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Daily MCQs: 25-01-2025

1. Consider the following statements about Eco-sensitive zones

- 1) These are fragile areas falling within 10 km of the boundaries of national parks and wildlife sanctuaries.
- 2) They are protected under the Environment Protection Act, 1986.
- 3) Agriculture is the only activity permitted in an Eco-sensitive zone.

How many of the statements given above is/are correct?

- A) Only one
- B) Only two
- C) All the three
- D) None of the above

2. Consider the following indices:

- 1. SDG India Index
- 2. Composite Water Management Index
- 3. Export Preparedness Index
- 4. India Innovation Index

How many of the above are published by the NITI Aayog?

- A. Only one
- B. Only two
- C. Only three
- D. All four

3. Consider the following statements about Bengal Tigers in India.

- 1. India hosts more than half of the world's wild tiger population.
- 2. It has been classified as vulnerable by IUCN.
- 3. Biligiri Rangaswamy Temple Tiger Reserve (BRT) is the only tiger habitat in the world to have melanistic tigers.

Which of the above statements is/are correct?

- A. 1 only
- B. 2 only
- C. 3 only

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D. None of the above

4. Consider the following statements about NISAR

- 1) It is an Earth-observation satellite developed by the European Space Agency (ESA).
- 2) The primary objective of the mission is to study the composition of Mars' atmosphere.

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

5. Consider the following statements about Virtual Private Network (VPN)

- 1) A VPN is a private network that uses a public network to connect remote sites or users together.
- 2) VPNs mask the user's internet protocol (IP) address so their online actions are virtually untraceable.
- 3) VPN services provide greater privacy than an unsecured Wi-Fi hotspot.

How many of the statements given above is/are correct?

- A) Only one
- B) Only two
- C) All three
- D) None

Solutions:

1. Answer: B

Explanation:

- Eco-sensitive zones are areas notified by the MoEF around protected areas, National Parks and wildlife sanctuaries.
- The National Wildlife Action Plan (2002–2016) of MoEFCC stipulated that state governments should declare land **falling within 10 km** of the boundaries of national parks

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and wildlife sanctuaries as eco-fragile zones or ESZs under the **Environmental** (**Protection**) Act, 1986. Hence statements 1 and 2 are correct.

- The purpose of the ESZ was to provide more protection to the parks by acting as a shock absorber or transition zone.
- Eco-Sensitive Zones would minimize forest depletion and man-animal conflict.
- The basic aim is to regulate certain activities around National Parks and Wildlife
 Sanctuaries so as to minimize the negative impacts of such activities on the fragile
 ecosystem encompassing the protected areas.
- Activities prohibited in ESZ
 - Commercial mining, saw mills, industries causing pollution (air, water, soil, noise etc), establishment of major hydroelectric projects (HEP), commercial use of wood.
 - Tourism activities like hot-air balloons over the National Park, discharge of effluents or any solid waste or production of hazardous substances.
- Regulated Activities:
 - Felling of trees, establishment of hotels and resorts, commercial use of natural water, erection of electrical cables, drastic change of agriculture system, e.g., adoption of heavy technology, pesticides etc, widening of roads.
- Permitted Activities:
 - Ongoing agricultural or horticultural practices, rainwater harvesting, organic farming, use of renewable energy sources, adoption of green technology for all activities. Hence statement 3 is incorrect.

2. Answer: D

Explanation:

About NITI Aayog

- The **National Institution for Transforming India**, also called **NITI Aayog**, was formed via a **resolution of the Union Cabinet on January 1**, **2015**.
- It replaced the erstwhile Planning Commission.
- NITI Aayog is the premier policy 'Think Tank' of the Government of India, providing both directional and policy inputs.
- While designing strategic and long term policies and programmes for the Government of India, NITI Aayog also provides relevant technical advice to the Centre and States.

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- NITI Aayog's entire gamut of activities can be divided into four main heads:
 - Policy and Programme Framework
 - Cooperative Federalism
 - Monitoring and Evaluation
 - Think Tank, and Knowledge and Innovation Hub.

