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Geography

Q.1) Consider the following statements:

- 1. Non-coking coal is a type of coal that can be heated in the absence of air to produce coke.
- 2. Coal India Limited (CIL) notifies the prices of non-coking coal for different grades and sectors.
- 3. National Coal Index (NCI) is a price index released monthly that reflects the change of price level of coal in a particular month relative to the fixed base year.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 only
- d) 2 and 3 only

Q.2) Which one of the following straits connects the Indian Ocean with the South China Sea?

- a) Palk Strait
- b) Strait of Hormuz
- c) Strait of Malacca
- d) Sunda Strait

Q.3) It's the world's largest acidic lake. It emits hot, flammable sulphurous gases that ignite upon contact with Earth's oxygen. Belambangan Biosphere Reserve is located near the lake. Among the following lakes, which one exhibits these characteristics?

- a) Yellowstone Lake
- b) Lake Mono
- c) Kawah Ijen Crater Lake
- d) Lake Yanacocha

Q.4) Which one of the following best describes the term "greying" phenomenon?

- a) This refers to the process of people growing older while still facing challenges and issues traditionally associated with youth, such as access to education and employment opportunities.
- b) It is the process by which societies transition from high birth and death rates to lower birth and death rates.
- c) It refers to a cumulative result of increasing longevity, declining fertility and the progression of larger groups of population to older ages.
- d) It is used to describe a sudden and significant increase in birth rates, resulting in a larger cohort of individuals born during a specific period.



Indian Polity

Q.5) With reference to the Finance Commission, which of the following are its roles/functions?

- 1. Recommends on the distribution of tax revenues between the central and state governments.
- 2. Changes the tax rates and policies of the central government.
- 3. Establishes the principles governing tax allocation among states
- 4. Shapes the fiscal federalism and development trajectory of India.
- 5. Responsible for managing the finances of the Indian government.

Select the correct answer from the codes given below:

- a) 1, 2 and 3 only
- b) 1, 3 and 4 only
- c) 2, 3, 4 and 5 only
- d) 1, 3, 4 and 5 only

Q.6) Consider the following statements:

- 1. The Right to Privacy finds a mention in Part III of the Constitution.
- 2. The Right to Privacy is not absolute, and is subject to reasonable restrictions.
- 3. The Right to Know is a subset of the right to freedom of speech and expression as enshrined in Article 19(1)(a) of the Indian Constitution.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Q.7) Enabling Communications on Real-time Environment (ENCORE) was seen in the news recently, is related to which one of the following?

- a) Augmented and Virtual Reality (AR/VR)
- b) Voice over Internet Protocol (VoIP)
- c) Emergency Response Systems
- d) Election Management Systems



Q.8) Which of the following statements are correct with respect to the Advocate-on-Record (AoR)?

- 1. Only AoRs can file cases in the Supreme Court.
- 2. AORs are eligible to appear only before the Supreme Court of India.
- 3. An AoR must have an office located in Delhi within a 16-kilometer radius of the Supreme Court.
- 4. An Advocate-on-Record must be appointed by a judge to represent a client.
- 5. The rules governing the Advocate-on-Record (AoR) system are created by the Bar Council of India (BCI).

Select the correct statements using the codes given below:

- a) 1, 2, 3 and 5 only
- b) 1, 2, and 3 only
- c) 1 and 3 only
- d) 2, 4 and 5 only

Q.9) Consider the following statements with reference to electronic First Information Report (e-FIR):

- 1. It means an automatic registration of an FIR using electronic means.
- 2. It can be filed for cognizable offenses only.
- 3. It can be filed from anywhere at any time.
- 4. It can help to improve the transparency and accountability of the police.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) Only three
- d) All four

Q.10) Consider the following statements:

- 1. Gambling in India is largely a state subject under seventh Schedule of the Constitution.
- 2. A ban on online betting is issued under Section 69A of the Information Technology Act 2000.
- 3. The Indian government has established a government regulator to oversee the online betting industry.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 2 only
- d) 1, 2 and 3



Q.11) With reference to the regulations for foreign universities to set up and operate their campuses in India, consider the following statements:

- 1. Two or more than two universities can collaborate to set up a campus in India, provided each institution meets the eligibility criteria individually.
- 2. A foreign university cannot set up more than one campus in India.
- 3. The foreign universities are not allowed to open learning centers, study centres or franchises that may act as representative offices of the parent entity.
- 4. No programmes can be offered in Open and Distance Learning modes.

Which of the criteria listed above have been established by the Indian government for foreign universities looking to establish their campuses in India?

- a) 1, 2 and 3 only
- b) 2, and 3 only
- c) 1 and 4 only
- d) 1, 3 and 4 only

Acts, Organization, Policies & Reports

Q.12) Consider the following statements:

- 1. The goal of Atal Tinkering Labs (ATLs) is to replace traditional educational methods with a focus on innovation and active community participation.
- 2. The goal of ATL Sarthi is to empower schools to continuously improve the functioning of their ATLs and achieve the desired objectives of fostering curiosity, creativity, and innovation among young students.

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

Q.13) Consider the following statements:

- 1. The National Efficient Cooking Programme (NECP) is a government initiative aimed at promoting the adoption of efficient clay pots for cooking in rural households.
- 2. Energy Efficient Fans Programme (EEFP) aims to enhance the market for efficient fans by deploying one crore 5-star energy-efficient ceiling fans across India.
- 3. The Bureau of Energy Efficiency (BEE) has made it mandatory for all new ceiling fans sold in India to be 5-star energy-efficient.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) All three
- d) None



Q.14) Which of the following are the key pillars of the World Food India 2023, recently inaugurated by the Prime Minister of India?

- 1. Leveraging India's Super Food for the World
- 2. Positioning India as the Global Hub for food processing
- 3. Promoting cultivation of hybrid crops in India

Select the correct answer from the codes given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Q.15) With reference to the Annual Survey of India's City-Systems (ASICS) 2023 report, consider the following statements:

- 1. As per the report, 39% of India's capital cities lack an active master plan.
- 2. As per the report, southern states have relatively better urban legislations than the eastern Indian states.
- 3. As per the report, only Assam empowers its city governments to collect all key taxes.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) All three
- d) None

Q.16) Consider the following reports:

- 1. Emission Gap Report
- 2. Global Environment Outlook
- 3. Adaptation Gap Report
- 4. World Development Report

Which of the above reports are published by the United Nations Environment Programme (UNEP)?

- a) 1 and 2 only
- b) 1, 2 and 3 only
- c) 2 and 4 only
- d) 2, 3 and 4 only



Q.17) Consider the following statements:

- 1. National Mineral Development Corporation (NMDC) operates the only mechanized diamond mine in India.
- 2. NMDC is the single largest producer of iron ore in India.
- 3. The Mount Celia Gold Project is a gold mining project located in Australia is the first international gold mine project of NMDC.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Q.18) With reference to the PM Vishwakarma Scheme, which of the following statements are correct?

- 1. The registration and benefits under the Scheme are restricted to only one member of the family.
- 2. It provides financial assistance to artisans to start their own businesses.
- 3. The scheme provides financial assistance to artisans in the form of grants.
- 4. The scheme is being implemented by the Ministry of Micro, Small and Medium Enterprises (MSME).

Select the correct answer using the codes given below:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 2 and 3 only
- d) 1, 2 and 4 only

Q.19) Which one of the following the is the objective of LEAP AHEAD Initiative?

- a) To provide accelerated growth support to tech startups across India.
- b) To establish India as a global leader in the semiconductor industry.
- c) To close the gender gap in employment by encouraging higher Female Labor Force Participation Rate (FLFPR) among women.
- d) To utilize India's cutting-edge space technologies to develop innovative services for global markets.

Q.20) With reference to the Bharat Atta scheme, consider the following statements:

- 1. Bharat Atta is a fortified wheat flour that is made with a blend of wheat, rice, and pulses.
- 2. It aims to provide affordable wheat flour to the poor and vulnerable sections of the society.

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



Q.21) Which one of the following is the objective of Krishi 24/7 portal, recently launched by the government?

- a) It is an app developed to help farmers in accessing finance and insurance products.
- b) It can connect farmers with experts who can provide them with advice on crop management and pest control.
- c) It is an AI powered tool designed to automatically monitor and analyze agricultural news.
- d) It helps farmers to sell their crops directly to buyers, eliminating the need for intermediaries.

