y + 7) = 0$
$(y + 7)(y – 13) = 0$
y = -7, 13

X	Relation	Y
12	>	-7
12	<	13
-9	<	-7
-9	<	13

So, relationship between x and y cannot be established.

54. **Answer: (D)**
From I:
$x^2 – 28x + 192 = 0$

$x^2 - 12x - 16x + 192 = 0$
$x(x - 12) - 16(x - 12) = 0$
$(x - 12)(x - 16) = 0$
x = 12, 16
From II:
$y^2 - 23y + 132 = 0$
$y^2 - 11y - 12y + 132 = 0$
$y(y - 11) - 12(y - 11) = 0$
$(y - 11)(y - 12) = 0$
y = 11, 12

X	Relation	Y
12	>	11
12	=	12
16	>	11
16	>	12

So, x ≥ y

55. **Answer: (A)**
Let 'A', 'B' and "C" has ₹5x, ₹20x and ₹9x, respectively with them
Sums with 'C' = ₹144
Or, 9x = 144
Or, x = 16
Therefore, sum with 'A' = 16x = ₹80
Sum with 'B' = 20x = 320
Let the sum given by 'B' to 'A' be ₹y
Therefore, 3(80 + y) = 320 – y
Or, 240 + 3y = 320 – y
Or, 4y = 80
Or, y = 20

56. **Answer: (C)**
Sum of the ages of all the members of the group in 2002 = 24 × 12 = 288 years
Sum of the ages of all the members of the group in 2006 = 288 + (12 × 4) – 28 + 14 + 18 + 10 = 350 years
Sum of ages of 14 members of the group in 2013 = 350 + (14 × 7) = 448 years
Required average = 448/14 = 32 years

57. **Answer: (C)**
Let the total marks of the test be 'x'
Therefore, marks scored by Ajay = 0.24x
Therefore, passing marks of the test = 0.24x + 40
Marks scored by Vinay = 0.48x
Also, passing marks of the test = 0.48x – 20
Therefore,
0.24x + 40 = 0.48x – 20
Or, 0.24x = 60
Or, x = 60/0.24 = 250
Therefore, total marks of the test = 250

58. **Answer: (D)**
Let, the cost price and marked price of the article be ₹5x and ₹8x, respectively.
Therefore, selling price of the article = 1.12 × 5x = ₹5.6x
Or, 8x – 5.6x = 600
Or, 2.4x = 600
Or, x = 250
Amount by which the article is marked up above its cost price = 8x – 5x = 3x = ₹750
Required difference = 750 – 600 = ₹150

59. **Answer: (C)**
Let 1 day's work of each men and each boy be 'x' units and 'y' units, respectively
According to the question,
6x + 3y = (1/6)......... (1)
And, 5x + 8y = (1/5)....... (2)
On solving equation (1) and (2), we get
1 day's work of each men = 1/45
1 day's work of each boy = 1/90
Therefore, 1 day's work of 3 men and 6 boys = 3x + 6y
Or, 1 day's work of 3 men and 6 boys = 3 × (1/45) + 6 × (1/90) = (12/90) = 1/7.5
Therefore, time taken by 3 men and 6 boys to complete the work = 7.5 days

60. **Answer: (A)**
Let speed of bus is 'x' km/h
So, speed of car = 'x+ 12' km/h
According to question;
{162/x} – {216/(x + 12)} = 45/60 = 3/4
Or, 54/x – {72/(x + 12)} = 1/4
Or, 4 × {54(x + 12) – 72} = x(x + 12)
Or, 216x + 2592 – 288x = x^2 + 12x
Or, x^2 + 84x – 2592 = 0
Or, x^2 + 108x – 24x – 2592 = 0
Or, x(x + 108) – 24(x + 108) = 0
Or, (x – 24)(x + 108) = 0
Or, x = 24 or x = -108
So, speed of bus = 24 km/h
Desired distance = 24 × 4 = 96 km

61. **Answer: (B)**
Let the number of blue balls be 'x'
Number of pink balls = 3x
Number of red balls = (3x – 4)
According to the question,
3x + x + 3x – 4 = 24
Or, 7x – 4 = 24
Or, 7x = 28
Or, x = 4
Number of red balls = 3x – 4 = 8

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Number of pink balls = 3x = 12
Number of blue balls = x = 4
Required probability = 6 × (8/24) × (12/23) × (4/22) = 48/253

62. **Answer: (A)**
Let the 1st term (a) and common difference (d) of the arithmetic progression be 'a' and 'd', respectively
n^{th} term of an arithmetic progression is given by = a + (n – 1)d
According to the question,
(a + 6d + a + 8d) = 140
Or, 2(a + 7d) = 140
Or, a + 7d = 70…….. (1)
Also, a + 14d = 84…… (2)
On solving equation (1) and (2), we get
First term of the arithmetic progression = a = 56

63. **Answer: (B)**
Speed of stream = 24/2 = 12 km/h
Let, speed of boat in still water is 'x' km/h
Speed of boat in upstream = 'x – 12' km/h
Speed of boat in downstream = 'x + 12' km/h
So, 54/(x – 12) – 45/(x + 12) = 45/60 = 3/4
Or, 18/(x – 12) – 15/(x + 12) = 1/4
Or, 4{18(x + 12) – 15(x – 12)} = (x + 12)(x – 12)
Or, 4{396 + 3x} = x^2 – 144
Or, 1584 + 12x = x^2 – 144
Or, x^2 – 12x – 1728 = 0
Or, x^2 – 48x + 36x – 1728 = 0
Or, x(x – 48) + 36(x – 48) = 0
Or, (x + 36)(x – 48) = 0
Or, x = 48
Desired time = 144/48 = 3 hours

64. **Answer: (A)**
According to the question,
{(d_1 × d_2)/2} = 540
Or, 45 × d_2 = 1080
Or, d_2 = 1080/45 = 24
Therefore, each side of the squared paper = 24 + 24 = 48 cm
Required cost of painting = 2 × 48 × 48 × 0.25 = ₹1152

65. **Answer: (E)**
According to the question,
{x(1 + r/100)^8}/{x(1 + r/100)^6} = 10800/7500
Or, (1 + r/100)^2 = 1.44
Or, (1 + r/100)^2 = (1 + 20/100)^2
Or, r = 20
New rate of interest = (r – 4) = 16% p.a.

Required amount received = {(7500 × 16 × 8)/100} + 7500 = ₹17100

Reasoning Aptitude

Direction sol (66-70):

Designations	Persons	Years
Manager	Q	1994
AM	P	1991
Chef	V	1992/1990
KM	S	1993
LC	R	1995
Bartender	T	1990/1992
Waiter	U	1996

66. **Answer: (B)**
U is the waiter.

67. **Answer: (D)**
P joined in 1991.

68. **Answer: (E)**
Three persons have joined after S.

69. **Answer: (B)**
S is the Kitchen Manager.

70. **Answer: (E)**
T joined in either 1990 or 1992.

Direction (71-75)
The final table is given below:

Position	Shelf	Item
8	G	Fruit
7	A	Ornaments
6	D	Pens
5	F	Flower
4	B	Vegetables
3	H	Clothes
2	C	Books
1	E	Bags

71. **Answer: (C)**
Three shelves are above F.

72. **Answer: (D)**
7th shelf contains Ornaments.

73. **Answer: (A)**
Among the given shelves, only B is not prime numbered shelf.

74. **Answer: (E)**
Shelf containing Books is immediately above E.

75. **Answer: (C)**
There are more than three shelves between A and E.

Direction sol (76-80)
The final table is given below:

	11th	15th	20th	24th

January	L	E	B	F
February	D	A	K	G
March	J	H	I	C

76. **Answer: (C)**
F takes leave on 24th January.

77. **Answer: (B)**
E takes leave immediately after L.

78. **Answer: (A)**
Two persons take leave between D and G.

79. **Answer: (B)**
L doesn't take leave in February.

80. **Answer: (D)**
Four persons join between D and H.

81. **Answer: (D)**
All the consonants are replaced by their immediate preceding letters. All the vowels are replaced by their 2nd succeeding letters as per the alphabetical series.
Given word: SOCIETY

S	O	C	I	E	T	Y
R	Q	B	K	G	S	X

PROJECT

P	R	O	J	E	C	T
O	Q	Q	I	G	B	S

Similarly, FLORENCE

F	L	O	R	E	N	C	E
E	K	Q	Q	G	M	B	G

82. **Answer: (E)**
Clues: C is lighter than only F. A is heavier than at least two persons. B is heavier than D and E. D is not the lightest.
Inference: So, F must be the heaviest. Also, E must be the lightest.
F > C > A/B > B/A > D > E
So, either A or B is the 3rd heaviest.

83. **Answer: (A)**
OR, OP, DJ and PR are the four pairs which have as many letters between them in the given word "JEOPARDY" as in the alphabetical series.

84. **Answer: (C)**
Given series: 7 5 3 6 8 2 3 5 7 3 6 8 9 2 6 2 6 7 8 5 8 3 2 2 5 6
Third prime number from right: 2
Second even number from left: 8
Sum = 2 + 8 = 10

85. **Answer: (B)**
Given statements: Decoding the signs of the statement, it becomes
M>Q≥N; V=N; S<V ≥ Y

On combining, we get
M>Q≥N = V ≥ Y; M>Q≥N = V> S
Conclusions:
I. Q2S means Q>S: True (As Q≥N = V > S, so,Q>S)
II. Y1Mmeans Y<M: True(As M>Q≥N = V ≥ Y, so, M>Y)
III. S2Y means S>Y: False (As S<V ≥ Y, so, the relation between S and Y cannot be determined)
So, only conclusion I and II are true.

86. **Answer: (C)**
Given statements: Decoding the signs of the statement, it becomes
L=K≤C < J; W >U>J; G≥ I ≥ L
On combining, we get
G≥ I ≥ L=K≤C < J< U < W
Conclusions:
I. G2U means G>U: False (As G≥ I ≥ L=K≤C < J < U, so, the relation between G and U cannot be determined)
II. W3L means W=L: False (As L=K≤C < J < U < W, so, W>L)
III. W2K means W>K: True (As K≤C < J < U < W, so, W>K)
Only conclusion III is true.

87. **Answer: (A)**
Given statements: Decoding the signs of the statement, it becomes
O≥C>H > X; Z=S<X; Z>D
On combining, we get
O≥C>H > X> S = Z>D
Conclusions:
I. O5D means O≥D: False (As O≥C>H > X > S = Z>D, so, O>D)
II. Z1C means Z<C: True (As C>H > X > S = Z, so, C>Z)
III. H3Z means H=Z: False (As H > X > S = Z, so, H>Z)
Only conclusion II is true.

88. **Answer: (A)**
Given expression,
'P%H$R@K#V'
P % H means P is daughter of H
H $ R means H is sister of R
R @ K means R is mother of K
K#V means K is the son of V

H(-) — **sister of** — R(-) — **married to** — V(+)
|
P(-)
|
K(+)
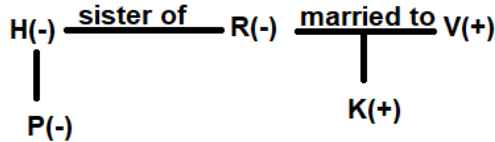
So, V is the brother-in-law of H.

89. **Answer: (E)**
Given expression,
'D@N@Y%S#P'
D@N@Y means D is the mother of N, who is the mother of Y.
Y%S means Y is the daughter of S.
S#P means S is the son of P.

D(-)   P(-/+)
| |
N(-) — **married to** — S(+)
|
Y(-)
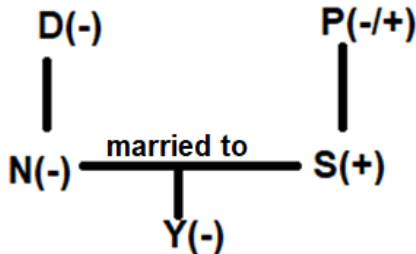
So, we cannot determine the gender of P with the given information.

90. **Answer: (A)**
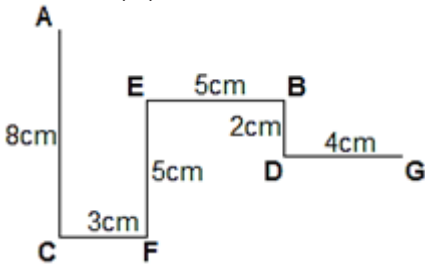
C is to the south west of E.
D is to the north east of C.

91. **Answer: (B)**
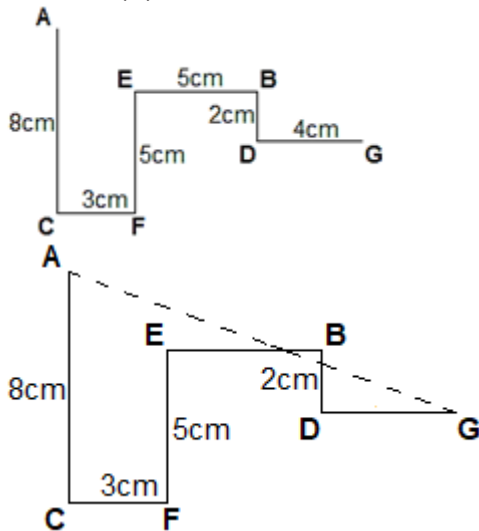
The shortest distance between A and G

= √[(12)² + (5)²] cm
= √(144 + 25) cm
= √169 cm
= 13 cm

92. **Answer: (E)**
Following figure can be formed:
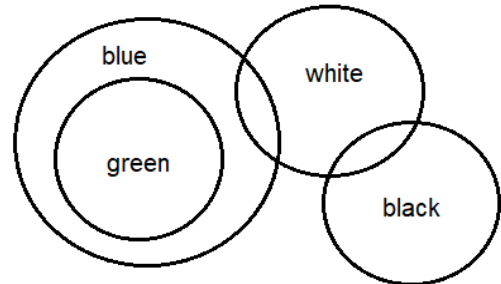
Only blue is green means nothing can be part of green except blue.
From the figure, none of the conclusion follows.

Directions sol: (93-97):
The final arrangement us as follows:

D	G	A	C	I	B	H	F	E

93. **Answer: (A)**
D is sitting at the extreme right end.

