

# SOLUTIONS

DATE : 30<sup>th</sup> Oct- 6<sup>th</sup> Sept

**1) Answer:** c) Penalize individuals for violating air quality standards

**Explanation:**

The CAQM can restrict activities impacting air quality, conduct research on pollution, and issue binding directions to authorities. However, it does not have direct authority to penalize individuals. The responsibility of enforcement and imposing penalties for violations falls under state pollution control boards or other designated authorities.

**2) Answer:** a) To empower locals as tourism ambassadors

**Explanation:**

The 'Paryatan Mitra & Paryatan Didi' initiative is focused on empowering locals, particularly women and youth, as tourism ambassadors. The aim is to enhance the tourist experience by training locals in hospitality, safety, and promoting tourism through local storytelling and cultural heritage. The initiative emphasizes community involvement in tourism to make the sector more inclusive and sustainable.

**3) Answer:** b) Only two

**Explanation:**

Statements 1 and 2 are correct. Vizhinjam International Seaport is poised to become India's first fully automated port and is designed as an all-

weather, multi-purpose port. However, statement 3 is incorrect because the port is located strategically close to international shipping lanes, making it important for global trade rather than just regional.

**4) Answer:** c) World Intellectual Property Organisation (WIPO)

**Explanation:**

The Global Innovation Index (GII) is published by the World Intellectual Property Organisation (WIPO) in collaboration with other institutions. The GI ranks economies based on innovation capabilities and performance, covering metrics such as ICT services, research and development, and startup ecosystems.

**5) Answer:** a) 1 and 3 only

**Explanation:**

The PLI (Production Linked Incentive) scheme for textiles is intended to reduce India's reliance on textile imports by boosting domestic manufacturing (statement 1) and aims to make India a global manufacturing hub, particularly in high-growth sectors (statement 3). However, the scheme does not provide tax benefits based on incremental sales; it offers performance-linked incentives (making statement 2 incorrect).

**6) Answer:** a) 1 and 2 only

**Explanation:**

In a T+0 settlement cycle, trades are settled on the same day, requiring that both funds and securities be exchanged on the transaction day (statement 1). This allows retail investors quicker access to their securities (statement 2). However, T+0 has not yet been fully implemented in India, making statement 3 incorrect. India currently operates on a phased T+1 settlement cycle.

**7) Answer:** d) 1, 2, and 3 only

**Explanation:**

The CAQM has jurisdiction over Delhi-NCR and adjoining states like Punjab, Haryana, Rajasthan, and Uttar Pradesh (statement 1). Its directives are legally binding on individuals and organizations (statement 2), and it has the authority to regulate vehicular emissions (statement 3). However, CAQM does not have the power to revoke licenses of polluting industries; this power remains with state pollution control boards, making statement 4 incorrect.

**8) Answer:** b) Only two

**Explanation:**

Statements 1 and 2 are correct. T+1 settlement refers to trades being settled one business day after the transaction, and it was introduced in 2021 in phases in India. However, statement 3 is incorrect because the T+1 settlement cycle has improved accuracy and reduced error rates in settlements, particularly benefiting foreign portfolio investors (FPIs).

**9) Answer:** d) ICT services exports

**Explanation:**

India ranks 1st globally in ICT services exports, highlighting its strong position in technology-driven services. While India has made significant strides in other areas, such as R&D and venture capital, it still faces challenges in these areas compared to global leaders.

**10) Answer:** b) 1 and 2 only

**Explanation:**

The Federal Reserve's dual mandate is to achieve maximum employment and stable prices (statements 1 and 2). High short-term interest rates are not a primary goal of the Fed; instead, the Fed aims for moderate long-term interest rates to foster sustainable economic growth and price stability.

**11) Answer:** c) Article 39(e) and (f)

**Explanation:**

Article 39(e) and (f), part of the Directive Principles of State Policy, direct the State to protect children from abuse and ensure their healthy development. Article 39(e) ensures that children are not employed in hazardous work, while Article 39(f) ensures that children grow up in an environment of dignity and freedom. These are guiding principles for the government, not enforceable by law.