Q.22) Consider the following statements with reference to Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY):

- 1. It is a food security welfare scheme.
- 2. By providing free food grains, PMGKAY helps to boost the economy by increasing consumption and supporting the agricultural sector.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.23) Consider the following missions:

- 1. Skill India Mission
- 2. Deep Ocean Exploration
- 3. Accelerating Growth of New India's Innovations (AGNIi)
- 4. National Biodiversity Mission
- 5. Smart Cities Mission

How many of the above missions are included under the Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC)?

- a) Only two
- b) Only three
- c) Only four
- d) All five

Q.24) With reference to the Energy Conservation Building Code (ECBC), which of the following statements are correct?

- 1. It sets minimum energy standards for commercial buildings, with the objective of enabling energy savings of between 25 and 50% in compliant buildings.
- 2. It mandates the use of plants and greenery in buildings to improve air quality.
- 3. It only applies to newly constructed commercial buildings.
- 4. It helps to reduce India's reliance on imported energy.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) Only three
- d) All four



Q.25) Which one of the following is the objective of Production Gap Report?

- a) It assesses the gap in achieving global education goals and highlights challenges and disparities in education access and quality.
- b) It provides analysis and information on the gap in global investment trends and policies.
- c) It assesses the gap between current global greenhouse gas emissions and the necessary reductions to limit global warming to a specific temperature target.
- d) It focuses on a specific development challenge each year and provides evidence-based analysis and policy recommendations.

Q.26) With reference to the National Curriculum Framework (NCF) consider the following statements:

- 1. It serves as an educational blueprint in India.
- 2. It has been developed by the National Council of Educational Research and Training (NCERT).
- 3. It emphasizes teacher-centered learning, where teachers are active participants in the learning process.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) All three
- d) None

International Relations/Organizations

Q.27) With reference to the differences between the United Nations General Assembly (UNGA) and the United Nations Security Council (UNSC), consider the following statements:

- 1. In the UNGA, decisions on important questions, such as peace and security, require a two-thirds majority while there is no such mechanism in the UNSC.
- 2. The UNSC is the most representative of UN organs while the UNGA is less representative.
- 3. The UNGA's resolutions are not binding on Member States while the UNSC's resolutions are binding on all Member States.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3



Q.28) Consider the following statements:

- 1. An embassy is the primary diplomatic mission of a country in another country and is usually located in the host country's capital city whereas a consulate is a smaller diplomatic mission that is located in a major city in the host country, other than the capital.
- 2. A consulate is the official representation of the sending country to the host country whereas an embassy is a subordinate office of the consulate and provides consular services to citizens of the sending country who are living or traveling in the host country.

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

Q.29) With reference to the World Food Programme, consider the following statements:

- 1. It is an independent for-profit organization with the objective of offering global policy recommendations to countries for addressing malnutrition.
- 2. It is the world's largest humanitarian organization.
- 3. It works on long-term development programs aimed at building the resilience of communities and improving their access to food.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Q.30) Consider the following statements:

- 1. The World Customs Organization (WCO) is the only international organization with competence in customs matters.
- 2. The primary objective of the International Association of Ports and Harbors (IAPH) is to take the lead in implementing initiatives designed to address the issue of Illegal, Unreported, and Unregulated (IUU) fishing.

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



Q.31) With reference to the Financial Action Task Force (FATF) consider the following statements:

- 1. It is an intergovernmental organization that develops and promotes policies to combat money laundering, terrorist financing, and the proliferation of weapons of mass destruction.
- 2. India is one of the members of FATF.
- 3. As of now, Pakistan and Afghanistan are the black listed countries in the FATF.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Q.32) The proposed Eastern Maritime Corridor (EMC) is expected to reduce the travel time between India and Russia. Which of the following seas will the corridor be expected to pass through?

- a) Coral Sea, the Sea of Philippines, and the Tasman Sea
- b) Arabian Sea, the Red Sea and the Mediterranean Sea
- c) Sea of Japan, the East China Sea, and the South China Sea
- d) Berring Sea, Labrador Sea, and the Barent Sea

Q.33) In the context of international law, which one of the following best describes the "Doctrine of Dualism", seen in the news recently?

- a) It recognizes that states may have some discretion in implementing and interpreting international human rights standards within their domestic legal systems.
- b) It states that international law is separate from national law and it must be incorporated into national law through domestic legislation.
- c) It refers to customary practices and norms that have evolved over time and are considered legally binding on states and acts independently of international treaty or law.
- d) It refers to the international law that automatically becomes part of domestic law without the need for specific incorporation.

Q.34) In the context of international relations, the term "Principle of Reciprocity" is used for -

- a) States avoiding taking sides in conflicts and aim to remain impartial and uninvolved in the disputes of other states.
- b) The practice of mutual exchange or give-and-take between states, where one state grants certain benefits or concessions to another with the expectation of receiving similar treatment or benefits in return.
- c) The promotion of the peaceful settlement of conflicts and disputes between states through negotiation, diplomacy, mediation, and other non-violent means.
- d) Allowing people and nations to determine their political, economic, social, and cultural status without external influence.



Q.35) Consider the following initiatives:

- 1. The Defense Technology and Trade Initiative (DTTI)
- 2. Quadrilateral Security Dialogue (Quad)
- 3. India-United States Defence Acceleration Ecosystem (INDUS-X)
- 4. Artemis Accord

Which of the initiatives mentioned above represent defense cooperation between India and the United States?

- a) 1 and 2 only
- b) 1, 2 and 3 only
- c) 1, 3 and 4 only
- d) 1, 2, 3 and 4

Economy

Q.36) The term 'Grey Infrastructure' was seen in the news recently. In this regard, which one of the following statements is correct?

- a) It is the natural or man-made bodies of water that help to store, clean, and move water, such as rivers, lakes, and constructed wetlands.
- b) It refers to telecommunications infrastructure, such as cell phone towers, broadband networks, and satellites.
- c) It refers to engineered assets that provide one or multiple services required by society, such as transportation or wastewater treatment.
- d) It is the disaster-resilient infrastructure that is designed to withstand natural disasters, such as earthquakes, hurricanes, and floods.

Q.37) If an Indian company is listed on foreign stock exchanges, then -

- 1. It will get access to foreign capital markets.
- 2. It will increase the liquidity of the company's stock.
- 3. It will need to spend lesser money on market makers to maintain liquidity.
- 4. It can help to diversify the company's investor base.

Which of the statements given above are correct?

- a) 1 and 4 only
- b) 1, 2, and 4 only
- c) 2 and 3 only
- d) 1, 2, 3 and 4



Environment

Q.38) With reference to the Biosphere Reserves, which of the following statements is/are correct?

- 1. Human settlement is allowed in the buffer zone of the reserve.
- 2. Sustainable infrastructure development is permissible in the transition zone of the reserve.
- 3. Ecotourism is permissible in the core zone of the reserve.

Select the correct answer using the codes given below:

- a) 1 only
- b) 1 and 2 only
- c) 2 only
- d) 2 and 3 only

Q.39) With reference to the White hydrogen, which one of the following statements is correct?

- a) White hydrogen is the most common form of hydrogen on Earth.
- b) White hydrogen is more environmentally friendly than green hydrogen.
- c) White hydrogen is more abundant than other forms of hydrogen.
- d) White hydrogen causes no CO2 emissions when used as a fuel.

Q.40) With reference to the Dust and Control Management Centre (DCMC), consider the following statements:

- 1. It monitors real-time data on dust levels at construction sites using sensors and cameras installed at strategic locations.
- 2. If contractors fail to comply with notices, the DCMC may take enforcement action, such as imposing fines or suspending work at the construction site.
- 3. The DCMC promotes the adoption of innovative technologies to enhance dust control efforts.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Q.41) Consider the following pollutants:

- 1. Particulate matter (PM2.5)
- 2. Particulate matter10 (PM10)
- 3. Ozone (O3)
- 4. Nitrogen Dioxide (NO2)
- 5. Sulphur Dioxide (SO2)

Which of the pollutants mentioned above are considered in the calculation of the Air Quality Index (AQI)?

- a) 1, 2, 3 and 4 only
- b) 1, 2 and 5 only
- c) 1, 2, 3 and 5 only
- d) 1, 2, 3, 4 and 5



Q.42) National Centre of Excellence in Carbon Capture and Utilisation (NCoE-CCU) at IIT Bombay has developed a carbon dioxide (CO2) conversion technology that converts it into carbon monoxide. On which one of the following processes is the technology based on?

- a) Photolysis
- b) Thermal decomposition
- c) Electrocatalysis
- d) Biomass gasification

Q.43) Birds are called the "canary in the gold mine" because the condition of birds in an ecosystem serves as an indicator of the health of the environment which can be impacted by gold mining. Which of the following is/are the reason(s) associated with the gold mining that impact birds?