94. **Answer: (C)**
No one is sitting in the left of E.

95. **Answer: (A)**
C is sitting 3rd to the right of H.

96. **Answer: (B)**
Three persons are sitting between I and E.

97. **Answer: (C)**
B is sitting 4th from the left end.

Directions sol: (98-100):
Starting Point: Here, we can start with C, D and E in order to form two cases initially.
Clues:
1.) C sits third to the right of D, who like White colour.
2.) One person sits between C and E.
Inference:
From (2), E sits second right of C or second to left of C.
Case 1:

"The ones who are crazy enough to think they can change the world, are the ones that do."

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C

E

D(White)

Case 2:

C

E

D(White)
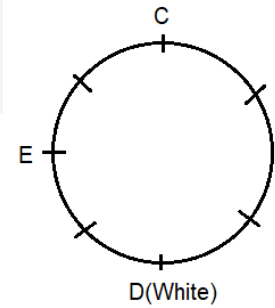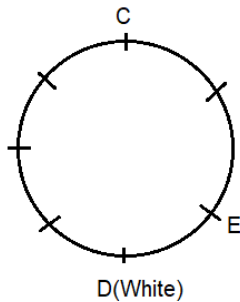
Clues:

3.) G sits immediate right of F but not adjacnet to D.

4.) Person immediate right of E likes Red colour.

Inference:

Case 1:

C

E

G

(Red)

F

D(White)

Case 2:

C

F

(Red)

G

E

D(White)
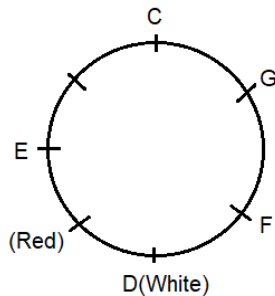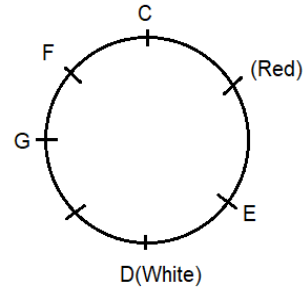
Clues:

5.) A likes Black and is not adjacent to G.

6.) Person, who likes blue is immeidate rigth of one, who likes Yellow.

7.) Persons adjacent to A does not like blue.

Inference:

From (5), case 2 must be rejected. Also, B must like Red colour. From (7), G and F must like Blue and Yellow colour respectively.

C (Pink/Orange)

A(Black)

G (Blue)

E(Orange/Pink)

B (Red)

F (Yellow)

D(White)
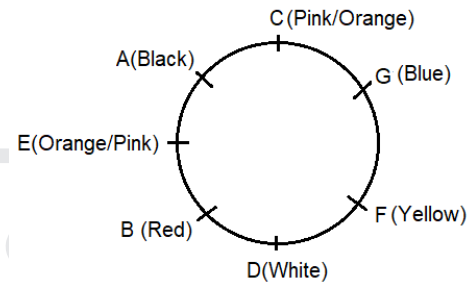
98.   **Answer: (C)**
        E sits second to the left of D.
99.   **Answer: (E)**
        Either C or E likes Orange colour.
100.   **Answer: (D)**
        G likes Blue colour.

"I Think Goals Should Never Be Easy, They Should Force You To Work, Even If They Are Uncomfortable At The Time."

"One Of The Lessons That I Grew Up With Was To Always Stay True To Yourself And Never Let What Somebody Else Says Distract You From Your Goals."

SSC CHSL Prelims Solved Paper

Quantitative Aptitude

1. Two numbers are in the ratio 12:5. If their difference is 812, then find their sum.
   (A) 1762   (B) 2012
   (C) 1824   (D) 1972

2. Find the number of odd factors of 4200.
   (A) 24   (B) 48
   (C) 12   (D) 16

3. If LCM of two numbers 'p' and 'q' is pq, then 'p' and 'q' must be:
   (A) even number   (B) odd number
   (C) composite number   (D) prime number

4. In a company with 600 employees, the average age of male employees is 42 years and that of female employees is 41 years. If the average age of all the employees in the company is 41 years 9 months, then number of female employees in the company is:
   (A) 350   (B) 450
   (C) 300   (D) 150

5. Ratio of age of 'A' after 14 years to age of 'B' after 12 years will be 5:6 respectively. If present average age of 'A' and 'B' is 42 years, then find the ratio of their age 6 years ago.
   (A) 5:6   (B) 5:7
   (C) 7:9   (D) 4:7

6. Monthly income of 'A' is 40% less than that of 'B' and expenditure of 'B' is 6.25% less than that of 'A'. If income of 'A' is 160% of expenditure of 'B', then find the ratio of savings of 'A' and 'B' respectively.
   (A) 8:25   (B) 12:25
   (C) 16:25   (D) 4:25

7. When two numbers 'P' and 'Q' are separately divided by 87, the remainder obtained are 54 and 82 respectively. If the sum of the numbers 'P' and 'Q' is divided by 87, then the remainder will be:
   (A) 47   (B) 51
   (C) 49   (D) 42

8. If the cost price of 16 chairs is equal to the selling price of 20 chairs then find the loss percent.
   (A) 20%   (B) 25%
   (C) 32%   (D) 12.5%

9. ₹24000 when invested at 15% p.a. compound interest compounded annually for 'n' years gives an interest of ₹7740. Find the value of n.
   (A) 2.4   (B) 1.5
   (C) 2   (D) 1.9

10. 'A', 'B' and 'C' can complete a piece of work in 30 days, 45 days and 90 days respectively. 'A' starts the work and is assisted by 'B' and 'C' together on every third day. In how many days will the work be completed?
    (A) 30 days   (B) 45 days
    (C) 23 days   (D) 22 days

11. A man rows upstream 40 km and downstream 60 km taking 5 hours each time. Find the speed of the current.
    (A) 2.5 km/hr   (B) 2 km/hr
    (C) 4 km/hr   (D) 3.5 km/hr

12. A man travels 24 km at an average speed of 20 km/hr and again travels 20 km with an average speed of 24 km/hr. Find his approximate average speed during the whole journey.
    (A) 22.42 km/hr   (B) 21.64 km/hr
    (C) 20.88 km/hr   (D) 23.42 km/hr

13. If $\cos x + \sec x = 10$, then find the value of $\cos^2 x + \sec^2 x$
    (A) 98   (B) 54
    (C) 112   (D) 105

14. If $\{x + (1/x)\} = 7$, then find the value of $(x^4 + 3x^3 + 5x^2 + 3x + 1)/(x^4 + 1)$.
    (A) 73/47   (B) 56/25
    (C) 74/29   (D) 64/49

15. The value of $\sin 80^\circ \cos 10^\circ + \sin 10^\circ \cos 80^\circ$ is
    (A) 0   (B) -1
    (C) 1   (D) $1/\sqrt{2}$

16. Find the value of 'x' for the equation: $7x^2 + 33x - 10 = 0$
(A) -2/9, -12   (B) -1/7, -8
(C) 3/7, -4   (D) 2/7, -5

17. Find the least value of $\tan^2 x + \cot^2 x + 5$.
(A) 5   (B) $(\sqrt{3} - 1)$
(C) 7   (D) $(\sqrt{3} + 1)/2$

18. Find the points at which graphs of the equations $y = x^2 - 15$ and $y = 5 - x$ will intersect.
(A) (-8, 2) (3, 5)   (B) (4, 1) (-5, 10)
(C) (2, -3) (4, -5)   (D) (7, -2) (-5, 1)

19. If chord of a circle of radius 15 cm is tangent to another circle of radius 9 cm and both the circles being concentric, then the length of the chord is
(A) 24 cm   (B) 32 cm
(C) 18 cm   (D) 30 cm

20. If the angles of a triangle are in the ratio 2:1:1, then find the ratio of perimeter of the triangle to the length of the smaller side.
(A) $3:\sqrt{2}(\sqrt{2} + 1)$ (B) $2:\sqrt{3}(\sqrt{3} + 1)$
(C) $2:(\sqrt{2} + 1)$ (D) $1:\sqrt{2}(\sqrt{2} + 1)$

Direction (21-24): The given bar graph shows the number of male and female employees, in five different offices. Study the graph carefully and answer the question given below.

☐ Number of male employees
▥ Number of female employees

21. The number of employees in office 'E' is how much percent of number of male employees in offices 'C' and 'D', together?
(A) 50%   (B) 45%
(C) 75%   (D) 60%

22. Find the average of number of female employees in given five offices.
(A) 208   (B) 198
(C) 312   (D) 244

23. Find the difference between number of male employees in offices 'A', 'C' and 'E', together and total employees in office 'B'.
(A) 320   (B) 240
(C) 180   (D) 260

24. Find the ratio of the number of male employees in offices 'A' and 'B' together to the number of female employees in offices 'D' and 'E', together.
(A) 3:5   (B) 2:7
(C) 1:3   (D) 2:3

25. Find the length of the longest rod that can be put in a 12 m long, 8 metres broad and 20 metres high room.
(A) $5\sqrt{12}$ metres   (B) $4\sqrt{38}$ metres
(C) $3\sqrt{34}$ metres   (D) $5\sqrt{33}$ metres

Reasoning Aptitude

26. Select the number-pair in which the numbers are similarly related as in the given pair.
17: 4914
(A) 36: 135   (B) 5: 35
(C) 10: 1110   (D) 9: 730

27. Select the set of numbers that is similar to the following set:
(26, 8, 12, 1728)
(A) 24, 10, 111, 132   (B) 11, 8, 16, 1102
(C) 15, 6, 10, 1000   (D) 18, 9, 112, 1111

28. Find the word which holds the same relation with the third word as there in between the first two words.
Venerate: Worship:: Extol : ?
(A) Compliment   (B) Complain

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(C) Glorify   (D) Reference

29. If $55 \times 23 = 31$, $62 \times 46 = 36$, $19 \times 12 = 11$, then $57 \times 34 = ?$
(A) 40   (B) 32
(C) 47   (D) 28

30. Three of the following four letter – cluster are alike in a certain way and one is different. Pick the odd one out.
(A) EHKN   (B) MPSV
(C) ADFI   (D) ORUX

31. In a certain code language, '#' represents '÷', '@' represents '+', '%' represents '-' and '?' represents '×'. Which of the following will fill the blank?
115%16@247#13?7 =
(A) 245   (B) 232
(C) 330   (D) 184

32. A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.
54, 56, 60, 68, 84, ?
(A) 116   (B) 120
(C) 178   (D) 114

33. A series is given with one word is missing. Choose the correct alternative from the given ones that will complete the series.
Assertion, Brand, Cartoons, Drives, Eventually, ?
(A) Tank   (B) Secret
(C) Figure   (D) Animal

34. Which set of letter when sequentially placed at the gaps in the given letter series shall complete it?
P A P R R A P R R _ _ A A
(A) APPRRPA   (B) RPAPPRA
(C) APPRARP   (D) RPAAPPR

35. 'Cuboid' is related to '8' in the same way as 'Pentagon' is related to '_____'.
(A) 10   (B) 8
(C) 6   (D) 5

36. In the following question, select the missing number from the given alternatives.
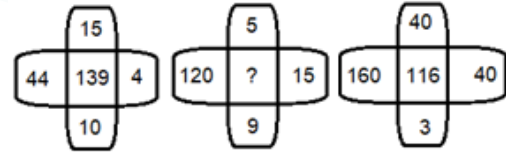
(A) 47   (B) 40
(C) 37   (D) 85

37. From the given alternative words, select the word which cannot be formed using the letters of the given word:
CHARACTERS
(A) Arrest   (B) Archer
(C) Tracker   (D) Earth

38. Choose the correct option in order to balance the following equation.
15 _ 4 _ 6 _ 144 _ 6 _ 78
(A) $- + \times = \div$ (B) $\times - + \div =$
(C) $+ - \div \times =$ (D) $= \times \div - +$

39. Arrange the following words in logical and meaningful order.
1. Secondary School 2. High School 3. Nursery 4. Graduation 5. Post-Graduation
(A) 2, 3, 1, 4, 5   (B) 3, 2, 1, 4, 5
(C) 1, 2, 3, 4, 5   (D) 4, 1, 5, 2, 3

40. B is the son of D. K is the mother of R, who is the father of C. D is married to C. L is married to R. Gender of L and D is different, then how is C related to K's only daughter-in-law?
(A) Nephew   (B) Niece
(C) Daughter   (D) Son

41. Two positions of the same dice are given, which of the following number will be opposite to 5?
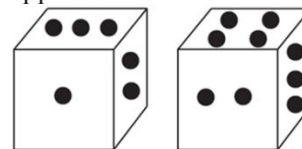
(A) 3   (B) 2
(C) 6   (D) Cannot be determined

42. Select the correct option that represents the given Venn Diagram:

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(A) Men, Person, Women
(B) States, Countries, Places
(C) Oceans, Water, Seas
(D) Earth, Satellite, Moon

43. How many triangles are there in the given figure?
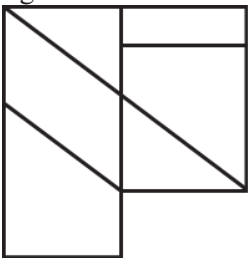
(A) 4   (B) 3
(C) 1   (D) 2

44. Select the option in which will complete the following figure.
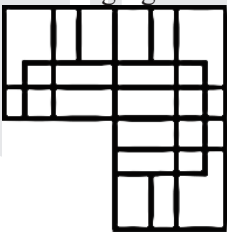
45. In the question below there are two statements followed by two conclusions I and II. You have to take the two given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the two statements disregarding commonly known facts.
Statements: All room are floor.
Each floor is building.
Conclusions: I. Some building are room.
II. Some building are not floor.
(A) Only conclusion I follows
(B) Only conclusion II follows
(C) Both the conclusions I and II follow
(D) Neither conclusion I nor II follows

46. In a row of girls, Anny is 8th from the left and Vaishali is 12th from the right. If they interchange their position, Anny becomes 23rd from the left. How many girls are there in the row?
(A) 19   (B) 34
(C) 43   (D) 29

47. Identify the mirror image of the following figure when the mirror is placed to the right of the figure.
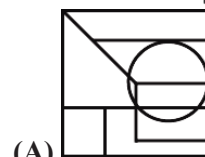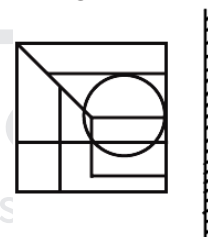
(A)   (B)
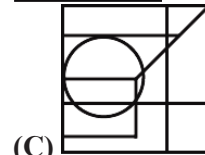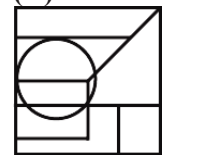
(C)   (D)
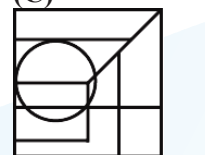
48. Select a figure from amongst the following which will continue the same series as established by the five?