**12) Answer:** a) A-2, B-1, C-3, D-4

**Explanation:**

- Tomb of Balban: India's first true arch and dome (A-2).
- Jamali Kamali Mosque: Reflects the transition from Lodi to Mughal architectural elements (B-1).

- Rajon Ki Baoli: A stepwell reflecting the importance of water management (C-3).
- Gandhak ki Baoli: A Mughal-era structure showcasing advanced design (D-4).

**13) Answer:** d) None

**Explanation:**

All three statements are correct. The NAMASTE Programme was launched by the Ministry of Social Justice and Empowerment to empower sanitation workers, turning them into “sanipreneurs” (sanitation entrepreneurs). It aims to eliminate hazardous manual cleaning practices by providing mechanized tools and safety equipment.

**14) Answer:** b) 1 and 2 only

**Explanation:**

- Article 15(3) allows for special provisions for children and women (statement 1).
- Article 21 guarantees the right to life and personal liberty, which includes protection from exploitation (statement 2).
- Article 47 focuses on public health and nutrition but is not specifically aimed at children’s welfare (statement 3 is incorrect).

**15) Answer:** a) 1, 2, and 3 only

**Explanation:**

Nipah is a zoonotic virus, transmitted from fruit bats to humans, and it can cause severe neurological symptoms like encephalitis (statements 1 and 2). Human-to-human transmission is also possible (statement 3). However, no vaccine has been developed for Nipah yet, making statement 4 incorrect.

**16) Answer:** d) Long maturation time

**Explanation:**

The Pusa-44 rice variety has a long maturation period, which delays wheat sowing. This delay leads to stubble burning as farmers try to clear fields quickly for the next crop cycle, contributing significantly to air pollution in Northern India.

**17) Answer:** c) Only three

**Explanation:**

The Mehrauli Archaeological Park contains over 100 historically significant monuments and is located adjacent to the Qutb complex in Delhi (statements 1 and 2). It includes British-era structures (statement 3). However, it is not recognized as a UNESCO World Heritage Site (statement 4 is incorrect).

**18) Answer:** b) To increase exports to \$100 billion by 2030

**Explanation:**

The Production Linked Incentive (PLI) scheme for the textile sector aims to increase India’s textile exports to \$100 billion by 2030. The scheme focuses on boosting production in man-made fibers and technical textiles to enhance India’s competitiveness in the global market.

**19) Answer:** b) Only two

**Explanation:**

The LUX-ZEPLIN (LZ) experiment is designed to detect dark matter particles (statement 1). Neutrino fog refers to interference caused by neutrinos that can complicate dark matter detection (statement 2). However, the experiment is based in the U.S., not India (making statement 3 incorrect).

**20) Answer:** d) A small, concrete defense structure used during World War II

### Explanation:

Pillboxes were small, concrete defense structures used during World War II. They were typically positioned along coastlines and strategic locations to protect soldiers from enemy fire while allowing them to fire through small openings (loopholes).

### 21) Answer: a)

### Explanation:

- Statement 1 is correct: The Eight Core Industries contribute 40% of the weight in the Index of Industrial Production (IIP).
- Statement 2 is incorrect: The ICI is released by the Office of the Economic Adviser under the Department for Promotion of Industry and Internal Trade (DPIIT), not the Reserve Bank of India.
- Statement 3 is correct: The base year for the ICI is 2011-12.

### 22) Answer: a)

### Explanation:

- Statement 1 is correct: Thermobaric weapons use the oxygen from the atmosphere to fuel an explosion, creating a high-temperature blast.
- Statement 2 is incorrect: Thermobaric weapons are not specifically banned under the Hague Conventions, though their use against civilians would violate humanitarian law.
- Statement 3 is incorrect: These weapons are more effective in enclosed spaces like buildings or tunnels, not in open fields.