- 1. Bioleaching
- 2. Exposure to Mercury
- 3. In-situ leaching
- 4. Solvent extraction

Select the correct answer using the codes given below:

- a) 1 and 2 only
- b) 2 only
- c) 1, 2 and 3 only
- d) 4 only

Q.44) Consider the following themes:

- 1. Restoration of Water Bodies
- 2. Groundwater
- 3. Watershed Development
- 4. Rural Drinking Water
- 5. Managing Water Cycle
- 6. Building Dams

How many of the themes mentioned above are included within the Composite Water Management Index (CWMI)?

- a) Only three
- b) Only four
- c) Only five
- d) All six



Q.45) Consider the following statements:

Statement-I: As per the Elephant Corridor Report 2023, West Bengal has the highest number of identified elephant corridors in India.

Statement-II: West Bengal's forests are home to a significant number of elephant population.

Which one of the following is correct in respect of the above statements?

- a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- c) Statement-I is correct but Statement-II is incorrect
- d) Statement-I is incorrect but Statement-II is correct

Q.46) The Clean and Green Village is one of the themes adopted by the Ministry of Panchayati Raj to transform rural ecosystems with the support of the Gram Panchayat Development Plan (GPDP). Which of the following practices contribute to the formation of Clean and Green Village?

- 1. Organic and Natural Farming
- 2. Agro forestry
- 3. Monocropping
- 4. Smallholder Farming

Select the correct code given below:

- a) 1 and 2 only
- b) 1, 2 and 4 only
- c) 2, 3 and 4 only
- d) 1 and 4 only

Science & Technology

Q.47) With reference to Frontier AI sometimes seen in the news, which of the following are benefits associated with it?

- 1. Improved healthcare
- 2. More efficient transportation
- 3. Moral reasoning
- 4. Interpretability

Select the correct code given below:

- a) 1 and 2 only
- b) 1, 3 and 4 only
- c) 1, 2 and 4 only
- d) 2 and 4 only



Q.48) Recently, the Government of India is taking steps to promote Small Modular Reactors (SMR). Which of the following are the reason behind promoting SMRs?

- 1. Smaller size
- 2. Flexibility
- 3. Lower cost
- 4. Lower Environmental Impact

Select the correct answer using the codes given below:

- a) 1, 2 and 4 only
- b) 2, 3 and 4 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4 only

Q.49) Consider the following statements:

- 1. Asteroids orbit the Sun in the same direction as the planets.
- 2. Asteroids often have a visible coma (a cloud of gas and dust) and a tail that points away from the Sun.
- 3. Asteroids are mostly rock and metal, while comets are mostly ice and dust.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) All three
- d) None

Q.50) Consider the following statements:

- 1. A binary asteroid is a system of two asteroids that orbit each other around a common center of mass.
- 2. Trojan asteroids have orbits that cover the boundary between the Kuiper belt and the asteroid belt.

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



Q.51) Consider the following:

- 1. Monitoring invasive species
- 2. Air quality monitoring
- 3. Water quality monitoring
- 4. Environmental impact assessment
- 5. Deep-sea environments

Among the areas mentioned above, where is Environmental DNA (eDNA) most commonly used?

- a) 1, 2, 3 and 4 only
- b) 2,4 and 5 only
- c) 1, 3, 4 and 5 only
- d) 1, 2, 3, 4 and 5

Q.52) Consider the following statements:

Statement-I: Israel's Iron Dome is based on the principle of kinetic interception, which is based on the method of destroying a threat by physically striking it with another object.

Statement-II: Project Kusha is a mission by India's Defence Research and Development Organization (DRDO) to develop a state-of-the-art air defence system similar to Israel's Iron Dome.

Which one of the following is correct in respect of the above statements?

- a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- c) Statement-I is correct but Statement-II is incorrect
- d) Statement-I is incorrect but Statement-II is correct

Q.53) With reference to women in Defence Forces, consider the following statements:

- 1. Women candidates can join the National Defence Academy (NDA) every six months.
- 2. Women officers are being appointed on board warships in the Indian Navy.
- 3. Women are allowed to be the part of core combat arms such as Infantry, Mechanized Infantry, and Armored Corps.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 only
- d) 2 and 3 only



Q.54) Consider the following vessels:

- 1. INS Visakhapatnam
- 2. INS Mormugao
- 3. INS Imphal
- 4. INS Surat
- 5. INS Coimbatore

How many of the above vessels are part of Project 15B?

- a) Only two
- b) Only three
- c) Only four
- d) All five

Q.55) With reference to the Poshan Tracker Application, consider the following statements:

- 1. It is a mobile-based application implemented by the Ministry of Women and Child Development, Government of India by the National e-Governance Division (NeGD).
- 2. The Poshan Tracker is a beneficiary-focused, service delivery application that provides real-time data with statistical analysis.
- 3. It primarily monitors the nutritional status of children going to the high school, aiming to offer services related to nutrition and address the challenges associated with malnutrition.
- 4. The Poshan Tracker enables real-time monitoring of all Anganwadi Centers and services provided to the beneficiaries.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) Only three
- d) All four

Q.56) Consider the following diseases:

- 1. Dengue fever
- 2. Zika virus
- 3. Chikungunya
- 4. Yellow fever

Which one of the following mosquito's species is responsible for the diseases mentioned above?

- a) Anopheles mosquitoes
- b) Aedes mosquitoes
- c) Culex mosquitoes
- d) Haemagogus mosquitoes



Q.57) With reference to the Wolbachia method, consider the following statements:

- 1. The Wolbachia method is a novel approach to controlling mosquito populations and reducing the transmission of mosquito-borne diseases.
- 2. Wolbachia is not always found in Aedes aegypti mosquitoes.
- 3. In the Wolbachia method, the genetic material of the mosquito is altered.
- 4. The method poses a high environmental risk.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) Only three
- d) All four

Q.58) With reference to Hypertension in India, consider the following statements:

- 1. Hypertension prevalence in southern states exceeds the national average.
- 2. Women in India are more prone to hypertension than men.

Select the correct statements using the codes given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.59) Consider the following statements with reference to the Tuberculosis (TB):

- 1. It is caused by a bacterium called Mycobacterium tuberculosis.
- 2. It can be spread through air.
- 3. As per the Global TB Report 2023, India accounted for the lowest number of tuberculosis (TB) cases in the world in 2022.

Which of the statements given above are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3



Answer Key

1 - (d)	2 - (c)	3 - (c)	4 - (c)	5 - (b)	6 - (b)	7 - (d)	8 - (c)	9 - (c)	10 - (a)
11 - (d)	12 - (b)	13 - (b)	14 - (a)	15 - (b)	16 - (b)	17 - (d)	18 - (d)	19 - (a)	20 - (c)
21 – (c)	22 - (c)	23 - (b)	24 - (b)	25 - (c)	26 - (b)	27 - (c)	28 – (a)	29 - (b)	30 - (a)
31 - (a)	32 - (c)	33 - (b)	34 - (b)	35 - (b)	36 - (c)	37 - (b)	38 - (b)	39 - (d)	40 - (d)
41 - (d)	42 - (c)	43 - (b)	44 - (b)	45 - (a)	46 - (b)	47 - (c)	48 - (d)	49 - (b)	50 - (a)
51 - (c)	52 - (b)	53 - (b)	54 - (c)	55 - (c)	56 - (n)	57 – (b)	58 - (a)	59 - (a)	



Answers & Explanations

Geography

1. Correct option is (D)

- Statement 1 is incorrect. Coking coal is a type of coal that can be heated in the absence of air to produce coke. Coke is a solid, porous material with a high carbon content (typically over 85%). It is used in the steelmaking process to reduce iron ore to molten iron.
- Non-coking coal is a type of coal that cannot be heated in the absence of air to produce coke. It is typically used for power generation, cement production, and other industrial purposes.
- Coking coal has a higher carbon content and lower ash content than non-coking coal.
- Statements 2 and 3 are correct. Coal India Limited (CIL) notifies the prices of non-coking coal for different grades and sectors. The subsidiaries of CIL, namely Bharat Coking Coal Limited (BCCL), Eastern Coalfields Limited (ECL), and Western Coalfields Limited (WCL), are responsible for notifying the prices of coking coal.
- The National Coal Index (NCI) is a price index released monthly by the Ministry of Coal. It is a composite index that reflects the average price of coal (both coking and non-coking coal) sold through different channels, including notified prices, auction prices, and import prices. The NCI is used by the government to track coal prices and to set coal pricing policies.
- The NCI is calculated with a base year of 2017-18. This means that the price of coal in any given month is compared to the price of coal in 2017-18 to calculate the NCI for that month.