(A)

(B)

(C)

(D)
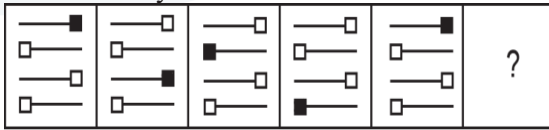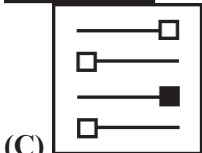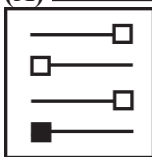
49. A word is represented by only one set of number as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as in two matrices given below. The columns and rows of Matrix I are numbered from 0 to 4 and that of Matrix II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column, e.g., C can be represented by 02 and 34, and L can be represented by 03, 41, 57 and 89 etc.

Similarly, you have to identify the code of given word "MODELS"?

Matrix I:

	0	1	2	3	4
0	S	M	C	L	S
1	N	T	A	G	N
2	T	U	M	T	D
3	U	K	X	P	C
4	G	L	O	S	U

Matrix II:

	5	6	7	8	9
5	N	O	L	E	E
6	V	E	D	H	V
7	Z	A	I	V	A
8	O	H	Q	M	L
9	E	M	R	O	N

(A) 66, 00, 34, 67, 13, 43
(B) 22, 85, 67, 58, 89, 00
(C) 22, 85, 67, 58, 89, 78
(D) 22, 85, 00, 45, 56, 96

50. In each question a statement is given, followed by two assumptions, numbered I and II. An assumption is supposed or taken for granted. You have to consider the statement and assumptions and decide which of the assumptions is implicit in the statement.

Statement: The Food Safety and Standards Authority of India's (FSSAI) took a move to reduce trans-fat in food items which use edible oil as an ingredient to 2%.

Assumptions: I. Trans-fats are only found in food items which use edible oil as an ingredient.

II. Trans-fats are not good for health.

(A) Only I is implicit
(B) Only II is implicit
(C) Both I and II are implicit
(D) Neither I nor II is implicit

General Studies

51. 'Sela Pass' is a sacred site in Tibetan Buddhism. It is located in which state of India?
(A) Sikkim   **(B)** Jammu & Kashmir
(C) Himachal Pradesh   **(D)** Arunachal Pradesh

52. The book which is at the centerpiece of the study of Macro-Economics was written by _____.
(A) Prof. Samuelson   **(B)** Prof. J.M. Keynes
(C) Prof. Benham   **(D)** Prof. Baumol

53. Name the national bird of Bangladesh.
(A) Magpai Robin   **(B)** Peacock
(C) Parrot   **(D)** Raven

54. Which country was first to implement Goods and Services Tax (GST)?
(A) Italy   **(B)** France
(C) Russia   **(D)** Germany

55. Name the national bird of China.
(A) Javan hawk-eagle

(B)Red-crowned Crane
(C) Common nightingale
(D) Raven

56. "Basic Structure" doctrine came into existence through which famous court case?
(A) Shahbano Case
(B) Minerva Mills Case
(C) Kesvananda Bharati Case
(D) Golaknath Case

57. Lord Cornwallis is known for _____.
(A) Permanent revenue settlement of Bengal

(B) Attacking the caste system
(C) Land revenue settlement of United States
(D) Ryotwari settlement of Madras

58. Which Chola ruler was popularly called 'Victor of the Ganges'?
(A) Gandaraditya Chola (B) Parantaka Chola I
(C) Vijayalaya Chola   (D) Rajendra Chola I

59. The First five year plan of the Government of India was based on _____.
(A) Leontief input-output model
(B) Harrod-Domar model
(C) Mahalanobis two-sector model
(D) Mahalanobis four-sector model

60. India follows the policy of non-alignment which implies:
(A) Being a third world power
(B) Choosing its women policies
(C) Neutrality towards power blocks
(D) Bringing peace and amity to the world

61. "Matatila Dam" is built on which river?
(A) Ganga   (B) Yamuna
(C) Betwa   (D) Son

62. The Ministry of Environment Forest and Climate Change along with the Wildlife Conservation Society (WCS) India has come up with a unique initiative: a "firefly bird diverter" for overhead power lines for protection of which bird?
(A) Sarus crane
(B) Great Indian bustard
(C) Bengal florican
(D) Himalayan quail

63. Dandia is a form of dance associated with which of the following state?
(A) Karnataka   (B) Manipur
(C) Maharashtra   (D) Gujarat

64. Which of the following Himalayan regions is known as 'Shivaliks'?
(A) Greater Himalayas   (B) Lesser Himalayas
(C) Outer Himalayas   (D) None of these

65. Which of the following is not a vector quantity?
(A) Momentum   (B) Displacement
(C) Torque   (D) Speed

66. What is the name of the tropical cyclones in the China Sea?
(A) Hurricanes   (B) Tornado
(C) Twister   (D) Typhoon

67. Synapse gap is present between which of the following?
(A) Two neurons
(B) Brain and Spinal Cord
(C) Two Kidneys
(D) None of these

68. What is the length of the Indian border with Afghanistan?
(A) 106 km   (B) 575 km
(C) 601 km   (D) 755 km

69. Capital output ratio of a commodity measures-
(A) Its per unit cost of production
(B) The amount of capital invested per unit of output
(C) The ratio of capital depreciation to quantity of output
(D) The ratio of working capital employed to quantity of output

70. Detritivores in the soil break down detritus into smaller particles. This process is called _____.
(A) Catabolism   (B) Mineralization
(C) Fragmentation   (D) Leaching

71. Which of the following is the first working prototype of Internet?
(A) APNET   (B) ANET
(C) PANET   (D) ARPANET

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72. According to Modern Theory of Rent, rent occurs to _____.
(A) Capital only   (B) Any factor
(C) Labour only   (D) Land only

73. The distance between Earth and Sun is maximum on _____.
(A) January 30   (B) December 20
(C) September 22   (D) July 4

74. The World Health Organization (WHO) has selected which Indian state for the World No Tobacco Day (WNTD) Award-2022?
(A) Jharkhand   (B) Sikkim
(C) Rajasthan   (D) Kerala

75. Which country's former President Bujar Nishani has passed away recently?
(A) Croatia   (B) Albania
(C) Greece   (D) Latvia

English Language

76. Select the most appropriate word to fill in the blank.

Details of the crime have not been _____ but it is understood to have happened in a public area.
(A) revealed   (B) reinforced
(C) attempted   (D) appalled

77. Out of the following choose the word which expresses the word opposite in meaning to the given word.
Relinquish
(A) acquire   (B) placate
(C) bolster   (D) comply

78. Select the most appropriate synonym of the given word.
mundane
(A) hilarious   (B) humdrum
(C) illicit   (D) furtive

79. Select the word which means the same as the group of words given.
A person who is killed because of their religious or other beliefs.
(A) Dogmatic   (B) Martyr
(C) Fanatic   (D) Patriot

80. Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select No improvement.
My birthday <u>falls in</u> January 24, 1998.
(A) fall into   (B) falls at
(C) falls on   (D) No improvement

81. Select the correct passive form of the given sentence.
The police has arrested the man for committing fraud.
(A) The man was arrested by the police for committing fraud.
(B) The man had been arrested by the police for committing fraud.
(C) The man has been arrested by the police for committing fraud.
(D) The man is arrested by the police for committing fraud.

82. Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select No improvement.
The thief had <u>broken in</u> through the first-floor window.
(A) brought over   (B) broken up
(C) broken down   (D) No improvement

83. Select the word which means the same as the group of words given.
An animal that can live on land as well as water
(A) amphibian   (B) anachronism
(C) aviary   (D) aquarium

84. The 1st and the last sentence of the passage (or parts of a sentence) are numbered 1 and 6. The rest is split into four parts and named P, Q, R and S. These four parts are not given in their proper order. Read the sentence and find out which of the four combinations is correct and indicate it.
1. The Statue of Liberty is
P. within New York City,
Q. in New York Harbor
R. a colossal sculpture
S. on Liberty Island

6. in the United States
(A) RPSQ   (B) PQRS
(C) SPRQ   (D) RSQP

85. Out of the following choose the word which expresses the right meaning of the given word
Reticent
(A) silent   (B) fine
(C) ill   (D) garrulous

86. Select the most appropriate word to fill in the blank.
Targeted at the upper _____ of society, the journal can be found in hotel lobbies.
(A) segment   (B) selection
(C) perfection   (D) example

87. Select the most appropriate antonym of the given word.
Redundant
(A) Superficial   (B) Steady
(C) Necessary   (D) Unsuitable

88. In the question given below, rearrange the parts of the sentence in the correct order, and choose the correct option.
School children absorbed information
P. much quicker than adults and
Q. the success of the project was
R. very much dependent on this
(A) PQR   (B) PRQ
(C) RQP   (D) RPQ

Directions (89-93): In the following passage some words have been deleted. Fill in the blank with the help of the alternatives given. Select the most appropriate option for each blank.

The Civil War was the first conflict in which the telegraph _____ a major role. Private telegraph companies had been in operation since the 1840s—a network of more than 50,000 miles of telegraph wire connected cities and towns across the United States when war erupted. Although some 90 percent of telegraph services _____ located in the North, the Confederates were also able to put the device to good use. Field commanders _____ orders to rapidly concentrate forces to confront Union advances—a tactic that led to

victory in the First Battle of Bull Run, in 1861. Arguably the most revolutionary aspect of the device was how _____ transformed the relationship between the executive branch and the military. Before, important battlefield decisions were left to the discretion of field generals. Now, however, the president _____ fully exercise his prerogative as commander in chief.

89. the telegraph _____ a major role
(A) aided   (B) scolded
(C) played   (D) lured

90. telegraph services _____ located in
(A) was   (B) were
(C) had   (D) am

91. commanders _____ orders to rapidly
(A) issued   (B) eluded
(C) shouted   (D) gauged

92. device was how _____ transformed
(A) they   (B) we
(C) its   (D) it

93. the president _____ fully exercise
(A) shall   (B) could
(C) must   (D) did

94. Select the most appropriate meaning of the given idiom.
Through thick and thin
(A) in happy times
(B) under all circumstances
(C) in different weather conditions
(D) in difficult times

95. Select the correct spelling of the word.
(A) disappointment   (B) disapointment
(C) dissapointment   (D) disappointment

96. Find out error, if any:
No one knows (a)/ for sure why adolescence (b)/ is unique to humans.(c)/ No error (d)
(A) a   (B) c
(C) b   (D) d

97. Select the correct indirect form of the given sentence.

She said to me, "They will be in need of my skills."
(A) She told me that they would be in need of her skills.
(B) She told me that they would be in need of my skills.
(C) She told me that they will be needing her skills.
(D) She told me that they will be in need of my skills.

98. In the sentence, identify the segment which contains the grammatical error.
You can left the theater but you won't be allowed to reenter without showing a ticket stub.
(A) to reenter without

(B) but you won't be allowed
(C) You can left the theater
(D) showing a ticket stub.

99. Select the correctly spelt word.
(A) Definition   (B) Humilliation
(C) Exeract   (D) Surveliance

100. Select the most appropriate meaning of the given idiom.
Open a can of worms
(A) to begin working on a complicated problem
(B) to stir up trouble
(C) to avoid conflict
(D) to narrowly escape danger

Solution

Quantitative Aptitude

1. **Answer: (D)**
Let the numbers be 12x and 5x, respectively
According to the question,
$12x - 5x = 812$
Or, $7x = 812$
Or, $x = 116$
Required sum = $12x + 5x = 17x = 1972$

2. **Answer: (C)**
$4200 = 2^3 \times 3^1 \times 5^2 \times 7^1$
Since, an even number will not give odd factor
Therefore, number of odd factors = $(1 + 1)(2 + 1)(1 + 1) = 12$

3. **Answer: (D)**
If LCM of two numbers 'p' and 'q' is pq, then 'p' and 'q' must be prime numbers.