### 23) Answer: c)

### Explanation:

- The Marburg Virus Disease (MVD) is caused by a zoonotic RNA virus from the Filoviridae family, similar to Ebola. It was first discovered in Marburg, Germany, in 1967, not in Uganda.
- The African fruit bat (*Rousettus aegyptiacus*) is the natural reservoir for the virus. No effective treatment or vaccine is available.

### 24) Answer: b)

### Explanation:

- Statement 1 is correct: The Bagmati River originates in the Shivapuri Hills of Nepal.
- Statement 2 is incorrect: The river flows through Bihar in India, but not Uttar Pradesh.
- Statement 3 is correct: The river has cultural significance as it is home to the Pashupatinath Temple in Kathmandu.

### 25) Answer: b)

### Explanation:

- Statement 1 is correct: MVD is caused by a zoonotic RNA virus from the Filoviridae family, similar to Ebola.
- Statement 2 is incorrect: Human-to-human transmission occurs through contact with bodily fluids, not just respiratory droplets.
- Statement 3 is correct: The case fatality rate varies between 24% and 88%.

### 26) Answer: c)

### Explanation:

- The Canary Islands are a volcanic archipelago located in the Atlantic Ocean, part of Spain. They experience little seasonal temperature



variation and are located west of the African coast.

**27) Answer: b)**

**Explanation:**

- Statement 1 is correct: Operation Northern Arrows targeted Hezbollah's military infrastructure in southern Lebanon.
- Statement 2 is incorrect: The operation was focused on the Israel-Lebanon border, not the Israel-Jordan border.
- Statement 3 is correct: The operation included localized raids with air cover and artillery support.

**28) Answer: d)**

**Explanation:**

- Statement 1 is correct: Thermobaric weapons create a two-stage explosion: dispersing fuel and then igniting it.
- Statement 2 is incorrect: These weapons are not specifically designed to target civilians.
- Statement 3 is incorrect: Thermobaric weapons cause damage through both pressure changes and the extreme heat generated by the explosion.

**29) Answer: d)**

**Explanation:**

- Coal: 10.33% weight in ICI.
- Electricity: 19.85% weight in ICI.
- Petroleum and Refinery Products: 28.04% weight in ICI.
- Fertilizers: 2.63% weight in ICI.

**30) Answer: a)**

**Explanation:**

- Statement 2 is correct: El Hierro has volcanic landscapes and a subtropical climate.
- Statement 1 is incorrect: El Hierro is the second-smallest of the Canary Islands, not the largest.
- Statement 3 is incorrect: El Hierro is about 115 km off the coast of Africa.

**31) Answer: b)**

**Explanation:** Overexploitation of citrus plants in Assam is cited as a primary reason for the endangerment of swallowtail butterflies. They depend on specific host plants for survival.

**32) Answer: c)**

**Explanation:** The Venus Orbiter Mission (VOM) will use aerobraking to achieve a low-altitude science orbit by utilizing the atmosphere to reduce speed and minimize fuel consumption.

**33) Answer: b)**

**Explanation:** Bharat-Gen is a government-funded initiative for AI models focusing on Indian languages and cultural contexts, but it is led by IIT Bombay, not IIT Madras.

**34) Answer: d)**

**Explanation:** Isostatic rebound occurs when glaciers melt, reducing the pressure on the Earth's crust, causing it to rise.

**35) Answer: a)**

**Explanation:** India's Venus Orbiter Mission (VOM) will use the LVM-3 launch vehicle and has multiple objectives, including studying the atmosphere and surface of Venus.

**36) Answer: d)**

**Explanation:** The Cruise Bharat Mission aims to boost cruise tourism, increasing passenger traffic and enhancing India's maritime trade.

**37) Answer: c)**

**Explanation:** ESA's EnVision mission will map Venus' surface using radar, focusing on geology. Other missions, such as VERITAS and DAVINCI, have different objectives.