Source: ForumIAS

2. Correct option is (C)

• The Strait of Malacca is located between the Malay Peninsula and the island of Sumatra, connects the Indian Ocean to the South China Sea. It is one of the world's busiest shipping lanes, with a significant volume of trade passing through it.

Source: ForumIAS

3. Correct option is (C)

- Kawah Ijen Crater Lake is located in Indonesia and is known for its extreme acidity and its emission of hot, flammable sulfurous gases. It's the world's largest acidic lake. It is located in the crater of the Kawah Ijen volcano (centre of East Java, Indonesia).
- The lake is filled with a high concentration of sulphuric and hydrochloric acids, as well as dissolved minerals, which makes it unswimmable. The Belambangan Biosphere Reserve is located nearby lake.

Source: ForumIAS

4. Correct option is (C)

• The "greying" phenomenon refers to the process of a population becoming older and having a higher proportion of older individuals. This occurs as a result of increased longevity and declining fertility rates, leading to an aging population. It's a natural demographic trend, and



it's happening in many countries around the world. In the 1970s, there were 3 times as many 15 to 24-year-olds then older people. By 2050, these age groups will be equal.

Source: ForumIAS

Indian Polity

5. Correct option is (B)

- Statement 1, 3 and 4 are correct. One of the primary functions of the Finance Commission is to recommend the distribution of tax revenues between the central government (Union) and the state governments. This ensures that states receive a fair share of tax resources to support their developmental needs.
- The Finance Commission also establishes the principles governing the allocation of taxes among the states. This involves considering various factors such as the population, income levels, and development needs of each state. The aim is to ensure equitable distribution of tax resources across India.
- The Finance Commission's recommendations play a significant role in shaping the fiscal federalism and development trajectory of India.
- Statements 2 and 5 are incorrect. The Finance Commission does not have the authority to directly change the tax rates and policies of the central government. These matters are primarily determined by the central government through legislative processes. It is also not responsible for the overall management of the Indian government's finances. This responsibility falls under the purview of the Ministry of Finance and other relevant ministries and departments.

Source: ForumIAS

6. Correct option is (B)

- Statement 1 is incorrect. The Right to Privacy was not directly envisaged by the Constitution makers. It also did not find a mention in Part III of the Constitution relating to Fundamental Rights.
- However, the Supreme Court gave a landmark decision on Right to Privacy in Justice K.S Puttaswamy vs Union of India case (2017).
- It ruled that Right to Privacy is "intrinsic to life and personal liberty". It is inherently protected under Article 21 and as a part of the freedoms guaranteed by Part III of the Constitution.
- Statements 2 and 3 are correct. The SC ruled that the right to privacy is not absolute, but is subject to reasonable restrictions.
- The Right to Know is a subset of the right to freedom of speech and expression as enshrined in Article 19(1)(a) of the Indian Constitution. A citizen has a fundamental right to access towards information. It is the duty of the state to protect the fundamental right.

Source: ForumIAS



7. Correct option is (D)

• ENCORE is the Election Commission of India's in-house software for complete Candidate and election management. It's a one-stop-shop for everything related to elections, including candidate registration, nomination management, voter registration, election day management, and results management. It's designed to streamline the election process and make it more efficient and secure.

Source: ForumIAS

8. Correct option is (C)

- Statements 1 and 3 are correct. Advocate on record (AOR) is a title given to an advocate who can represent a cause or pleading before the Supreme Court (SC). Only these advocates are entitled to file any matter or document before the SC.
- The Supreme Court Rules, 2013 prescribe eligibility criteria for an AoR: An advocate has to clear an examination set by the Supreme Court and has to meet specific criteria such as:
- 1. An advocate must undergo training with a court-approved AoR for at least one year before taking the examination.
- 2. The advocate should have at least four years of legal practice before beginning the training.
- 3. An AoR must have an office located in Delhi within a 16-kilometer radius of the Supreme Court.
- Statements 2, 4 and 5 are incorrect. While AoRs are primarily recognized for their expertise in representing clients before the Supreme Court, they are authorized to appear before other courts in India as well. This includes High Courts, district courts, and other lower courts.
- An Advocate-on-Record (AoR) does not need to be appointed by a judge to represent a client before the Supreme Court of India. The client has the right to choose their own AoR, and the AoR does not need to obtain the judge's approval before representing the client.
- The rules governing the Advocate-on-Record (AoR) system are created by the Supreme Court of India based on the authority given to it under Article 145 of the Constitution of India.
- The Bar Council of India is a statutory body created under the Advocates Act, 1961, and it regulates the legal profession and legal education in India. However, it does not create the rules for the AoR system.

Source: ForumIAS

9. Correct option is (C)

- Statement 1 is incorrect. 'e-FIR' does not mean an automatic registration of an FIR using electronic means. e-FIRs need to be reviewed and registered by a police officer before they are considered valid. This is because the police officer needs to verify the identity of the complainant and the details of the complaint before registering the FIR.
- Statements 2, 3 and 4 are correct. As per Section 154 of the Criminal Procedure Code (CrPC), an FIR can be registered in cognizable offenses only.
- e-FIRs can be filed from anywhere at any time, as long as the complainant has access to the internet. This makes it a convenient and accessible way to report crimes to the police.
- e-FIRs can help to improve the transparency and accountability of the police. e-FIRs are recorded electronically and can be tracked by the complainant and the police department. This makes it more difficult for the police to tamper with FIRs or to ignore complaints.

Source: ForumIAS



10. Correct option is (A)

- Statements 1 and 2 are correct. Gambling in India is largely a state subject under the Seventh Schedule of the Constitution. This means that individual states have the power to regulate gambling within their own borders.
- The Ministry of Electronics and Information Technology (MeitY) has the authority to block access to online betting platforms under Section 69A of the Information Technology Act 2000.
- This section empowers MeitY to block access to any information or content that is deemed to be "prejudicial to or contrary to sovereignty, integrity, or security of India, friendly relations with foreign states, or is likely to incite violence or hatred against any group of persons."
- Statement 3 is incorrect. The Indian government does not have a dedicated government regulator specifically for the online betting industry. While gambling and betting are regulated at the state level in India, there is currently no central body that regulates the online betting industry as a whole.

Source: ForumIAS

11. Correct option is (D)

- Statements 1, 3, and 4 are correct. A foreign university looking to establish campus in India should be: Ranked among the top 500 universities in the world according to a list approved by the University Grants Commission (UGC). It must be ranked among the top 500 universities in a specific subject according to a list approved by the UGC. It must have exceptional expertise in a particular field, as determined by the UGC.
- Two or more than two universities can collaborate to set up campuses in India, provided each institution meets the eligibility criteria individually. In case a Foreign University wants to receive or utilize foreign contributions, it will have to obtain registration or prior permission under the Foreign Contribution (Regulation) Act, 2010.
- The foreign universities are not allowed to open learning centers, study centres or franchises that may act as representative offices of the parent entity.
- No programmes can be offered online or in Open and Distance Learning modes. However, lectures in online mode not exceeding 10% of the programme requirements are allowed.
- Statement 2 is incorrect. Each foreign university can set up more than one campus in India. However, they shall make a separate application for each proposed campus to the UGC.

Source: ForumIAS

Acts, Organizations, Policies & Reports

12. Correct option is (B)

- Statement 1 is incorrect. ATLs are not meant to replace traditional schooling methods, but to complement them by providing an additional layer of experiential learning.
- The goal is to create a space where students can explore, experiment, and tinker with new ideas, in addition to their traditional schooling. While community involvement is a key aspect of ATLs, it's not meant to replace the traditional role of educators and teachers.



- Statement 2 is correct. The goal of ATL Sarthi is to empower schools to continuously improve the functioning of their ATLs and achieve the desired objectives of fostering curiosity, creativity, and innovation among young students.
- The program aims to help schools assess the effectiveness of their ATLs, identify areas for improvement, and take action to enhance their ATLs.