4. **Answer: (D)**

```
        Male                Female
      42 years             41 years
          ↖                ↗
        All employees = 41 years 9 months
          ↙                ↘
         9                  3
    Desired ratio = 9:3 = 3:1
```

Number of female employees = $1/4 \times 600 = 150$

5. **Answer: (B)**
Let present age of 'A' and 'B' is 'x' years and 'y' years respectively.
So, $(x + 14)/(y + 12) = 5/6$
Or, $6x + 84 = 5y + 60$
Or, $5y - 6x = 24$ ....(1)
And, $x + y = 42 \times 2 = 84$ ....(2)
Solving equation (1) and (2), we get
$x = 36$ and $y = 48$
Desired ratio = $(36 - 6):(48 - 6) = 30:42 = 5:7$

6. **Answer: (A)**
Let monthly expenditure of 'B' is ₹100x
So, monthly income of 'A' = $1.60 \times 100x = ₹160x$
Monthly income of 'B' = $160x/0.6 = ₹ 800x/3$
Monthly expenditure of 'A' = $100x/(0.9375) = ₹320x/3$
Monthly savings of 'A' = $160x - 320x/3 = ₹160x/3$
Monthly savings of 'B' = $800x/3 - 100x = ₹500x/3$
Desired ratio = $(160x/3):(500x/3) = 8:25$

7. **Answer: (C)**
According to question;
$P = 87 \times a + 54$
And, $Q = 87 \times b + 82$
Where 'a' and 'b' are natural numbers.
So, $P + Q = 87 \times (a + b) + 54 + 82 = 87 \times (a + b) + 87 + 49 = 87 \times (a + b + 1) + 49$
Desired remainder = 49

8. **Answer: (A)**

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According to the question,
CP of 16 chairs = SP of 20 chairs
Therefore, CP/SP = 20/16 i.e. 4 units loss
Therefore, loss percentage = (4/20) × 100 = 20%

9. **Answer: (C)**
According to the question,
$24000(1 + 15/100)^n = 24000 + 7740$
Or, $(1.15)^n = 31740/24000 = 1.3225$
Or, $(1.15)^n = 1.15^2$
n = 2

10. **Answer: (C)**
Let total amount of work = 90 units (LCM of 30, 45 and 90)
Amount of work done by 'A' in one day = 90/30 = 3 units
Amount of work done by 'B' in one day = 90/45 = 2 units
Amount of work done by 'C' in one day = 90/90 = 1 unit
Amount of work done by 'A', 'B' and 'C' in 3 days = 3 + 3 + 3 + 2 + 1 = 12 units
Amount of work done by 'A', 'B' and 'C' in 21 days = 12 × 7 = 84 units
Remaining 6 units work is done by A in next two days.
Full time = 21 + 2 = 23 days

11. **Answer: (B)**
Let the speed of the boat in still water and the speed of the current be 'x' km/hr and 'y' km/hr, respectively.
According to the question,
(x − y) = 40/5 = 8……. (1)
And, x + y = 60/5 = 12…….. (2)
Subtracting equation (1) from (2), we get
2y = 4
Or, y = 2
Therefore, speed of the current = 2 km/hr

12. **Answer: (B)**
Total distance travelled = 24 + 20 = 44 km
Total time taken = (24/20) + (20/24) = 61/30 hours
Average speed = 44 × (30/61) ∼ 21.64 km/hr

13. **Answer: (A)**
Given, cosx + secx = 10
Squaring both sides, we get
$(\cos x + \sec x)^2 = 100$
Or, $\cos^2 x + \sec^2 x + 2\cos x \sec x = 100$
Or, $\cos^2 x + \sec^2 x + 2 = 100$ (Since, secx = 1/cosx)
Or, $\cos^2 x + \sec^2 x = 98$

14. **Answer: (A)**
Given, (x + 1/x) = 7
Squaring both sides, we get
$(x^2 + 1/x^2) + 2 = 49$
Or, $(x^2 + 1/x^2) = 47$
Also, $(x^4 + 3x^3 + 5x^2 + 3x + 1)/(x^4 + 1)$
Dividing numerator and denominator by x^2, we get
$$\left\{x^2 + \frac{1}{x^2} + 3\left(x + \frac{1}{x}\right) + 5\right\} \div \left(x^2 + \frac{1}{x^2}\right)$$
$= \{47 + (3 \times 7) + 5\}/47 = (73/47)$

15. **Answer: (C)**
$(\sin 80°\cos 10° + \sin 10°\cos 80°) = \sin 80°\cos(90° − 80°) + \sin(90° − 80°)\cos 80°$
Or, $\sin^2 80° + \cos^2 80° = 1$ (since, $\sin^2 x + \cos^2 x = 1$)

16. **Answer: (D)**
Given, $7x^2 + 33x − 10 = 0$
Or, $7x^2 + 35x − 2x − 10 = 0$
Or, $7x(x + 5) − 2(x + 5) = 0$
Or, $(7x − 2)(x + 5) = 0$
Therefore, x = (2/7) and -5

17. **Answer: (C)**
The value of $\tan^2 x + \cot^2 x$ will be minimum at x = 45°
Required value = $\tan^2 45° + \cot^2 45° + 5 = 1 + 1 + 5 = 7$

18. **Answer: (B)**
According to the question,
$(5 − x) = x^2 − 15$
Or, $x^2 + x − 20 = 0$
Or, $x^2 + 5x − 4x − 20 = 0$
Or, $x(x + 5) − 4(x + 5) = 0$
Or, $(x − 4)(x + 5) = 0$
Or, x = 4, -5
Therefore, y = (1, 10)

19. **Answer: (A)**
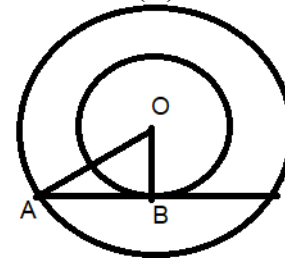
According to the question,
OA = 15 cm and OB = 9 cm
Also, OB is perpendicular to AB (radius and tangent makes and angle of 90° at the point of contact)
Using Pythagoras theorem,

$AB^2 = OA^2 – OB^2$

Or, $AB^2 = 15^2 – 9^2 = 144$

Or, $AB = 12$

Therefore, length of the chord= 2AB = 24 cm (perpendicular drawn from centre bisects the chord)

20.   **Answer: (D)**

Let the angles of the triangle be 2a, a and a, respectively

According to the question,

$2a + a + a = 180^o$ (sum of the interior angles of a triangle is 180°)

Therefore, $4a = 180^o$

Or, $a = 45^o$

Therefore, angles of the triangle = 90°, 45° and 45°, respectively

Let the two equal sides of the triangle be 'x' cm and the largest side be 'y' cm

Therefore, using Pythagorean rule

$y = \sqrt{2}x$

Therefore, perimeter of the triangle = x + x + y = (2x + y) = $2x + \sqrt{2}x = \sqrt{2}x(\sqrt{2} + 1)$

Required ratio = $x : \sqrt{2}x(\sqrt{2} + 1) = 1 : \sqrt{2}(\sqrt{2} + 1)$

21.   **Answer: (A)**

Required percentage = {(100 + 200)/(360 + 240)} × 100 = 50%

22.   **Answer: (D)**

Required average = (240 + 160 + 320 + 300 + 200)/5 = 244

23.   **Answer: (B)**

Number of male employees in offices 'A', 'C' and 'E', together = (120 + 360 + 100) = 580

Number of female employees in office 'B' = 180 + 160 = 340

Required difference = 580 – 340 = 240

24.   **Answer: (A)**

Required ratio = (120 + 180):(300 + 200) = 300:500 = 3:5

25.   **Answer: (B)**

The length of the longest rod = $\sqrt{(l^2 + b^2 + h^2)}$ = $\sqrt{(12^2 + 8^2 + 20^2)}$ = $\sqrt{608}$ = $\sqrt{(38 \times 16)}$ = $4\sqrt{38}$ metres

Reasoning Aptitude

26.   **Answer: (D)**

The pattern:

$17^3 = 4913 \Rightarrow 4913 + 1 = 4914$

Similarly,

$9^3 = 729 \Rightarrow 729 + 1 = 730$

27.   **Answer: (C)**

In (26, 8, 12, 1728), the pattern is,

26: 2 + 6 = 8 $\Rightarrow$ 8 + 4 = 12 $\Rightarrow$ $12^3 = 1728$

Similarly, in option (c),

15: 1 + 5 = 6 $\Rightarrow$ 6 + 4 = 10 $\Rightarrow$ $10^3 = 1000$

28.   **Answer: (C)**

The words in each pair are the synonyms of each other.

29.   **Answer: (C)**

The pattern is:

In 55 × 23 = 31: (5 × 5) + (2 × 3) = 25 + 6 = 31

In 62 × 46 = 36: (6 × 2) + (4 × 6) = 12 + 24 = 36

In 19 × 12 = 11: (1 × 9) + (1 × 2) = 9 + 2 = 11

Similarly,

In 57 × 34: (5 × 7) + (3 × 4) = 35 + 12 = 47

30.   **Answer: (C)**

After checking the given options, we get,

a. EHKN i.e., E + 3 = H, H + 3 = K, K + 3 = N

b. MPSV i.e., M + 3 = P, P + 3 = S, S + 3 = V

c. ADFI i.e., A + 3 = D, D + 2 = F, F + 3 = I

d. ORUX i.e., O + 3 = R, R + 3 = U, U + 3 = X

So, all are following the same pattern except option c.

31.   **Answer: (B)**

Codes	#	@	%	?
Representation	÷	+	–	×

115 % 16 @ 247 # 13 ? 7 = ____

After changing the codes,

115 – 16 + 247 ÷13×7 = _____

= 115–16+ 19 × 7

= 99 + 133 = 232

32.   **Answer: (A)**

The pattern would be,

$54 + 2^1 = 56$

$56 + 2^2 = 60$

$60 + 2^3 = 68$

$68 + 2^4 = 84$

$84 + 2^5 = 116$

33.   **Answer: (C)**

First alphabet of each word is as per the English alphabetical series.

So, next word must be Figure.

34.   **Answer: (B)**

From option (b),

P R A | P P R R A A | P P P R R R A A A

35.   **Answer: (D)**

As, Cuboid has 8 corners.

Similarly,

Pentagon has 5 corners.

36.   **Answer: (C)**

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In 1st figure: $(15 \times 10) - (44 \div 4) = 150 - 11 = 139$

In 3rd figure: $(40 \times 3) - (160 \div 40) = 120 - 4 = 116$

Similarly,

In 2nd figure: $(5 \times 9) - (120 \div 15) = 45 - 8 = 37$

37. Answer: (C)

The word "Tracker" cannot be formed from the given word as there is no "K" given in the word.

38. Answer: (B)

Option (a): $- + \times = \div$

$15 - 4 + 6 \times 144 = 6 \div 78$

$15 - 4 + 864 = 0.07$

$875 \neq 0.07$

Option (b): $\times - + \div =$

$15 \times 4 - 6 + 144 \div 6 = 78$

$60 - 6 + 24 = 78$

$54 + 24 = 78$

$78 = 78$

Option (c): $+ - \div \times =$

$15 + 4 - 6 \div 144 \times 6 = 78$

$15 + 4 - 0.04 \times 6 = 78$

$15 + 4 - 0.25 = 78$

$18.75 \neq 78$

Option (d): $= \times \div - +$

$15 = 4 \times 6 \div 144 - 6 + 78$

$15 = 4 \times 0.04 - 6 + 78$

$15 = 0.16 - 6 + 78$

$15 \neq 72.16$

39. Answer: (B)

The common logical stages in a person's life are:

3. Nursery
2. High School
1. Secondary School
4. Graduation
5. Post-Graduation

40. Answer: (C)

K(-)

R(+) ←—husband of—→ L(-)

D(+) ←—husband of—→ C(-)

B(+)
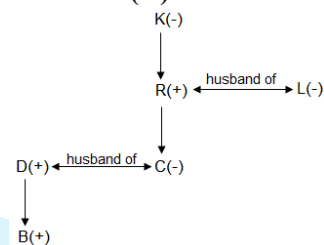
L is K's only daughter-in-law.

C is the daughter of L.

41. Answer: (D)

The number opposite to 5 cannot be identified.

42. Answer: (D)

Option (a): Men, Person, Women
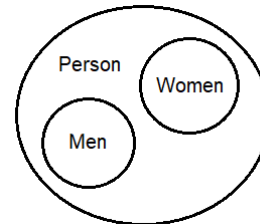
Option (b): States, Countries, Places
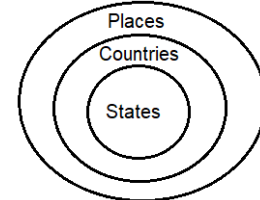
Option (c): Oceans, Water Seas
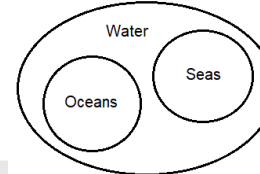
Option (d): Earth, Satellite, Moon
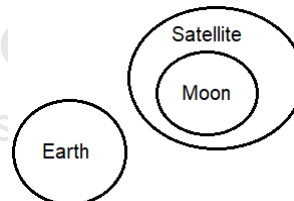
43. Answer: (B)
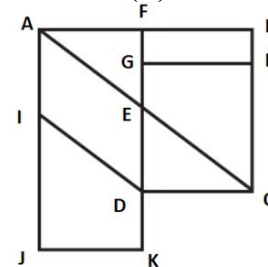
So, there are 3 triangles (ABC, EDC, AFE) in the figure.

44. Answer: (B)
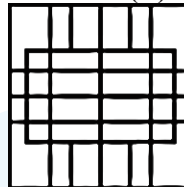
45. Answer: (A)

Following figures can be formed from the statements:
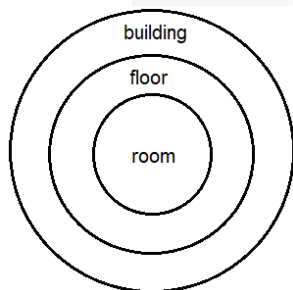
As, all room are floor and all floor are building then some building must be room. It might be possible that all buildings are floor.

46. **Answer: (B)**
Given,
Anny is 8ᵗʰ from the left. After interchanging, she becomes 23ʳᵈ from the left
So, Anny(8ᵗʰ) ------- Vaishali(23ʳᵈ)
Total number of girls in row = 23 + 12 – 1 = 34

47. **Answer: (D)**
If mirror is placed to the right of the figure.
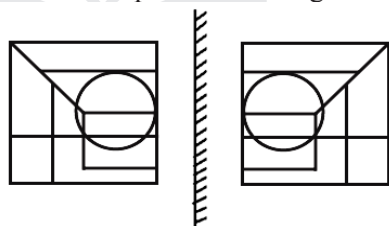
48. **Answer: (C)**
Here, the shaded part is marked from top to bottom alternatively for right and left boxes.
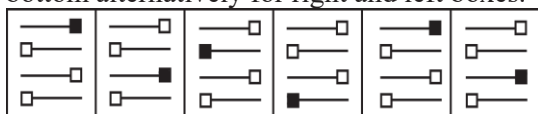
49. **Answer: (B)**
Given word "MODELS"

M	O	D	E	L	S
01,22, 88, 96	98, 85, 56, 42	24,67	58, 59, 66, 95	03, 41, 57, 89	00,04, 43

So, the code of 'MODELS' is '22, 85, 67, 58, 89, 00'.

50. **Answer: (B)**
The statement talks about how the FSSAI took a move to reduce trans-fat in certain food items that use edible oil as an ingredient. This rests on the assumption that the presence of trans-fat in food items is undesirable due to its negative health effects. II follows. Thus, (b) is the right answer.
I does not follow as the statement tells us how the move of the FSSAI only targets food items using edible oil as an ingredient. This does not mean that it is only these food items that contain trans-fats.