**38) Answer: b)**

**Explanation:** Statements 2 and 3 are correct, focusing on the role of erosion and isostatic rebound in the upward growth of Mount Everest.

**39) Answer: a)**

**Explanation:** The Arun River originates from the Tibet Autonomous Region and contributes to the Ganges Basin through its tributaries but does not directly flow into India.

**40) Answer: a)**

**Explanation:** Statement 1 and 2 are correct, emphasizing decarbonization, digitalization, and the establishment of a National Cruise Tourism Policy. Statement 3 is incorrect, as the mission also includes international promotion.

**41) Answer: b) Only two**

**Explanation:**

- Statement 1 is correct as the PM E-DRIVE scheme replaces the FAME India Phase II scheme and focuses on accelerating EV adoption.
- Statement 2 is also correct, providing subsidies for various electric vehicles,

including e-2Ws, e-3Ws, e-ambulances, and e-trucks.

- Statement 3 is incorrect as the scheme does not offer 100% incentives specifically for rural EV charging stations.

**42) Answer: b) It is located on an elevated plain, giving it a military advantage**

**Explanation:**

Vuhledar is strategically significant because of its elevated location in Donetsk Oblast, offering military control over the surrounding area. This makes it a focal point in military operations.

**43) Answer: a) 1 and 3 only**

**Explanation:**

- Statement 1 is correct as the IBBI regulates insolvency professionals, agencies, and entities related to bankruptcy.
- Statement 2 is incorrect because the tenure of the IBBI Chairperson is five years or until the age of 65, not three years or 60.
- Statement 3 is correct as the IBBI regulates both corporate and individual insolvency cases.

**44) Answer: d) None of the above**

**Explanation:**

All statements are incorrect. The World Green Economy Forum 2024 supported the production of SAF, emphasized the role of philanthropy along with public-private partnerships in climate solutions, and focused on both short-term and long-term climate actions, including ambitious net-zero goals.

**45) Answer: b) Albania and Greece**

**Explanation:**

Little Prespa Lake lies on the border between Albania and Greece, with most of the lake within Greek territory. It is part of a transboundary lake system with Great Prespa Lake located further north.

**46) Answer: a) Ministry of Commerce and Industry**

**Explanation:**

The Ministry of Commerce and Industry is not represented on the IBBI. The board consists of members from the Ministry of Finance, Ministry of Corporate Affairs, Ministry of Law, and a representative from the Reserve Bank of India (RBI).

**47) Answer: b)**

**Explanation:**

For a language to be granted Classical Language status in India, it must have a documented history of at least 1,500–2,000 years (Statement 1), and it must have an original literary tradition distinct from borrowed influences (Statement 2). However, the status is not limited to languages spoken by a majority population in India (Statement 3 is incorrect). Classical Language status is based on historical, cultural, and literary richness.

**48) Answer: d)**

**Explanation:**

The PM Internship Scheme aims to provide 1 crore youth with hands-on work experience over five years (Statement 1 is correct). It offers internships in sectors like agriculture, pharmaceuticals, and

automobiles (Statement 2 is also correct). However, the stipend is partially funded by the government (₹4,500) and partly by the companies (₹500), so the stipend is not entirely funded by the companies (Statement 3 is incorrect).

**49) Answer: a)**

**Explanation:**

The United States Commission on International Religious Freedom (USCIRF) reviews global religious freedom violations and provides policy recommendations to the U.S. government (Statement 1 is correct). However, it does not have enforcement powers to impose sanctions (Statement 2 is incorrect), and its recommendations are advisory, not mandatory (Statement 3 is also incorrect).

**50) Answer: c)**

**Explanation:**

The National Mission on Edible Oils – Oilseeds (NMEO-Oilseeds) aims to increase domestic oilseed production, reduce dependence on edible oil imports, and enhance post-harvest infrastructure. However, it promotes intercropping of oilseeds on both fallow and non-fallow lands, so Statement c is incorrect.