Source: ForumIAS

13. Correct option is (B)

- Statement 1 is incorrect. The National Efficient Cooking Programme (NECP) is a government initiative in India aimed at promoting the adoption of energy-efficient cooking technologies, such as induction cookstoves, to reduce household energy consumption and improve air quality. The program is being implemented by the Energy Efficiency Services Limited (EESL), a public sector enterprise under the Ministry of Power.
- Statements 2 and 3 are correct. Energy Efficient Fans Programme (EEFP) aims to enhance the market for efficient fans by deploying one crore 5-star energy-efficient ceiling fans across India. It was initiated during the G20 Energy Transitions Working Group in Goa in July 2023.
- The Bureau of Energy Efficiency (BEE) has made it mandatory for all new ceiling fans sold in India to be 5-star energy-efficient. This mandate is part of BEE's broader efforts to promote energy efficiency in the country and reduce the overall energy consumption of household appliances.

Source: ForumIAS

14. Correct option is (A)

 The key pillars of the World Food India 2023, recently inaugurated by the Prime Minister of India are: Shree Anna (Millets) – Leveraging India's Super Food for the World, Strategic Segments – Unlocking Potentials for Growth, Exponential Food Processing – Positioning India as the Global Hub, Efficient Ecosystem – Harnessing Opportunities with Inclusion, Sustainable Development – Processing for Prosperity.

Source: ForumIAS

15. Correct option is (B)

- Statements 1 and 3 are correct. Annual Survey of India's City-Systems (ASICS) 2023 report is released by Janaagraha Centre for Citizenship and Democracy, a non-profit institution. It aims to highlight the challenges and constraints faced by the Local Governments in Indian Cities.
- As per the report, 39% of India's capital cities lack an active master plan. Only nine cities have prepared sectoral plans for key aspects such as sanitation, comprehensive mobility, and sustainability.
- Majority of local governments are financially dependent on their state governments. Only Assam empowers its city governments to collect all key taxes. Except five States Bihar, Jharkhand, Odisha, Meghalaya, and Rajasthan all the others have to get approval from the State before borrowing money.



• Statement 2 is incorrect. As per the report, Eastern states, comprising Bihar, Chhattisgarh, Jharkhand, Odisha and West Bengal have relatively better urban legislations followed by southern states.

Source: ForumIAS

16. Correct option is (B)

- The United Nations Environment Programme (UNEP) publishes Emission Gap Report, the Adaptation Gap Report, the Global Environment Outlook, Frontiers, Invest into Healthy Planet. The World Development Report is published by the World Bank.
- Recently, The Adaptation Gap Report 2023 was issued by the United Nations Environment Programme (UNEP). According to the report, the world is underprepared, under invested and lacks the necessary planning for adaptation to climate change.

Source: ForumIAS

17. Correct option is (D)

• Statements 1, 2 and 3 are correct. NMDC is the Nartana Public Sector Enterprise. It is involved in the exploration of minerals like iron ore, copper, limestone etc. It is the single largest producer of iron ore in India. It operates the only mechanized diamond mine in India at Panna, Madhya Pradesh. The Mount Celia Gold Project is a gold mining project located in Australia is the first international gold mine project of NMDC.

Source: ForumIAS

18. Correct option is (D)

- Statements 1, 2 and 4 are correct. The Pradhan Mantri Vishwakarma Scheme (PMVS) is a central sector scheme launched by the Ministry of Micro, Small and Medium Enterprises (MSME).
- The scheme aims to provide holistic and end-to-end support to artisans and craftspeople who work with their hands and tools.
- Under the PM Vishwakarma Scheme, the registration and benefits under the Scheme are restricted to only one member of the family.
- The scheme offers low-interest loans that can be used to buy equipment, materials, and other resources that are necessary for starting a business.
- Statement 3 is incorrect. The PM Vishwakarma Scheme provides financial assistance to artisans in the form of loans, not grants. The loans are collateral-free and have a concessional interest rate of 5%.

Source: ForumIAS

19. Correct option is (A)

• The LEAP AHEAD (Launchpad for Tech Entrepreneurs towards Accelerated Growth and Pioneering AHEAD) Initiative is a pan-India initiative launched by the Software Technology Parks of India (STPI) in collaboration with The Indus Entrepreneurs (TiE) Delhi-NCR.



- This comprehensive program aims to provide accelerated growth support to tech startups across India, enabling them to scale their ventures and make a significant impact in the tech ecosystem.
- Eligibility: Startups involved in software product development, registered with DPIIT under the Startup India program and have demonstrated revenue generation and external investment.
- Benefits given to startups include: Intensive Three-Month Mentorship Program, One-on-One Mentorship with investors and industry experts, Funding Potential of upto ₹1 crore, Access to networks and exposure in the global market, One year of free associate membership with TiE Delhi-NCR.

Source: ForumIAS

20. Correct option is (C)

- Statements 1 and 2 are correct. Bharat Atta is a fortified wheat flour that is made with a blend of wheat, rice, and pulses. It is a good source of protein, iron, and other essential nutrients.
- The scheme aims to provide relief to people from the rising prices of food items, especially wheat flour, ahead of the Diwali festival. The flour will be sold through various outlets such as Kendriya Bhandars, NAFED, and other outlets. It aims to provide affordable wheat flour to the poor and vulnerable sections of the society.
- Bharat Atta is offered at a reduced price of ₹27.50 per kilogram, which is lower than the earlier rate of ₹29.50 at Kendriya Bhandar.

Source: ForumIAS

21. Correct option is (C)

- Krishi 24/7 app has been developed by Department of Agriculture and Farmers Welfare (DA&FW) in partnership with Wadhwani Institute for Artificial Intelligence (Wadhwani AI). It is an AI powered tool designed to automatically monitor and analyze agricultural news.
- It scans news articles in multiple languages and translates them into English. It extracts essential information from news articles including headline, crop name, event type, date, location, severity, summary and source link to ensure the government receives timely updates.
- Krishi 24/7 is an efficient mechanism for the government to identify and handle important agricultural news for quick decision-making.

Source: ForumIAS

22. Correct option is (C)

- Statements 1 and 2 are correct. PMGKAY is a food security welfare schemes and it helps to boost the economy by increasing consumption and supporting the agricultural sector.
- It was launched by the Government of India in 2020 to provide free food grains to vulnerable households affected by the COVID-19 pandemic. The scheme was initially launched for three months, but it has been extended several times due to its effectiveness in providing food security to millions of people.
- Under PMGKAY, each beneficiary gets free 5 kg of food grain per month, in addition to the PDS scheme (an extra 5 kg of food grain per month supplied at a subsidised price).



- PMGKAY has also provided support to the agricultural sector by increasing demand for food grains and providing an additional source of income for farmers. This has helped to stabilize agricultural prices and support the incomes of farmers, which is crucial for ensuring food security in India.
- In addition to the direct economic benefits, PMGKAY has also had other positive impacts, such as reducing food insecurity and malnutrition, and improving the health of poor and vulnerable households.

Source: ForumIAS

23. Correct option is (B)

- The Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC) is an overarching council that facilitates the Office of the Principal Scientific Adviser (PSA) to assess the status, challenges, and interventions needed in specific science and technology domains. It formulates interventions, develops a futuristic roadmap, and advises the Prime Minister accordingly.
- PM-STIAC has two main functions. First, it acts as a high-level advisory body to several ministries, providing guidance on science, technology, and innovation-related matters. Second, it executes mission-oriented programs to address various socio-economic challenges through innovation and technology-based solutions.
- PM-STIAC has identified nine national missions to ensure India's sustainable growth. These missions include: Natural Language Translation, Quantum Frontier, Artificial Intelligence, National Biodiversity Mission, Electric Vehicles, Bioscience for Human Health, Waste to Wealth, Deep Ocean Exploration, Accelerating Growth of New India's Innovations (AGNIi).

Source: ForumIAS

24. Correct option is (B)

- Statements 1 and 4 are correct. ECBC is a set of guidelines and standards for energy-efficient design and construction of buildings and their systems in India. It sets minimum energy standards for commercial buildings, with the objective of enabling energy savings of between 25 and 50% in compliant buildings.
- By reducing energy consumption, ECBC helps to reduce India's reliance on imported energy, which can improve energy security and reduce greenhouse gas emissions.
- Statements 2 and 3 are incorrect. ECBC doesn't specifically require the use of plants or greenery, though it does promote the use of natural ventilation, daylighting, and other passive design strategies that can improve indoor air quality.
- It is applicable to commercial buildings like hospitals, hotels, schools, shopping complexes and multiplexes which have a connected load of 100 kW or more, or contract demand of 120 kVA or more. The code is for both new buildings and retrofitting existing buildings.

Source: ForumIAS

25. Correct option is (C)

• Production Gap Report is published by the UN Environment Programme (UNEP). It assesses the gap between current global greenhouse gas emissions and the necessary reductions to



limit global warming to a specific temperature target. The report analyzes emissions trends for 20 major fossil-fuel-producing countries. One among them is India.