General Studies

51. **Answer: (D)**
The 'Sela Pass' is a high-altitude mountain pass located on the border between the Tawang and West Kameng districts of **Arunachal Pradesh** state in India.

52. **Answer: (B)**
The book which is at the centerpiece of the study of Macro-economic was written by Prof. J.M. Keynes. John Maynard Keynes attacked some of these classical theories and produced a general theory that described the whole economy in terms of aggregates rather than the individual.

53. **Answer: (A)**
The Magpie Robin is a widely used national symbol in Bangladesh, appearing on their currency notes, and a landmark in the Dhaka city is named as the Doyel Chatwar or Doyel Square. In short, Magpie Robin is the most beautiful, intelligent and mystery bird in Bangladesh to be the National bird symbol of Bangladesh.

54. **Answer: (B)**
France was the first country to implement the GST in 1954, and since then an estimated 160 countries have adopted this tax system in some form or another.

55. **Answer: (B)**
Red-crowned Crane is the National bird of China. In East Asia, it is known as a symbol of luck and fidelity.

56. **Answer: (C)**
The 'Doctrine of Basic Structure' is a judiciary made doctrine which was propounded by the Indian Judiciary on 24th April 1973 in **Keshavananda Bharati case**. The basic structure doctrine mandates that the Constitution of India has certain basic features that cannot be altered or destroyed through amendments by the parliament.

57. **Answer: (A)**

In 1786 Charles Cornwallis was sent out to India to reform the company's practices. In 1786, the East India Company Court of Directors first proposed a permanent settlement for Bengal, changing the policy then being followed by Calcutta, which was attempting to increase taxation of zamindars.

58. Answer: (D)
Rajendra Chola was popularly called the Victor of the Ganges. His new empire capital was called the Gangaikondacholapuram where he received the title of 'Gangaikonda'. This period is referred to as the golden age of the Cholas. After his rule, the kingdom witnessed a widespread downfall.

59. Answer: (B)
First Plan (1951–1956):
The First Five-year Plan was launched in 1951 which mainly focused in development of the primary sector. The First Five-Year Plan was based on the **Harrod–Domar model** with few modifications.

60. Answer: (C)
India follows the policy of non-alignment which implies **neutrality towards power blocks**. It is against major power and is based on neutrality with reference to super power.

61. Answer: (C)
The Matatila Dam is a dam in district Lalitpur, Uttar Pradesh., India that was built in 1958 on the Betwa River.

62. Answer: (B)
The Ministry of Environment Forest and Climate Change (MoEFCC) along with the Wildlife Conservation Society (WCS) India has come up with a unique initiative — a "firefly bird diverter" for overhead power lines in areas where Great Indian Bustard (GIB) populations are found in the wild.

63. Answer: (D)
Raas or Dandiya Raas is the socio-religious folk dance originating from Indian state of **Gujarat** and popularly performed in the festival of Navaratri. The dance is performed in the Marwar region of Rajasthan too.

64. Answer: (C)
Formation of Himalayas explained in Continent – Continent Convergence.
1. Shivaliks or outer Himalayas
2. Lesser or Middle Himalayas
3. The Greater Himalayas
4. The Trans-Himalayas – Tibetan Himalayas.
5. The Eastern Hills – Purvanchal: A chain of hills in North-East India.

65. Answer: (D)
A scalar quantity is defined as the physical quantity that has only magnitude, for example, volume, density, speed, energy, mass, time, mass, electric charge etc.
A vector quantity is defined as the physical quantity that has both magnitude as well as direction, for example, displacement, velocity, position, force, torque etc.

66. Answer: (D)
Tropical storms, cyclones, hurricanes and typhoons, although named differently, describe the same disaster type.
Essentially, these disaster types refer to a large scale closed circulation system in the atmosphere which combines low pressure and strong winds that rotate counter clockwise in the northern hemisphere and clockwise in the southern hemisphere.
The system is referred to as a "cyclone" in the Indian Ocean and South Pacific, "hurricane" in the Western Atlantic and Eastern Pacific and "**typhoon**" in the Western Pacific.
China Sea, part of the western Pacific Ocean bordering the Asian mainland on the east-southeast.
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China Sea, part of the western Pacific Ocean bordering the Asian mainland on the east-southeast.

67. Answer: (A)
An electrical synapse is a mechanical and electrically conductive link between **two neighboring neurons** that is formed at a narrow gap between the pre- and postsynaptic neurons known as a gap junction.

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68. **Answer: (A)**

Land Border Country	Length (Km)
Bangladesh	4,096
Bhutan	578
China	3,488
Myanmar	1,458
Nepal	1,752
Pakistan	3,310
Afghanistan	106

69. **Answer: (B)**
    Capital output ratio is the amount of **capital** needed to produce one unit of **output**.

70. **Answer: (C)**
    Detrivores (e.g., earthworm) break down detritus into smaller particles. This process is called fragmentation. By the process of leaching, water-soluble inorganic nutrients go down into the soil horizon and get precipitated as unavailable salts.

71. **Answer: (D)**
    The first workable prototype of the Internet came in the late 1960s with the creation of **ARPANET**, or the Advanced Research Projects Agency Network.

72. **Answer: (B)**
    Modern Theory of rent was first of all discussed by J.S. Mill and after that developed by economists like Jevous, Pareto, Marshell, Joan Robinson etc. According to this theory economic rent is a surplus which is not peculiar to land alone. It can be a part of income of labour, capital, entrepreneur.

73. **Answer: (D)**
    As Earth follows an elliptical path around the Sun its distance from the Sun never remains constant. It is nearest to the Sun on January 3rd (Perihelion) and farthest from the Sun on **July 4** (Aphelion).

74. **Answer: (A)**
    Jharkhand has been selected for the World No Tobacco Day (WNTD) Award-2022, recently. The World Health Organization (WHO) has selected Jharkhand for the World No Tobacco Day (WNTD) Award-2022 for recognising its efforts in controlling tobacco consumption. State Tobacco Control Cell of the Health Department has received the award on the occasion of World No Tobacco Day (31st May) in New Delhi.

As per the Global Adult Tobacco Survey (GATS)-1 report, the tobacco prevalence rate in the state was 51.1 percent, of which 48 percent were smokeless users. The GATS-2 report, which was published in 2018, states that tobacco users came down to 38.9 percent in the state, of which 35.4 percent were smokeless users.

75. **Answer: (B)**
    Bujar Nishani has passed away, recently. Former Albanian President Bujar Nishani has passed away recently due to the health problem. He was born on 29th September 1966 at Durres, Albania. He served as the President of Albania from 2012 to 2017. He was well known for his centre-right political affiliation from the leftist coalition.

English Language

76. **Answer: (A)**
    We need a past participle form verb here to fit in the passive voice construction HAVE + NOT + BEEN + VERB. REVEALED (disclosed) will fit here as the sentence tells us how details of the crime have not been disclosed. Thus, (a) is the right answer.
    Reinforced - strengthened. Attempted - tried. Appalled (adj.) - shocked.

77. **Answer: (A)**
    RELINQUISH means to let go of something. ACQUIRE means to obtain or collect something, which is its antonym. Thus, (a) is the right answer.
    Placate - appease. Bolster - strengthen. Comply - abide by.

78. **Answer: (B)**
    MUNDANE means arousing boredom; dull. HUMDRUM is its synonym, which will make (b) the right answer.
    Hilarious - amusing; funny. Illicit - illegal. Furtive - secretive.

79. **Answer: (B)**
    (b) is the right answer. A martyr is someone who is killed or made to suffer greatly because of their religious or political beliefs, and is admired and respected by people who share those beliefs.
    Dogmatic- inclined to lay down principles as undeniably true.

Fanatic- a person filled with excessive and single-minded zeal, especially for an extreme religious or political cause.

Patriot- a person who vigorously supports their country and is prepared to defend it against enemies or detractors.

80. **Answer: (C)**
(c) is the right answer. ON is used for telling exact dates and days. Example – on January 24, 1986, on Saturday.

AT is used for telling exact time. For example, at 3pm.

IN is used for a longer duration. Example – in 1998, in 3 months.

A is incorrect. The phrase fall into means to to belong in (a particular category or range).

81. **Answer: (C)**
The sentence is in active voice and in present perfect tense (HAS ARRESTED). Follow the rules below to convert a sentence in indicative mood to passive voice:

1. The subject clause will become the object clause. Here, the subject THE POLICE will change to the object of the verb, and the object THE MAN will change into the subject and begin the sentence.

2. Replace HAS ARRESTED with HAS BEEN ARRESTED. The passive voice construction for present perfect tense is "HAS + BEEN + past participle".

3. Add the conjunction BY before THE POLICE to link the verb with its object.

Option (c) is the right answer.

82. **Answer: (D)**
(d) is the right answer. The sentence is grammatically and contextually correct. If someone, usually a thief, breaks in, they get into a building by force.

Bring over- To bring someone or something from one place or area to another.

Break up- To stop a fight.

Break down- When someone loses self-control and is emotionally and/or mentally agitated.

83. **Answer: (A)**
An AMPHIBIAN is an animal that can live on both land and water. Thus, (a) is the right answer.

Anachronism - something that is out of its proper time. Aviary - a place for keeping birds. Aquarium - a place for keeping fish.

84. **Answer: (D)**

(d) is the right answer. (1)-RSQP-(6) is the right answer. (1) clearly establishes the subject- The Statue of Liberty. R and S form a pair. R tells us that it is SCULPTURE. S tells us that it has been built on the liberty island. Q and P for a pair. It tells us that the island is situated in the New York Harbour and that the harbour is located within the New york city. S ends the sentence by telling us that the statue is in the United States.

85. **Answer: (A)**
(a) is the right answer. RETICENT means not revealing one's thoughts or feelings readily. SILENT is the synonym.

Fine- of very high quality; very good of its kind.

Ill- suffering from an illness or disease or feeling unwell.

Garrulous- excessively talkative, especially on trivial matters.

86. **Answer: (A)**
We need a noun here to be modified by the adjective UPPER. SEGMENT (section) will fit here as the sentence tells us how journal is aimed at the upper section of society. Thus, (a) is the right answer.

Selection - choice. Perfection - ideal. Example - illustration.

87. **Answer: (C)**
(c) is the right answer. REDUNDANT means superfluous or unimportant; NECESSARY is its antonym.

Superficial - concerned with outward appearance only. Steady - calm, balanced. Unsuitable - inappropriate.

88. **Answer: (A)**
PQR is the final order. The given half of the sentence establishes the subject - school children. It tells us that they absorb information. P follows by telling us how they do this faster than adults. Q talks about the success of the project. R concludes by telling us how this success was dependent on this phenomenon. Thus, (a) is the right answer.

89. **Answer: (C)**
We need a verb here to link the subject TELEGRAPH with the object ROLE. PLAYED (carried out) will fit here as the sentence tells us how the telegraph had a major role to carry out in the Civil War. Thus, (c) is the right answer.

Aided - helped; assisted. Scolded - criticized; rebuked. Lured - attracted.

90. **Answer: (B)**
We need a helping verb here to take the main verb LOCATED after it. The past tense plural verb WERE will fit here as the sentence talks of a past event and the subject SERVICES is plural. Thus, (b) is the right answer.
WAS is singular, while the subject is plural. HAD LOCATED would convey the meaning that someone located or found something, which is not the meaning rendered by the context. AM is used for first person singular pronouns such as I.

91. **Answer: (A)**
We need a verb here to link the subject COMMANDERS with the object ORDERS. ISSUED (gave; announced) will fit here as the sentence tells us how field commanders gave orders to concentrate forces. Thus, (a) is the right answer.
Eluded - avoided. Shouted - yelled. Gauged - assessed; evaluated.

92. **Answer: (D)**
We need a singular subject pronoun here to form the subject of the verb TRANSFORMED and to denote the singular noun DEVICE. IT will fit here, which will make (d) the right answer.
THEY is a plural pronoun. WE is a first person pronoun while the presence of the noun will necessitate the use of a third person pronoun. ITS is a possessive pronoun.

93. **Answer: (B)**
We need a modal verb here to take the main verb EXERCISE after it. COULD will fit here as the sentence is in present tense as evident by the use of NOW. Thus, (b) is the right answer.
SHALL is in future tense. MUST is in future conditional tense. DID is in past tense.

94. **Answer: (B)**
If you support or stay with someone through thick and thin, you always support or stay with them, even if there are problems or difficulties. I.e., under all circumstances, no matter how difficult. (b) is the right answer.

95. **Answer: (A)**
The correct spelling of the word is DISAPPOINTMENT and it means sadness or displeasure caused by the non-fulfilment of one's hopes or expectations. Thus, (a) is the right answer.

96. **Answer: (D)**
(d) is the right answer. The sentence is grammatically and contextually correct.

97. **Answer: (A)**
(a) is the right answer.
The sentence is in direct speech, simple future tense. To convert this sentence to the indirect speech, follow these rules:1. Remove the comma and the inverted commas. 2. Begin the indirect speech sentence with the reporting speech clause SHE TOLD ME.3. Put THAT between the reporting and reported speeches.4. The modal verb WILL will change to WOULD.
5. In the quoted part of the speech, change the first person possessive MY to the third person objective HER.6. Use the following syntax: Reporting speech clause (SHE TOLD ME) + THAT + Subject (THEY) + verb clause (WOULD BE IN NEED OF) + Object (HER SKILLS).

98. **Answer: (C)**
(c) is the right answer. In C, we need to replace LEFT with LEAVE as we need the base form of the verb to follow the modal verb CAN.

99. **Answer: (A)**
(a) is the right answer. The correct spelling of other words are as follows:
Humiliation- a feeling of self-consciousness, shame, or awkwardness.
Extract- remove or take out, especially by effort or force.
Surveillance- close observation, especially of a suspected spy or criminal.

100. **Answer: (B)**
The idiom OPEN A CAN OF WORMS means to cause a conflict or trouble. Thus, (b) is the right answer.

"Success is not final; failure is not fatal: It is the courage to continue that counts."

"The only limit to our realization of tomorrow will be our doubts of today."

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RRB NTPC Prelims Solved Paper

General Awareness

1. Which State has become the first digital State of the country?
(A) Sikkim
(B) Gujarat
(C) Kerala
(D) Karnataka

2. Arrange the following dynasties in the correct order according to their period of their rule.
1. Tughlak Dynasty
2. Lodi Dynasty
3. Sayyid Dynasty
4. Khilji Dynasty
(A) 2, 1, 4, 3
(B) 4, 1, 3, 2
(C) 3, 1, 2, 4
(D) 1, 2, 4, 3

3. Mendeleev's periodic table...........
(A) does not explain the position of hydrogen
(B) is based on atomic number
(C) is based on atomic volume
(D) is based on atomic density

4. Which of the following pairs is not correctly matched?
(A) Canyon-River
(B) Zeugen-Wind
(C) Inselberg-Glacier
(D) Moraine-Glacier

5. Quartz composed of which two elements.
(A) Iron and Magnesium
(B) Iron and oxygen
(C) Oxygen and silicon
(D) Silicon and iron

6. Ozone hole refers to-
(A) hole in ozone layer
(B) decrease in the ozone layer in troposphere
(C) decrease in thickness of ozone layer in stratosphere
(D) increase in the thickness of ozone layer in troposphere

7. Green glands are associated with-
(A) Reproduction
(B) Excretion
(C) Respiration
(D) Digestion

8. Mahabharatha has _____ Chapters.
(A) 18
(B) 20
(C) 22
(D) 24

9. What is the percentage of oxygen in the air that is released during breathing?
(A) 9%
(B) 16%
(C) 4%
(D) 0.03%

10. Which disease is caused by deficiency of Vitamin B3?
(A) Scurvy
(B) Beri-Beri
(C) Pellegra
(D) Night-blindness

11. In which of the following countries, the Underwater Military Museum has been built?
(A) India
(B) China
(C) Germany
(D) Jordan

12. 'Buxar thermal power plant' is located in which of the following state?
(A) Andhra Pradesh
(B) Bihar
(C) Madhya Pradesh
(D) New-Delhi

13. How many states and union-territories have accepted the scheme of Ayushman Bharat yojana till now?
(A) 26
(B) 25
(C) 20
(D) 21

14. A tulip flower exhibits a partially yellow petal because of which of the following phenomenon?
(A) Mendelian inheritance
(B) Genetic engineering
(C) Mutation
(D) DNA sequencing

15. Which of the following bacteria present in tomatoes is responsible for causing gastroenteritis?
(A) Pseudomonas solonacearum
(B) Xanthomonas citri
(C) Xanthomonas oryzae
(D) Salmonella typhimurium

16. Which of the following hormone is secreted by Thyroid gland?
(A) Thyroxine
(B) Triiodothyronine
(C) Only A
(D) Both A and B

17. Which mirrors are used in the field of solar energy to focus sun's rays for heating solar furnaces?
(A) Concave mirrors
(B) Convex mirrors
(C) Both convex and concave
(D) Plane mirror

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18. The speed of sound is maximum in which state of matter?
    (A) Solid   (B) Liquid
    (C) Gas   (D) Both a and b

19. What should be the minimum distance between the observer and the reflector to hear an echo?
    (A) 15m   (B) 18m
    (C) 17m   (D) 20m

20. Who discovered the Law of electrostatic attraction?
    (A) Newton   (B) J.J Thomson
    (C) Max Plank   (D) Coulomb

21. In which city did Union Home Minister Amit Shah inaugurate the Second Ground Breaking Ceremonies of the UP Investors Summit?
    (A) Kanpur   (B) Lucknow
    (C) Varanasi   (D) Agra

22. Atal pension yojana is available to all the citizens in the age group of ……….
    (A) 18 – 35 years   (B) 18-60 years
    (C) 20-60 years   (D) 18-40 years

23. Which of the active volcanoes of Italy was recently affected by lava and smoke due to its public life?
    (A) Vesuvius mountain   (B) kopetaxi
    (C) Mount Etna   (D) Stromboli

24. Which of the following Indian Sand Artists was conferred the 'People's Choice Award' in America's prestigious 'Sand Sculpting Festival 2019'?
    (A) Nitish Bharti   (B) Rahul Arya
    (C) Narayan Sahu   (D) Sudarshan Patnaik

25. Recently, the Union Water Minister introduced the Capacity Strengthening Initiative of the Drinking Water and Sanitation Department of the Ministry of Water Power in the state.
    (A) Bihar   (B) Tamil Nadu
    (C) Jharkhand   (D) Punjab

26. Which term is used for the reactions in which two compounds react by an exchange of ions to form two new compounds?
    (A) Decomposition reaction
    (B) Combination reaction
    (C) Displacement reaction
    (D) Double-Displacement reaction

27. Which of the following indicator remains colourless in acidic as well as neutral solution?
    (A) Methyl orange   (B) Bromothymol blue
    (C) Phenolphthalein   (D) Both a and c

28. Name the poisonous gas formed by chloroform in the presence of sunlight?
    (A) Nitric oxide   (B) Phosgene gas
    (C) Nitrogen dioxide   (D) Methane gas

29. ………is used to disrupt computer operation, gather sensitive information or gain access to the private computer systems?
    (A) Malware   (B) Viruses
    (C) Worms   (D) Trojan Horse

30. First Indian political party which has created its website on internet is ……?
    (A) Aam Aadmi party
    (B) Bharatiya janta party
    (C) Samajwadi party
    (D) Indian National Congress

31. 'Kisan Suvidha loan' launched by which bank for small and marginal farmers?
    (A) State bank of India
    (B) Ujjivan small finance bank
    (C) United bank of India
    (D) Bank of Baroda

32. What is the theme of the world's Wetlands day 2019?
    (A) 'Wetlands and Forests'
    (B) 'Wetlands for Disaster risk reduction'
    (C) 'Wetlands and Climate Change'
    (D) 'Wetlands and Tourism'

33. The international Union of Railways is an international body of the rail transport industry created on………?
    (A) 17 October, 1922
    (B) 20 November, 1920
    (C) 2 August, 1931
    (D) 21 September, 1925

34. Name the 40th communication satellite launched by ISRO recently from French Guiana?
    (A) GSAT-11   (B) GSAT- 22

(C) GSAT-31 **(D)** None of these

35. The first jute mill in India was set up in which state?
(A) Mumbai **(B)** Madhya Pradesh
(C) Andhra Pradesh **(D)** Kolkata

36. Which is the first and the only state in India where rooftop rain water harvesting structure is compulsory to all the houses across the state?
(A) Madhya Pradesh **(B)** New-Delhi
(C) Orissa **(D)** Tamil nadu

37. Civil disobedience movement was started by Mahatma Gandhi in which year?
(A) 1930 **(B)** 1860
(C) 1885 **(D)** 1914

38. Who was the founder of Tughlaq Dynasty?
(A) Mohammad Bin Tughlaq
(B) Ghiyasuddin Tughlaq
(C) Feroz shah Tughlaq
(D) None of these

39. Who wrote Panchatantra and Hitopdesh?
(A) Kalidas **(B)** Vishakadatta
(C) Vishnu Sharma **(D)** None of the above

40. In which of the following state octroi tax is applicable in India?
(A) Gujarat **(B)** Maharashtra
(C) Punjab **(D)** All of the above

Mathematics

41. The mean of 15 numbers is 40. If two numbers 45 and 35 are removed, then what will be the mean of remaining numbers?
(A) 37.5 **(B)** 40
(C) 42.5 **(D)** 38

42. Sum of four times a fraction and 6 times its reciprocal is 11. What is the fraction?
(A) 3/4 **(B)** 4/3
(C) 4/7 **(D)** 7/4

43. The average of 4 consecutive even numbers is 51. What is the third number?
(A) 46 **(B)** 52
(C) 54 **(D)** 56

44. If $a + b + c = 3$ and none of a, b and c is equal to 1, then what is the value of

$$\frac{1}{(1-a)(1-b)} + \frac{1}{(1-b)(1-c)} + \frac{1}{(1-c)(1-a)}?$$

(A) 0 **(B)** 1
(C) 3 **(D)** 6

45. A motorboat whose speed in still water is 15 km/hr, goes 30 km downstream and comes back in 4 hrs and 30 minutes. The speed of the stream (in km/hr) is
(A) 10 km/hr **(B)** 6 km/hr
(C) 5 km/hr **(D)** 4 km/hr

46. If $x + \frac{1}{x} = 5$, then find $x^5 + \frac{1}{x^5} =?$
(A) 2525 **(B)** 2527
(C) 2520 **(D)** 2530

47. Find the value of N for the number 79N614 to be divisible by 2, 3 and 11.
(A) 0 **(B)** 4
(C) 1 **(D)** 5

48. If R% (R+25) % × (R + 50) % × Q^3 = 2835 then find the value of Q if R = 75/2?
(A) 24 **(B)** ±12
(C) 12 **(D)** 48

49. What is the value of $\frac{4.35\% \ of \ 46 + 33.33\% \ of \ 9}{20\% \ of \ 25} =?$
(A) 1 **(B)** 2
(C) 3 **(D)** 4

Direction (50–53): Read t he following data carefully and answer the questions as follow
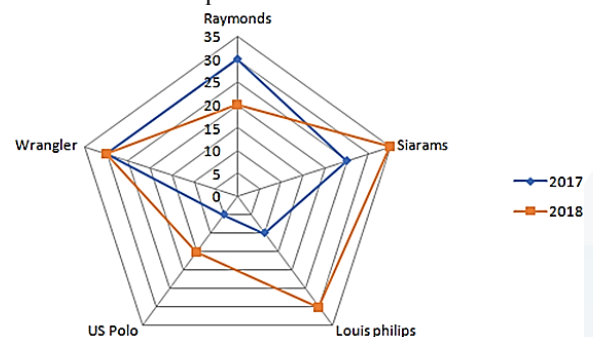
50. Considering the sales data of shirts sold by these textile companies in the year 2017 and 2018, calculate the percentage increase in the total sales in 2018 from its previous

year.(consider only these companies exist in market)

(A) 30   (B) 20
(C) 25   (D) 40

51. What is the total average sale of all the shirts in the year 2018?

(A) 65   (B) 26
(C) 75   (D) 25

52. The ratio of total sales of wrangler in these two years to that of the combined sales of siyarams in 2017 and us polo in 2018 is

(A) 3 : 2   (B) 6 : 1
(C) 5 : 1   (D) 2 : 3

53. Find the greatest three digit number that when divided by 12, 16 and 18 leaves a remainder of 5 in every case.

(A) 869   (B) 968
(C) 972   (D) 894

54. Two numbers are in the ratio of 8 : 9 and their LCM 144. Find the sum of these numbers?

(A) 24   (B) 34
(C) 56   (D) 42

55. There are some boys and girls in a class. If every girls mark is decreased by 20 marks then the total average decreases by 5 marks find the number of boys if the number of girls is 100?

(A) 300   (B) 400
(C) 500   (D) 250

56. A man travels with speed of 40 km/hr to his destination but returns back with speed of 60km/hr. find the average speed during his whole journey?

(A) 24 km/hr   (B) 42 km/hr
(C) 48 km/hr   (D) 36 km/hr

57. If the cube sides are increased by 12.5%, then find the increase units of the volume?

(A) 36%   (B) 42.38%
(C) 50%   (D) 25%

58. Two numbers are 35% and 25% less than the third number respectively. The first number is what percentage less than the second number?

(A) 13.33%   (B) 3.33%
(C) 1.33%   (D) 16.66%

59. A container contains milk and water in the ratio in 1: 3. If 30 litres of liquid is taken away and 30 litre of milk is added then the new ratio of milk to water1: 1 then find the initial volume of liquid?

(A) 90 litres   (B) 91 litres
(C) 89 litres   (D) 80 litres

60. If 64.29% of d = 42.86% of c then find the ratio d : c?

(A) 2 : 3   (B) 7 : 8
(C) 8 : 7   (D) 9 : 6

61. A reduction of 14.29 % in the price of sugar enables a home maker to obtain 4 kg more for Rs 120. What is the original price of the sugar?

(A) Rs. 35   (B) Rs. 40
(C) Rs. 30   (D) Rs. 25

62. 3 men or 4 women can do a piece of work in 43 days. In how many days will 7 men and 5 women do this work?

(A) 12 day   (B) 14 day
(C) 24 day   (D) 16 day

63. Mani can build a wall in 4 hours, while his neighbour destroys it in 7 hours the very next day. How much time will Mani take to build the wall if the day he makes wall the next day his neighbour breaks the wall?

(A) 15 days   (B) 91/3 days
(C) 16 days   (D) 191/3 days

64. Venugopal was going to the bus stand, he observed that from the opposite side every 10 minutes a bus crosses him. On reaching bus stand he came to know that buses leave from the bus stand every 12 minutes. If the buses ran at a uniform speed of 40 km/hr then what is the speed at which Venugopal was walking?

(A) 10 kmph   (B) 12 kmph
(C) 8 kmph   (D) 14 kmph

65. A man calculates to go upstream it takes 16 hrs and to return back it takes 12 hrs. What is the ratio of speed of boat to that of the stream?