Source: ForumIAS

26. Correct option is (B)

- Statements 1 and 2 are correct. The National Curriculum Framework (NCF) serves as an educational blueprint in India. It is a comprehensive document that provides guidance on the goals, objectives, and content of education at different levels.
- It is developed by the National Council of Educational Research and Training (NCERT) in consultation with various stakeholders, including educators, experts, and parents.
- Statement 3 is incorrect. The National Curriculum Framework (NCF) emphasizes studentcentered learning, where students are active participants in the learning process.
- In teacher-centered learning, the teacher is the sole source of information and students are expected to passively absorb it. The NCF, on the other hand, encourages teachers to create a learning environment where students can learn by doing and by applying what they learn to real-world situations.

Source: ForumIAS

International Relations/Organizations

27. Correct option is (C)

- Statements 1 and 3 are correct. Decisions on important issues in the General Assembly require a two-thirds majority of the member states present and voting.
- However, the UN Security Council operates differently. Its decisions are made by a vote of the 15 members, and any one of the five permanent members (China, France, Russia, the United Kingdom, and the United States) can veto a decision, even if the other 14 members support it.
- Resolutions adopted by the United Nations General Assembly (UNGA) are not legally binding on Member States, while resolutions adopted by the United Nations Security Council (UNSC) are legally binding on all Member States.
- Statement 2 is incorrect. The United Nations General Assembly (UNGA) is often considered the most representative UN organ. The UNGA includes all 193 member states of the United Nations, and each member state has one vote, giving it a high degree of representativeness.
- On the other hand, the United Nations Security Council (UNSC) is less representative because it consists of 15 member states, with 5 permanent members (China, France, Russia, the United Kingdom, and the United States) and 10 non-permanent members elected for two-year terms.

Source: ForumIAS

28. Correct option is (A)

- Statement 1 is correct. An embassy is the primary diplomatic mission of a country in another country and is usually located in the host country's capital city whereas a consulate is a smaller diplomatic mission that is located in a major city in the host country, other than the capital.
- Statement 2 is incorrect. An embassy is the official representation of the sending country to the host country whereas a consulate is a subordinate office of the embassy and provides



consular services to citizens of the sending country who are living or traveling in the host country.

Source: ForumIAS

29. Correct option is (B)

- Statement 1 is incorrect. The World Food Programme is a UN agency not an independent forprofit organization. It doesn't offer policy recommendations, but rather works directly with governments and other organizations to provide humanitarian assistance and improve food security in developing countries.
- Statements 2 and 3 are correct. The WFP is the world's largest humanitarian organization it assists over 100 million people in more than 80 countries every year.
- It also focuses on long-term development programs to build resilience and improve access to food. These include initiatives like school feeding programs, cash transfers, and agricultural support to smallholder farmers.

Source: ForumIAS

30. Correct option is (A)

- **Statement 1** is correct. The World Customs Organization (WCO) is an intergovernmental organization that facilitates cooperation and standardization among customs administrations worldwide. It was established in 1952 as the Customs Co-operation Council (CCC) and changed its name to the World Customs Organization (WCO) in 1994.
- The WCO has 189 member states and territories, representing over 98% of world trade. It is headquartered in Brussels, Belgium. It is the only international organization with competence in Customs matters.
- Its main functions include developing standards for customs procedures, capacity building of its members and promoting cooperation between the customs administrations of its members.
- **Statement 2** is incorrect. The International Association of Ports and Harbors (IAPH) is a global trade association for seaports worldwide. It is headquartered in Tokyo, Japan. Formed in 1955, it is now recognised as the NGO representing ports worldwide.
- The primary objective of IAPH is to promote the interest of ports worldwide through strong member relationships, collaboration, and information-sharing that help resolve common issues, to advance sustainable practices, and to continually improve how ports serve the maritime industries.
- Its focus areas are: Climate and energy, risk and resilience of port services and guiding the ports in digitalization.

Source: ForumIAS

31. Correct option is (A)

• **Statements 1 and 2** are correct. FATF is an intergovernmental organization that develops and promotes policies to combat money laundering, terrorist financing, and the proliferation of weapons of mass destruction. India is one of the members of FATF since 2001.



• **Statement 3** is incorrect. **Black List**: Countries known as non-cooperative are put in the blacklist. These countries support terror funding and money laundering activities. As of now, **Iran, North Korea and Myanmar** are the three black listed countries.

Source: ForumIAS

32. Correct option is (C)

- The Eastern Maritime Corridor is a proposed sea route between Chennai, India, and Vladivostok, Russia. The corridor would pass through the Sea of Japan, the East China Sea, the South China Sea, and the Malacca Strait to reach the Bay of Bengal and then cut across through the Andaman and Nicobar archipelago to reach Chennai.
- The Eastern Maritime Corridor is a proposed sea route between India and Russia that is expected to reduce the travel time between the two countries by up to 40%.

Source: ForumIAS

33. Correct option is (B)

- The Doctrine of Dualism in international law is a legal concept that refers to the separation of international law and domestic (national) law within a state's legal system. This doctrine asserts that international law and domestic law are distinct and separate legal systems, and they operate independently of each other.
- It states that the international law, in and of itself, does not automatically apply within a state's legal system. Domestic laws must be enacted or modified to reflect the state's obligations under international law.
- In other words, international treaties do not automatically become part of domestic law without proper incorporation.

Source: ForumIAS

34. Correct option is (B)

- The principle of reciprocity is a fundamental concept in international relations and diplomacy. It refers to the practice of mutual exchange or give-and-take between states, where one state grants certain benefits or concessions to another with the expectation of receiving similar treatment or benefits in return.
- Reciprocity is a key element of many international agreements, negotiations, and interactions. It is based on the idea that cooperation and mutual respect between states are often achieved through a balance of benefits and obligations.

Source: ForumIAS

35. Correct option is (B)

- The Defense Technology and Trade Initiative (DTTI) is a bilateral initiative between India and the United States aimed at promoting cooperation in defense technology and trade.
- While the Quad is not exclusively a defense cooperation initiative, it has a significant focus on defense and security cooperation. The four countries have conducted joint military exercises,



shared information on maritime security, and promoted cooperation in emerging technologies such as artificial intelligence and quantum computing.

- INDUS-X is a joint initiative between India and the US to promote defense innovation collaboration.
- The Artemis Accords, on the other hand, are a set of principles for responsible and peaceful **exploration and use of space**.

Source: ForumIAS

Economy

36. Correct option is (C)

• Grey infrastructure refers to man-made, built systems and facilities that are designed to manage and control natural processes, particularly in the context of urban and environmental planning. These engineered structures are often used to address various challenges, such as water management, transportation, and energy distribution. Grey infrastructure stands in contrast to "green infrastructure," which involves the use of natural systems and processes for similar purposes. Examples include: Water management, Roads and highways, etc.

Source: ForumIAS

37. Correct option is (B)

- If an Indian company is listed on foreign stock exchanges, it can potentially benefit from: Increased visibility and exposure to a wider pool of investors, Access to foreign capital markets, Enhanced liquidity and trading volumes, Higher valuations and potential for higher returns, diversifying the company's investor base, access to foreign currency, raising the company's profile and enhance its brand recognition among international investors and consumers.
- However, the challenges include: Increased regulatory and compliance costs, Currency exchange risks, Differences in accounting and financial reporting standards, Communication and cultural barriers, Potential political and economic instability in foreign markets. Companies may need to spend more money on market makers to maintain liquidity. They may also need to deal with higher trading costs. Companies may need to spend more money on marketing and investor relations to reach new investors. Companies may need to comply with more stringent accounting and reporting standards.
- Further, currently, any company already listed in India is eligible for foreign secondary listing. Now, the government has allowed certain unlisted companies to directly list on foreign stock exchanges.
- However, unlisted companies are unlikely to be allowed to list anywhere they want. The government is expected to provide a list of jurisdictions where Indian firms will be allowed to list. IFSC in Gift City, Gandhinagar is expected to be part of permitted jurisdictions for overseas listing.

Source: ForumIAS



Environment

38. Correct option is (B)

- Statements 1 and 2 are correct. Human settlement is allowed in the buffer zone. People can live in the buffer zone as long as they don't engage in activities that threaten the reserve's conservation goals.
- Sustainable infrastructure development may be allowed in the transition zone of a Biosphere Reserve, provided it aligns with the principles of sustainable development and does not cause significant harm to the environment.
- Statement 3 is incorrect. Ecotourism activities are typically restricted or regulated in the core area of a Biosphere Reserve to minimize human impact and preserve the natural environment. The core area is meant to be a strict nature reserve, free from human interference.

Source: ForumIAS

39. Correct option is (D)

- White hydrogen is a naturally occurring form of hydrogen found in underground deposits and created through fracking. It is a relatively new discovery and is not as common as other forms of hydrogen.
- Both white hydrogen and green hydrogen are environmentally friendly fuels that produce no harmful emissions. However, green hydrogen is considered to be more sustainable because it is produced using renewable energy sources, while white hydrogen can be produced from fossil fuels.
- White hydrogen is rare compared to other forms of hydrogen. Gray hydrogen is by far the most abundant form of hydrogen, making up more than 90% of all hydrogen produced globally.
- When white hydrogen is used as a fuel, it produces water vapor (H2O) as its only emission. Water vapor is a natural component of the atmosphere and does not contribute to climate change.

Source: ForumIAS

40. Correct option is (D)

- **Statements 1, 2 and 3** are correct. The Dust and Control Management Centre (DCMC) is a body set up by the National Highway Authority of India (NHAI) to monitor and control dust pollution at construction sites along national highways in India. The center was established in accordance with the directions issued by the Commission of Air Quality Management (CAQM) to improve air quality in the National Capital Region (NCR).
- DCMC monitors real-time data on dust levels at construction sites using sensors and cameras installed at strategic locations. This allows the DCMC to track dust levels and identify construction sites that are not complying with dust control regulations.
- If contractors fail to comply with notices, the DCMC may take enforcement action, such as imposing fines or suspending work at the construction site. The DCMC has the authority to enforce dust control regulations and can take steps to ensure that construction companies are complying with these regulations.



• The DCMC actively promotes the adoption of innovative technologies to improve dust control measures at construction sites. This includes encouraging contractors to utilize dust suppression techniques, such as water sprinkling, covering exposed materials, and using wind barriers.

Source: ForumIAS

41. Correct option is (D)

• The Air Quality Index (AQI) is a measure of air quality that is based on the concentration of five major air pollutants: PM2.5, PM10, O3, NO2, and SO2. The AQI is a number between 0 and 500, with higher numbers indicating worse air quality.

Source: ForumIAS

42. Correct option is (C)

- The NCoE-CCU's CO2 conversion technology is based on electrocatalysis, which is a process that uses electricity to drive chemical reactions. In this case, the electricity is used to convert CO2 into CO. The CO produced can then be used as a fuel for various applications, such as the production of synthetic fuels or chemicals.
- One of the key advantages of the NCoE-CCU's technology is that it can be operated at ambient temperatures and pressures. This makes it much more energy-efficient than other CO2 conversion technologies that require high temperatures or pressures.
- Currently, the process for CO2 to CO conversion occurs at elevated temperatures (400-750 °C) making it an energy-intensive process. But this newly developed CO2 conversion process requires only minimal energy as it can proceed under ambient temperatures (25-40 °C) in the presence of water.
- Moreover, the energy required for this electrocatalysis reaction can be harnessed directly from a renewable energy source (in the form of a solar panel or windmill) for a carbon-neutral conversion process.

Source: ForumIAS

43. Correct option is (B)

- Bioleaching, In-situ leaching and Solvent extraction are the different types of methods used in mining gold. However, all these three processes are considered safer for the environment or birds.
- Whereas, mercury is commonly used in small-scale gold mining to separate gold from other minerals due to its ability to bind to gold and form amalgam.
- Due to this, small-scale gold mining releases large amounts of mercury to the environment and is estimated to contribute approximately 37% of mercury emissions on a global scale. This becomes harmful for the birds.
- According to the study:
- 1. Mercury may be playing a role in the declining biodiversity of tropical birds like kingfishers, wrens, warblers among others.



2. Birds living within 7 km (4 miles) of such gold mining activity were found to have mercury concentrations over four times higher than those living at other sites across the tropics of Central and South America.

Source: ForumIAS

44. Correct option is (B)

- The Composite Water Management Index consists of 9 key themes which are: 1. Restoration of Water Bodies, 2. Groundwater, 3. Major and Medium Irrigation, 4. Watershed Development, 5. Participatory Irrigation Practices, 6. Sustainable on-form Water Use Practices, 7. Rural Drinking Water, 8. Urban Water Supply and Sanitation, 9. Policy and Governance.
- The Composite Water Management Index (CWMI) is a tool developed by NITI Aayog to assess and compare the performance of Indian states in managing their water resources.

Source: ForumIAS

45. Correct option is (A)

- According to the Elephant Corridor Report 2023, in terms of state, West Bengal has the highest number of identified elephant corridors in India, with 26 corridors.
- In terms of region, the east-central region has 52 corridors, the northeast region with 48 corridors, the southern region with 32 corridors, and the northern region with 18 corridors.
- The report also found that the intensity of use of elephant corridors has increased by 40% since 2010.
- West Bengal has the highest number of identified elephant corridors in India for a number of reasons. These include: **Large elephant population** which further contributes to the identification of more corridors in the state, **Forest Cover**: West Bengal has a significant forest cover, which is essential for the survival and movement of elephants, **Geographical Location**: West Bengal is located in the eastern part of India, which is known for its rich biodiversity and forested areas. This favorable geographical location provides suitable habitats for elephants, **Efforts in Identification**: The state government of West Bengal, in collaboration with the central government, has been proactive in identifying and reporting elephant corridors.

Source: ForumIAS

46. Correct option is (B)

- The Clean and Green Village is the fifth among the nine themes adopted by the Ministry of Panchayati Raj to transform rural ecosystems with the support of the Gram Panchayat Development Plan (GPDP).
- Further, the government is trying to promote Clean and Green Village through Agroecological approach.
- Agro-ecological approach is an integrated approach that simultaneously applies ecological and social concepts, to the design and management of food and agricultural systems. It seeks to optimise the interactions between plants, animals, humans and environment.
- The following practices forms the part of Clean and Green Village: Organic and Natural Farming, Waste to Wealth- Biogas and organic manure, Agro forestry, Smallholder Farming, Social Equity, Crop Diversity, etc.



• However, Monocropping is the practice of growing the same crop on the same piece of land year after year. This practice can deplete the soil and make it more susceptible to pests and diseases. Therefore, monocropping is not a practice that contributes to a Clean and Green Village.

Source: ForumIAS

Science & Technology

47. Correct option is (C)

- Frontier AI is defined as highly capable foundation generative AI models that could possess dangerous capabilities and that can pose severe risks to public safety. These are highly capable artificial intelligence (AI) models that have the potential to significantly impact society. These models are often characterized by their ability to learn and adapt to new situations, their ability to perform complex tasks, and their ability to generate creative outputs. For example, Biometric Authentication, Automation, etc.
- Frontier AI can be used to develop new drugs and treatments, diagnose diseases more accurately, and provide personalized medical care. For instance, AI-powered systems can analyze medical images to detect anomalies and assist doctors in making informed decisions.
- Frontier AI can be used to develop self-driving cars, optimize traffic flow, and improve public transportation systems.
- Some Frontier AI systems are becoming more interpretable, which means that it is easier to understand how they make decisions. This can help to build trust in AI systems and making transparency and interpretation a key part of machine decision making.
- Moral reasoning is the ability to make judgments about right and wrong, and it is something that AI systems are not yet capable of doing.

Source: ForumIAS

48. Correct option is (D)

- Small Modular Reactors (SMRs) are a class of nuclear reactors that are smaller in size compared to traditional, large-scale nuclear power plants. They are designed to be more flexible, scalable, and easily deployable in various settings.
- The Government of India is planning to offer incentives along the lines of a production linked incentive (PLI) scheme for manufacturing small modular reactors (SMR).
- This is because: SMRs are smaller in size than the conventional reactors, they are flexible and can be scaled up or down to meet changing power demands, making them more adaptable to changing market conditions, has lower costs and lower Environmental Impact.

Source: ForumIAS

49. Correct option is (B)

• Statements 1 and 3 are correct. Asteroids orbit the Sun in the same direction as the planets, but their orbits are often more elliptical, or oval-shaped. This means that they can get closer to the Sun at one point in their orbit and farther away at another point.



- Asteroids are mostly rock and metal, while comets are mostly ice and dust. Asteroids are generally made up of rocky and metallic material and are considered to be remnants of the early solar system.
- On the other hand, comets are made up of frozen water, methane, ammonia, and other ices, as well as dust and rock. They are thought to have formed in the outer reaches of the solar system,
- Statement 2 is incorrect. Comets often have a visible coma (a cloud of gas and dust) and a tail that points away from the Sun. Comets are known for their tails of gas and dust that are visible when they come close to the Sun.