(A) 7:1   (B) 1:7
(C) 4:3   (D) 3:4

66. Aruna borrowed Rs 90,000 at 10% per annum simple interest. On the same day, she lent the sum to her friend at the same but compounded annually. How much does she gains at the end of 3 years?
(A) Rs. 2907
(B) Rs. 2790
(C) Rs. 2970
(D) Rs. 2800

67. A sum of money for invested for 19 years earns an interest of 19/4 times itself. Then find the rate %.
(A) 25%
(B) 45%
(C) 37.5%
(D) 35%

68. A and B together have 158000. If 37/79th part of A's amount is equal to 126/237th part of B. What is the amount of B?
(A) Rs. 74000
(B) Rs. 37000
(C) Rs. 67500
(D) Rs. 56700

69. Calculate the total surface area (meter) in of a hemisphere of diameter 14cm?
(A) 1848 m^2
(B) 1847 m^2
(C) 0 .0462 m^2
(D) 462 m^2

70. Which of the following option is correct according to the given conditions related correctly?
A= tan30^0
B= $\frac{tan60-tan30}{1+tan60 \times tan30}$
(A) A > B
(B) A < B
(C) A − B = 0
(D) A + B = 1

General Intelligence and Reasoning

71. Look at this series
80, 10, 70, 15, 60, ….
What number should come next?
(A) 20
(B) 25
(C) 30
(D) 50

72. In the following question, select the related letters from the given alternatives.
RATS : XGZY : : RIPE : ?
(A) KVMA
(B) XPUL
(C) XOVK
(D) XNVG

73. In a certain language, 'MADRAS' is coded as NBESBT, how is 'BOMBAY' coded in that language?
(A) DPNCBX
(B) CPNCBZ
(C) CPNCBY
(D) DPNCBZ

74. From the given answer figure select the one which in which the question figure is hidden/embeddedd
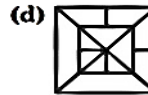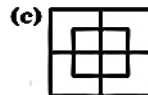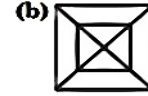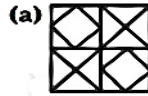
(A) A
(B) B
(C) C
(D) D

75. When seen through a mirror, a clock shows 8:30, the correct time is
(A) 2:30
(B) 3:30
(C) 8:30
(D) 5:30

76. If "TREASURE" is coded as "VTEAUUTE" what is the code for "VIOLATION"?
(A) XIONAPOIV
(B) XKQNCVKQN
(C) XKNNAVKOP
(D) XIONAVIOP

77. Attenuate : Evacuate : : Replenish : ---------- ?
(A) Inhale
(B) Reuse
(C) Restore
(D) Evict

78. Some statements are given below. Find which of the following conclusion logically follows the given statement.
1. All Exams are Tough.
2. Some exams are UPSC.
3. No UPSC is Corrupt.
(A) Some Exams are Corrupt.
(B) Some Tough is not UPSC.
(C) Some tough is corrupt
(D) Some Exams are not Corrupt.

79. Find the missing term (?) in the series
2 , 7 , ? , 29 , 46 , 67 , 92
(A) 16
(B) 18
(C) 17
(D) 19

80. Select the alternative which shows similar relationship as the given pair.
Spiders : Cluster

(A) Fish : Hook   (B) Starlings : Herd
(C) Flamingos : Pat (D) Crows : Troop

81. Rearrange the jumbled letter to make a meaningful word and then select the one which is different.
(A) RAAE   (B) EOZN
(C) MDINOA   (D) NEAOSR

82. Rajeev has a son Raunak and a sister Shilpi who is the mother of Sujay and Vijay. Hari is Sujay's maternal uncle. How is Hari related to Raunak?
(A) Nephew   (B) Paternal Uncle
(C) Cousin   (D) Maternal Uncle

Direction (83 –85): Read the following information carefully and answer the question:

There are five friends Chaitu, Shaileja, Varna, Priyanka and Prajakta. They like different Fruit and are in different profession. Chaitu likes Orange and is an Engineer. The Lawyer like Banana. Shaileja and Priyanka like Apple and Grapes respectively and neither of them is a Teacher. Varna like Watermelon and The Inspector likes grapes. One of five is a Fashion Designer.

83. Which Fruit does the Teacher like?
(A) Watermelon   (B) Apple
(C) Grapes   (D) Banana

84. Who is the Fashion Designer?
(A) Priyanka   (B) Prajakta
(C) Shaileja   (D) Varna

85. Which of the following is wrong pair?
(A) Priyanka - Inspector
(B) Prajakta - Grapes
(C) Apple - Fashion Designer
(D) Varna -Teacher

86. Which of the following is not similar to the other?
(A) Delhi   (B) Bhagalpur
(C) Haridwar   (D) Mirzapur

87. Which statement is required for giving the correct answer of the following question?
What is the position of Prerana with respect to Sushil?

I. Kisan is left to Sushil.
II. Kisan is to the south of Prerana.
(A) If Only I is sufficient
(B) If Only II is sufficient
(C) Both I and II together are sufficient
(D) Neither I nor II is sufficient.

88. What is the minimum number of straight lines that is needed to construct the given figure?
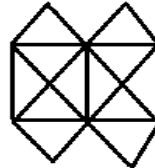
(A) 15   (B) 11
(C) 13   (D) 21

89. An Assertion and a Reason given below choose the correct option:
Assertion (A): The same side of the moon faces the earth at all times.
Reason (R): Moon is the only natural satellite of the Earth.
(A) Both A and R is true but R is not the correct explanation of A
(B) Both A and R is true and R is the correct explanation of A
(C) A is false but R is true
(D) Both A and R is false

90. In a row there are 30 students. Richa is 12th from the left and Prachi is 13th from the right end. Supriya sits between Richa and Prachi. What is Supriya's position from Left?
(A) 16th   (B)15th
(C) 17th   (D) 14th

91. Which one of the four interchanges in sign and numbers would make the given equation correct?
$3 + 2 \times 4 - 6 = 8$
(A) × and - , 4 and 2   (B) - and +, 6 and 2
(C) × and +, 2 and 4   (D) × and +, 2 and 6

92. Which of the following appear third if they are arranged according to the dictionary?
(A) Apprehensive   (B) Appendix
(C) Application   (D) Appreciate

93. Arav started walking he turned left and then turned right and then towards left again now he

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finds that he is walking towards north. In which direction he started walking at first.

(A) North   (B) East
(C) West   (D) South

Direction (94-95): Study the following diagram and answer the questions based on it. Symbols represent students with different degrees.
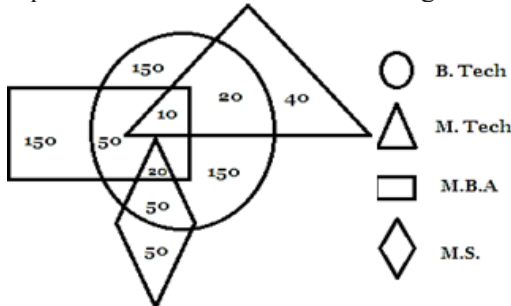
94. What is the ratio of B.tech student and who do not have B.Tech degree?
(A) 9/8   (B) 15/8
(C) 7/5   (D) 15/13

95. How many students have done B.Tech and M.Tech but not M.B.A?
(A) 10   (B) 30
(C) 40   (D) 20

96. Find the odd one out
(A) U   (B) H
(C) T   (D) N

97. A school recruits teachers with the following criteria-
1. Candidate should have at least B. Ed Degree.
2. Candidate must be fluent in Hindi and English.
3. Candidate should have at least one year of teaching experience.
Which candidate among the following will the school definitely take?

(A) Niharika is post graduate fluent in Hindi and English and have two year of teaching experience.
(B) Neha is a graduate fluent in Hindi and English, have done B.Ed and have three year of teaching experience.
(C) Rahul is fluent in Hindi English have done B. Ed this year and do not have any experience.
(D) None of these are eligible

98. Some numbers are missing which are given in that order as one of the alternative given below it. Choose the correct alternative.
_ _ 1 2 1 _ _ 2 1 _ 1 2
(A) 1 2 2 2 1   (B) 2 1 1 2 2
(C) 1 2 2 1 2   (D) 2 2 1 2 1

99. Three statements are given below and two conclusions are given. you have to take the given statement to be true even if they seems to be at variance with commonly known facts and then decide which of the following conclusion logically follows.
Statement: 1. All Books are Papers.
2. Some papers are Notebooks.
3. Some Notebooks are Computers.
Conclusion: I. Some Notebooks are Books.
II. Some Papers are Computers.
(A) Only I follows   (B) Only II follows
(C) Both I and II follow.   (D) None follows.

100. There are five family member A, G, K, M and S. A is older than S.M is elder than A but younger than K. K is elder than S.S is younger than M.G is the eldest. Who is youngest member in the family?
(A) A   (B) S
(C) K   (D) M

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Solution

General Awareness

Ans.1(C) Kerala has become the first digital State of the country.

Ans.2(D)

Ans.3(A) Mendeleev's periodic table does not explain the position of hydrogen.

Ans.4(B) Zeugen-Wind pairs is not correctly matched.

Ans.5(C) Quartz composed of two elements Oxygen and silicon.

Ans.6(C) Ozone hole refers to decrease in thickness of ozone layer in stratosphere.

Ans.7(B) Green glands are associated with Excretion.

Ans.8(A) Mahabharatha has 18 chapters.

Ans.9(B) The percentage of oxygen in the air that is released during breathing is16%.

Ans.10(C) Pellegra disease is caused by deficiency of Vitamin B3.

Ans.11(D) The world's first underwater martial museum has been built in Aqaba, Jordan. It is made in the depth of 28 meters (92 feet) in the sea. Army here has 19 types of military equipment including war tanks, military ambulance, helicopter, war aircraft, crane and anti-aircraft.

Ans.12(B) Buxar thermal power plant has recently been inaugurated by PM Narendra modi. The 1320 MW capacity plant is located in chausa village in Buxar district of Bihar. It will generate 9828 million units of energy in a year.

Ans.13(A) Ayushman bharat yojna or Pradhan Mantri Jan Arogya Yojna is a centrally sponsored scheme launched in 2018 under the Ayushman Bharat Mission of MoHFW in India. About 26 states and union territories have accepted the scheme till now except Delhi, Orissa and Telangana.

Ans.14(C) A tulip flower exhibits a partially yellow petal because of the mutation in its genes.

Ans.15(D) Gastroenteritis happens when bacteria causes an infection in our gut. The symptom varies de pending upon the type of bacteria causing the in fection. Washing tomatoes thoroughly will not get rid of Salmonella typhimurium which is responsible for causing gastroenteritis in humans.

Ans.16(D) The thyroid is a butterfly shaped organ located in the base of the neck. The hormones secreted by it are thyroxine and Triiodothyronine which are produced by the follicular cells of thyroid gland.

Ans.17(A) A solar furnace is a structure that uses concentrated solar power to produce high tem perature, usually for industry. Concave mirrors are used in solar furnaces because concave mirrors reflect the light towards a single focal point due to which the solar furnace gets very hot.

Ans.18(A) The speed of sound is different in different medium. It basically depends upon the elasticity and the density of the medium. Thus, the speed of sound is maximum in solids and minimum in gases.

Ans.19(C)

Ans.20(D) Electrostatic attraction is a phenomenon in which a positively charged molecule or atom gets attracted towards negatively charged molecule. It is also known as coulomb's law. Coulomb discovered the law of electrostatic attraction in 1779.

Ans.21(B) Lucknow
The purpose of this summit is to make an active effort to facilitate is of doing business by setting up a model of good governance by the Central Government. Under the second ground of the

UP Investors Summit, efforts have been made to incorporate every citizen of the country to the 'Transforming India' approach to incorporate the country into the top three economies of the world.

Ans.22(D) Atal pension yojana become operational from June 1, 2015. This scheme is basically for the workers of the unorganised sector and aims to provide a minimum guaranteed pension of 1000 to 5000 Rs. Per month from the age of 60 years. It is available to all the citizens in the age group of 18-40 years.

Ans.23(C) Mount Etna
According to the National Institute of Geophysics and Volcanology, this volcano

was active even earlier in June. Mount Etna is Europe's tallest and active volcano. It is located on the eastern coast of Sicily in Italy and is the highest mountain in Italy. United Nations Organization UNESCO has also included it in the list of World Heritage Sites. This volcano is approximately 3326 meters high.

Ans.24(D) Sudarshan Patnaik

Sudarshan Patnaik gave a message to tackle the 'plastic pollution' in the ocean in the shape engraved on the sand. Apart from Patnaik, 15 top sand artists of the world participated in this competition organized on 'River Beach' in Boston, Massachusetts.

Ans.25(C) Jharkhand

Under this program, a group of 2800 field trainers will be created in the initial training, which will reach around 2.5 lakh gram panchayats all over the country. The main objective of this initiative is to ensure the permanence of open Defecation Free villages in the open under the Clean India Mission. In addition to this, the initiative will be helpful in facilitating the provision of safe and adequate drinking water as well as management of solid and liquid waste to the members of the field trainers and Panchayat Raj institutions.

Ans.26(D) Double-Displacement reaction is a type of chemical reaction where two compounds react and the positive ions and the negative ions of the two reactants switch places to form two new compounds or products.

Ans.27(C) Phenolphthalein is a colourless indicator used in acid-base titrations. It turns colourless in acidic as well as neutral solutions and magneta in basic solutions.

Ans.28(B) Chloroform in the presence of sunlight forms a poisonous gas 'Phosgene'. Phosgene is a major industrial chemical used to make plastics and pesticides. It is highly toxic substance that exists as a gas at room temperature.

Ans.29(A) Malware is any software intentionally designed to cause damage to computer server, client or computer network. It includes computer viruses, worms, Trojan horses and spyware.

Ans.30(B)

Ans.31(B) Ujjivan small finance bank has announced the launch of 'kisan suvidha loan' for small and marginal farmers. It provides loans to the individuals with an amount ranging from Rs. 60,000-Rs. 2 lakh for agricultural and allied activities.

Ans.32(C) World wetlands day is celebrated every year on 2nd February to commemorate the signing of Ramasar convention on wetlands in the Iranian city of Ramsar in 1971. This year the theme was 'wetlands and climate change' that highlights the impact of wetlands and the impact of climate change.

Ans.33(A) The UIC or International Union of Railways is an international rail transport industry body. It was created on 17 October 1922, with the aim of standardising industry practices. It has 194 members across 5 continents.

Ans.34(C)

Ans.35(D) The first jute mill was set up at Rishra near Kolkata in 1855 by an Englishman, George Auckland.

Ans.36(D)

Ans.37(A) The civil disobedience movement was an important part of Indian freedom. It was started by Mahatma Gandhi on 12 March, 1930 along with his followers. However, the movement was not successful but it prepared the people of India for great Sacrifice.

Ans.38(B) The Tughlaq dynasty was basically of Turkish origin and the family was essentially Muslim. Ghiyasuddin Tughlaq was the founder of the Tughlaq dynasty in the year 1321.

Ans.39(C) Hitopdesh is a collection of Sanskrit fables in prose and verse. It is similar to, though distinct from, the Panchatantra which is a collection of five volumes of stories. Vishnu Sharma was an Indian scholar and author who wrote Panchatantra and Hitopdesh.

Ans.40(D) The state government in India levies the octroi charges when the product enters the state. Generally, it varies from 3 to 6 % of the product value. Gujarat, Maharashtra and Punjab are the only states where octroy tax is applicable at present.