Source: ForumIAS

50. Correct option is (A)

- **Statement 1** is correct. A binary asteroid is a system of two asteroids that orbit each other around a common center of mass. This center of mass is called the barycenter. Binary asteroids are relatively common, with about 10% of all known asteroids being part of a binary system.
- **Statement 2** is incorrect. Trojan asteroids are not located between the Kuiper belt and the asteroid belt, but instead orbit near Jupiter in two large groups, leading and trailing the planet in its orbit. These asteroids are thought to have been captured by Jupiter's gravitational field as they traveled through the solar system, and now they stay put in these special positions.

Source: ForumIAS

51. Correct option is (C)

- Environmental DNA (eDNA) is genetic material that is found in the environment. It can be shed from organisms through their feces, urine, skin cells, and other bodily fluids. eDNA can also be found in the water, soil, and air.
- eDNA can be used to identify and track the presence of organisms in the environment, even if the organisms themselves are not directly observed. This is because eDNA is relatively stable and can persist in the environment for long periods of time.
- eDNA is a powerful tool used in environmental monitoring and biodiversity studies. It allows scientists to detect the presence of organisms without directly observing them.
- eDNA can be applied in a variety of areas such as: Monitoring Invasive species, water quality monitoring, Environmental impact assessment, deep-sea environments, Biodiversity surveys, Disease surveillance, Ecosystem monitoring, etc.
- However, eDNA is not commonly used in air quality monitoring because DNA is typically found in water and soil, and it is not as abundant in the air.

Source: ForumIAS

52. Correct option is (B)

• **Statements 1** and 2 are correct. Israel's Iron Dome is based on the principle of kinetic interception which is based on the method of destroying a threat by physically striking it with another object.



- It works by firing an interceptor missile that is specifically designed to collide with and destroy the incoming projectile. The interceptor is guided by radar and other sensors, which track the trajectory of the incoming threat and help the Iron Dome system calculate the most effective intercept point. The key benefit of kinetic interception is that it doesn't rely on any sort of explosive payload it's all about the direct impact.
- Project Kusha is a mission by India's Defence Research and Development Organization (DRDO) to develop a state-of-the-art air defense system similar to Israel's Iron Dome. The project aims to develop an indigenous long-range air defense system that can detect and destroy enemy projectiles and armor, including cruise missiles, stealth fighter jets, and drones at long range.
- It seeks to establish a formidable three-layered defense system with the capability to neutralize enemy aircraft and missiles from extended distances effectively.

Source: ForumIAS

53. Correct option is (B)

- Statements 1 and 2 are correct. Women candidates can join the National Defence Academy (NDA) twice a year, i.e., every six months. The NDA conducts two examinations annually for this.
- In 2019, the Indian Navy announced that it would allow women officers to serve on board warships. This was a significant step forward for women in the Indian Armed Forces.
- Statement 3 is incorrect. Women are not eligible in core combat arms such as Infantry, Mechanized Infantry, and Armored Corps. The Indian Army is not open to women fighting wars at the borders as foot soldiers.

Source: ForumIAS

54. Correct option is (C)

- Project 15B is a follow-on project of the Project 15A Kolkata-class destroyers, designed and built by Mazagon Dock Shipbuilders Limited (MDL) in Mumbai, India. The Project 15B destroyers are stealthier, more automated, and more heavily armed than their predecessors.
- Project 15B is a significant development for the Indian Navy, as it will provide the Navy with a new class of modern and technologically advanced destroyers. The ships will enhance the Navy's ability to defend India's maritime interests and protect its coastline from threats.
- The Indian Navy plans to build a total of four Project 15B destroyers: INS Visakhapatnam, INS Mormugao, INS Imphal, INS Surat.

Source: ForumIAS

55. Correct option is (C)

• Statements 1, 2 and 4 are correct. Poshan Tracker Application is a mobile-based application implemented by the Ministry of Women and Child Development, Government of India, by the National e-Governance Division (NeGD). The Poshan Tracker is a beneficiary-focused, service delivery application that provides real-time data with statistical analysis. The Poshan Tracker enables real-time monitoring of all Anganwadi Centers and services provided to the beneficiaries.



- It is built using a centralized data architecture that converges with the digital technology systems of other Ministries and Programs.
- The objective is to provide a complete view of Anganwadi Centers (AWCs), service delivery of Anganwadi Workers (AWWs) and complete beneficiary management for pregnant women, lactating mothers and children.
- Statement 3 is incorrect. The Poshan Tracker focuses on children under 10, as well as pregnant women and adolescent girls. High school-aged children are not part of the program's scope.
- The aim of the Poshan Tracker is to monitor and improve the nutritional status of these vulnerable groups by providing real-time data and analysis on their nutritional status and offering services to address any challenges they may be facing.

Source: ForumIAS

56. Correct option is (B)

- Aedes mosquitoes are a genus of mosquito known for their significance in the transmission of various viral diseases to humans. They are small to medium-sized mosquitoes with distinctive characteristics and are primarily recognized for their distinctive black and white markings.
- Aedes mosquitoes are vectors for these diseases, meaning they can pick up the virus from an infected person, transmit it to another person when they bite them, and then continue to spread the virus to more people.
- Aedes mosquitoes are originally found in tropical and subtropical zones but are now found on all continents except Antarctica. Unlike most native mosquito species, Aedes mosquitoes bite during the day.
- Several diseases caused by Aedes mosquitoes are: dengue, zika virus, yellow fever, malaria, chikungunya, Mayaro virus, Rift Valley fever, and several types of encephalitis.

Source: ForumIAS

57. Correct option is (B)

- Statements 1 and 2 are correct. The Wolbachia method is a novel approach to controlling mosquito populations and reducing the transmission of mosquito-borne diseases. It involves introducing Wolbachia, a bacterium that is naturally found in many insects, into populations of mosquitoes that transmit diseases such as dengue fever, Zika virus, and chikungunya virus (Aedes mosquitoes).
- Wolbachia method can significantly change the reproductive biology of the insects they infect.
- For example, Wolbachia-modified male mosquitoes can transmit the modified Wolbachia bacteria into the infected female partners with virus, which can prevent the females from producing viable offspring. This is called cytoplasmic incompatibility (CI).
- Aedes aegypti mosquitoes do not always have Wolbachia naturally present in their bodies. The presence of Wolbachia varies depending on the location and environmental conditions.
- Further, the Wolbachia bacterium that occurs naturally in Aedes aegypti mosquitoes doesn't have any real impact on the mosquitoes or their ability to transmit diseases.
- However, the modified Wolbachia that's introduced into the mosquito population through the Wolbachia method is able to control the mosquitoes' ability to transmit viruses, like dengue and Zika.



- **Statements 3 and 4** are incorrect. The Wolbachia method doesn't actually alter the mosquito's genetic material. Instead, it just introduces the modified Wolbachia bacteria into the mosquito population.
- The method is considered to have low environmental risk because it doesn't involve the use of insecticides or other chemicals. Wolbachia is safe for humans, animals and the environment.

Source: ForumIAS

58. Correct option is (A)

- **Statement 1** is correct. Hypertension prevalence in southern states slightly exceeded the national average (29.9% vs. 26.8%). The proportion of diagnosed individuals with hypertension was similar in southern states but showed higher treatment and control rates compared to the national average.
- **Statement 2** is incorrect. Men are more prone to hypertension. But women are more likely to be diagnosed, treated and have controlled blood pressure.

Source: ForumIAS

59. Correct option is (A)

- **Statements 1 and 2** are correct. Tuberculosis (TB) is caused by a bacterium called Mycobacterium tuberculosis. This bacterium is spread through the air when someone with active TB disease coughs, sneezes, speaks, sings, or laughs. The bacteria can travel through the air and be inhaled by other people.
- Once the TB bacteria are inhaled, they travel to the lungs and begin to multiply. The bacteria can damage the lungs and cause inflammation.
- Statement 3 is incorrect. As per the Global TB Report 2023, India accounted for the highest number of tuberculosis (TB) cases in the world in 2022. It contributed 27% of the total TB cases.
- Two-thirds of the global TB cases was in eight countries namely: India (27%), Indonesia (10%), China (7.1%), the Philippines (7.0%), Pakistan (5.7%), Nigeria (4.5%), Bangladesh (3.6%) and the Democratic Republic of the Congo (3.0%).
- The report also found that the global TB burden is declining, but progress is too slow.