Mathematics

Ans.41(B) Sum of Numbers $=15 \times 40 = 600$
After Removing 35, 45 Total Number=13
Sum of number= 600-35-45=520
New Average= 520/13=40

Ans.42(A)

Let fraction=$\frac{x}{y}$

$\frac{4x}{y} + \frac{6y}{x} = 11$

$4x^2+6y^2=11xy$

$\Rightarrow 4x^2+6y^2-11xy=0$

$\Rightarrow (4x-3)(x+2y)=0$

$\Rightarrow \frac{x}{y} = \frac{3}{4}, -\frac{2}{1}$

Ans.43(B)

$\frac{x+x+2+x+4+x+6}{4} = 51$

$4x + 12 = 51 \times 4$

$4x = 204 - 12 = 192$

$X = 48$

Then numbers be 48, 50, 52, 54
The third number is 52.

Ans.44(A)

$\frac{1}{(1-a)(1-b)} + \frac{1}{(1-b)(1-c)} + \frac{1}{(1-c)(1-a)}$

$= \frac{(1-c)+(1-a)+(1-b)}{(1-a)(1-b)(1-c)}$

$= \frac{3-(a+b+c)}{(1-a)(1-b)(1-c)}$

$= \frac{3-3}{(1-a)(1-b)(1-c)}$

$=0$

Ans.45(C)

$x = 15km$
Distance = speed × time
Time = $\frac{distance}{Speed}$
$4\frac{3}{60} = \frac{30}{x+y} + \frac{30}{x-y}$
$\frac{9}{2} = \frac{30}{15+y} + \frac{30}{15-y}$
$\frac{9}{2} = \frac{30 \times (15-y+15+y)}{225+y^2}$
$225 - y^2 = 200$
$y^2 = 25$
$y = 5$ km/h

Ans.46(A)

$x+\frac{1}{x} = 5$

Then squaring both sides,

$x^2 + \frac{1}{x^2} = 23$ .... (i)

Again cubing both sides

$x^3 + \frac{1}{x^3} = 110$ .... (ii)

Multiplying both the equations (i) and (ii)

$x^5 + \frac{1}{x^5} + x + \frac{1}{x} = 2530$

$x^5 + \frac{1}{x^5} = 2525.$

Ans.47(A) For getting divisible by 11 the sum of the digits must be 11 or multiple of 11
And for 3 it is the sum of digits must be divisible by 3
Sum of the digits = 27 hence divisible by 3, N = 0, 3, 6, 9
Now for 11, alternate places digits sum subtraction must be multiple of 11.
19 − (N + 8) = multiple of 11, which shows n = 0
As 0 satisfy both the conditions hence is the answer.

Ans.48(A) $37.5\% \times 62.5\% \times 87.5\% \times Q^3 = 2835$
Upon solving we will get Q = 24.

Ans.49(A) $\frac{4.35\% \text{of } 46 + 33.33\% \text{ of } 9}{20\% \text{ of } 25} = \frac{2+3}{5} = 1$

Ans.50(A) **Sales in 2017 = 30 + 25 + 10 + 5 + 30 =
100**
Sales in 2018 = 20 + 35 + 30 + 15 + 30 =
130
Increase in sales = 30
% increase in sales = 30/100×100 = 30

Ans.51(B) Sales in 2018 = 20 + 35 + 30 + 15 + 30 =
130
Average = 130/5 = 26

Ans.52(A) Sales of siyarams in 2017 + sales of US polo in 2018 = 25 + 15 = 40
Sales of wrangler in 2 years = 30 + 30 = 60
Ratio = 60 : 40 = 3 : 2

Ans.53(A) Had there been no 5 in this number, it must be completely divided by 12,16and 18.
Hence finding LCM of 12, 16, 18 which is 144
Now the number must be = 144 a + 5
Now it to be greatest 3 digit number, putting a = 6
144 × 6 + 5 = 864 + 5 = 869

Ans.54(B) **Since the two numbers ratio is 8:9 and
LCM** is 144

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Let the HCF be x then
The numbers must be $8x$, $9x$
Then $8x \times 9x = 144x$
$x = 2$
Numbers are= 16 and 18 and sum of them is 34.

Ans.55(A) Now if the girls marks are decreased by 20 marks, then total average decreases by 5 marks , this means marks decrease by $1/4^{th}$ then the girls must be $1/4^{th}$ of the class and boys $3/4^{th}$.
But given number of girls is 100 then number of boys will be 300

Ans.56(C) **Average speed during travelling** of equal distances = 2uv/ (u + v), where u, v are the speeds.
$(2 \times 40 \times 60)/ (40+60) = 48$ km /hr

Ans.57(B) If $x\%$ increase in the side of cube then increase in the volume is given by
$$\left[\left(1 + \frac{x}{100}\right)^3 - 1\right] \times 100\%$$

$$\left[\left(1 + \frac{12.5}{100}\right)^3 - 1\right] \times 100\%$$

$$\left[\left(\frac{729}{512}\right) - 1\right] \times 100\% = 42.38$$

Ans.58(A) Let the third number be 100, then the second number will be 65 and the third number will be 75
Percentage loss = $10/75 \times 100 = 13.33\%$

Ans.59(A) Let the ratio there be x litres of milk and 3x litres of water. Then after the liquid is taken away and milk added the new ratio should be
$$\frac{x - \frac{30}{4} + 30}{3x - \frac{90}{4}} = \frac{1}{1}$$

On solving $x = 90/4$

Total volume = $x + 3x = 4x$

So $4 \times 90/4 = 90$ lit
$$\frac{d}{c} = \frac{42.86}{64.29} = \frac{2}{3}$$

Ans.60(A)

Ans.61(A) Home maker gets 4 kg more for Rs 120, then sugars reduced price is $120/4 = 30$
14.29% reduction means if the total is 7 units then 1 unit will get reduced,
= 6(reduced price) /7 (original price)

The reduced price is 30 which correspond to 6, and then increased price corresponding to 7 will be Rs 35.

Ans.62(A) **men = 4 women**
1 men= 4/3 women
7 men= 28/3 women
7 men + 5 women= 28/3 + 5 = 43/3 women
Total work in terms of women = 4×43
Then 43/3 women will take (4×43)/ (43/3) = 12 days.

Ans.63(A) **Let the total unit of work** be 28 units.
Mani will build in a day =7 units
Neighbour will in next day destroy = 4 units
So net wall build in 2 day= 3 units
Now see once the wall is completely made then his neighbour cannot break it, hence to make the complete ly, the last one to work on it must be Mani
Hence work to completed by both = 28 – 7 = 21 units
So to complete 21 units by both = 21/3 =7 but in original = 14 days
And then mani will come and do his day of work i.e. 7 units then the total work would be completed 14+1 = 15 days.

Ans.64(C) **Let us assume the speed of venugopal** as x km /hr
The first bus would have to travel 40×12/ (60) km to meet venugopal.
Now for the next bus, as both venugopal and bus are moving towards each other, the relative speed will be (40+ x) and then they have to cover the same distance previously hence
40×12/60 = (40 + x) × (10)/60
Hence x = 8 km/hr

Ans.65(A) For distance remaining same the speed is inversely proportional to time and hence if we consider the boat speed as B and stream speed as C then down stream speed will be B + C and upstream speed will be B – C
(B + C)/(B – C) = 16/12 = 4/3
B : C = 7 : 1

Ans.66(B) SI at 10% for 3 years = 30% of 90,000 = 27000
Now as for compound Interest,
Amount = 90000 ×11/10 × 11/10 × 11/10 = 90×1331 = 119790

Now CI = 119790 – 90000 = 29790
Difference = 29790 – 27000 = 2790

Ans.67(A)

Ans.68(A) 126/237 = 42/79
37/79 ×A = 42/79×B
= A : B = 42 : 37
Now A + B=79
Now 79 ×2000 →158000
37×2000 →74000

Ans.69(C) **Surface area of hemisphere** = $3\pi r^2$
14cm= 0.14 m (diameter)
Hence radius = 0.07
Surface area= 3×22/7 ×0.07×0.07 = 0.0462 cm^2

Ans.70(C)

$$\tan 30° = \frac{\tan 60° - \tan 30°}{1 + \tan 60° \times \tan 30}$$

Hence A = B or A – B = 0

General Intelligence and Reasoning

Ans.71(A) 80, 10, 70, 15, +0
Alternate
80 – 70 = 60 – 10 = 50
10 + 5 = 15 + 5 = 20

Ans.72(C) Difference of +6

Ans.73(B)
M (+) → N   B (+1) → C
A (+1) → B   O (+1) → P
D (+1) → E   M (+1) → N
R (+1) → S   B (+1) → C
A (+1) → B   A (+1) → B
S (+1) → T   Y (+1) → Z

Ans.74(D)

Ans.75(B) Mirror image of 3 : 30 is 8 : 30.

Ans.76(D) All vowels are kept same and consonants are increased two step forward.

T R E A S U R E   V I O L A T I O N
+2 +2   +2 +2   +2   +2 +2   +2
V T E A U U T E   X I O N A V I O P

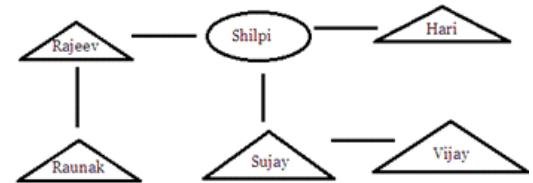**Ans.77(C)** Evacuate is the synonym of Attenuate. Similarly Restore is the synonym of replenish.

Ans.78(D)
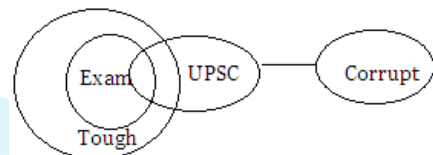
Ans.79(A) Series is +5, +9, + 13 , +17 , +21 , +25

2   7   16   29   46   67   92
  +5   +9   +13   + 17   + 21   +25
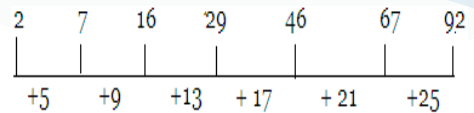
Ans.80(C) Animal : Group Name
Group of Flamingos is called as Pat.

Ans.81(D) Area, Zone, Domain, Reason
So here all words represent same meaning except Reason.

Ans.82(B)

Rajeev — Shilpi — Hari
Raunak   Sujay — Vijay

Ans.(83–85):

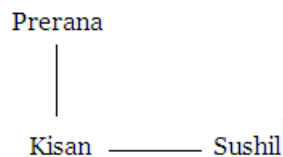| Person	Fruit	Profession
Chaitu	Orange	Engineer
Shaileja	Apple	Fashion Designer
Varna	Watermelon	Teacher
Priyanka	Grapes	Inspector
Prajakta	Banana	Lawyer

Ans.83(A)
Ans.84(C) Shaileja - Fashion Designer
Ans.85(B) Prajakta likes banana.
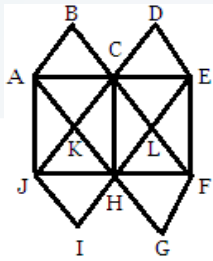**Ans.86(A)** All the cities are near Ganga river bank except Delhi.
Ans.87(C) From I and II

Prerana
|
Kisan ——— Sushil

Ans.88(C)

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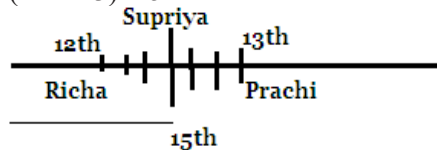www.vsom.ac.in

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AE , JF , CH , AG,FB , AB ,DE , JD , IE , JI , DE AJ , EF

Ans.89(A) The moon rotates on its axis once in 27 ⅓ days and it also takes the same time to revolve around the Earth. So only one side of moon remains visible to Earth.

Ans.90(B) Student In between Rich and Prachi = 30 – (12 + 13) = 5

Ans.91(C) $3 + 2 \times 4 - 6 = 8$ → $3 \times 4 + 2 - 6 = 12 + 2 - 6 = 8$

Ans.92(D) Appendix, Application, Appreciate, Apprehensive
So Appreciate is third after arrangement.

Ans.93(B)
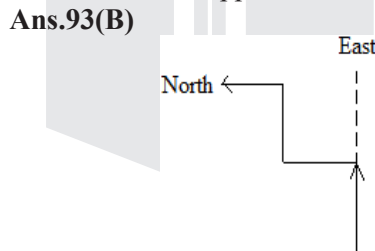
Ans.94(B) Total No of B.tech Student = 150 + 50 + 20 + 50 + 10 +150 + 20 =450
Who do not have B.Tech degree = 150 +40 + 50 = 240
Required ratio = 450 /240 = 15/8

Ans.95(D) Total Number of students who have done B.Tech and M.Tech represented by common region of circle and triangle which do not include rectangle
Total Number of student who have done B.Tech and M.Tech = 20

Ans.96(A) All are at even place in alphabetical series. Except U.

Ans.97(B) Neha have B. Ed degree and is fluent in Hindi and English and have three year of teaching
experience so all criteria is fulfilled.

Ans.98(C) 1 2 / 1 2 / 1 2 / 1 2 / 1 2 / 1 2
Ans.99(D)
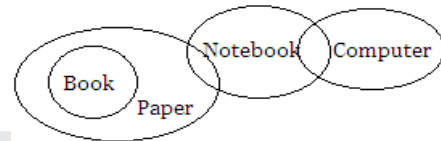
Ans.100(B) A> S, K > M > A, K > S, M> S
Finally, G> K> M > A > S

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Mayank's quest to give more to his students encourage him to write a book cum journal for his students for their career oriented studies and preparations, resulting the compilation of "Aarambh-Current affairs by Mayank Ojha",

This magazine covers all the current affairs in different styles from The news format to questionnaires to the multiple MOCK papers for different govt. job exams.This personally and beautifully crafted handbook is very helpful to those students who are government job aspirants like bank exams, SSC Exams, Railway Exams or Civil Services exams, state level or center level exam categories.

Address: Bhayara Road, Jyori, Masauli, Uttar Pradesh
Contact Info: 6389611115, 9454787301, 8400071593
E-MAIL: veenasudhakarojha123@gmail.com