Governing Council of NITI Aayog

- The Governing Council of NITI Aayog is **chaired by the Prime Minister** and comprises Chief Ministers of all the States and Union Territories with legislatures; Lt Governors of other Union Territories; Ex-Officio Members; Vice Chairperson; Full-time Members; Special Invitees and Chief Executive Officer.
- The Governing Council, which embodies the objectives of cooperative federalism, presents a **platform to discuss inter-sectoral, inter-departmental and federal issues** to accelerate the implementation of the national development agenda.

Important reports released by NITI Aayog

- Healthy States, Progressive India Report
- Composite Water Management Index
- SDG India Index
- North-Eastern Region District SDG Index
- Multidimensional Poverty Index
- Export Preparedness Index
- India Innovation Index

3. Answer: A

PRELIMS

Explantion:

Bengal Tigers:

- The Bengal tiger (*Panthera tigris tigris*) is a subspecies of tiger **native to the Indian subcontinent.**
- It inhabits hot and humid forests, and wetlands of India, Bangladesh, Bhutan, and Nepal.
- India hosts over 70% of the world's wild tiger population, with an estimated count exceeding 3,600, the majority of which are found in Madhya Pradesh. Hence, statement 1 is correct.
- The **Bengal tiger's coat** is yellow to light orange, with **black stripes unique to each tiger**.
- They are **solitary hunters. Males are larger** in size than females.

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- They are carnivorous in their diet, preying on ungulates such as deer and antelope, gaurs, and wild boars.
- Conservation Status:
 - IUCN Red List: **Endangered**; CITES: **Appendix I**; Wildlife Protection Act (2022): **Schedule I. Hence, statement 2 is incorrect.**
- The National Tiger Conservation Authority (NTCA) has approved the world's first melanistic tiger safari near Similipal tiger reserve of Odisha.
- Simlipal tiger reserve is the only tiger habitat in the world to have melanistic tigers. Hence, statement 3 is incorrect.

Melanism in Royal Bengal tigers

- Melanism is a genetic condition that causes animals to have black or nearly black skin, hair, or feathers due to increased melanin production.
- In Bengal tigers, the presence of higher levels of melanin, gives tigers black and yellow
 interspersed stripes on their coats which are much thicker than the stripes found in
 normal tigers.



- Since these tigers are not entirely black, they are often described as being pseudo-melanistic (false coloured).
- Factors such as geographical isolation have led to constant inbreeding amongst genetically related tigers for over generations leading to such melanistic tendencies.
- Constant inbreeding amongst species leads to poorer reproductive efficiency, lower growth rates, and higher mortality rates thereby threatening the survival of species.

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4. Answer: D

Explanation

- **Statement 1 is incorrect:** NISAR (NASA-ISRO Synthetic Aperture Radar) is an **Earth-observation satellite jointly developed by U.S. space agency NASA and ISRO** under a partnership agreement signed in 2014.
- The 2,800 kilograms satellite consists of both L-band and S-band synthetic aperture radar (SAR) instruments, which makes it a **dual-frequency imaging radar satellite**.
- While NASA has provided the L-band radar, GPS, a high-capacity solid-state recorder to store data, and a payload data subsystem, ISRO has provided the S-band radar, the GSLV launch system and spacecraft.
- Another important component of the satellite is its large 39-foot stationary antenna
 reflector. Made of a gold-plated wire mesh, the reflector will be used to focus the radar
 signals emitted and received by the upward-facing feed on the instrument structure.



What is the mission?

- Statement 2 is incorrect: Once launched into space, NISAR will observe subtle changes in Earth's surfaces, helping researchers better understand the causes and consequences of such phenomena.
- Designed as a **low earth orbit (LEO) observatory**, NISAR will map the entire globe in **12 days** and provide **spatially and temporally consistent data** for understanding changes in Earth's ecosystems, ice mass, vegetation biomass, sea level rise, groundwater and natural hazards, including earthquakes, tsunamis, volcanoes and landslides.

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• Synthetic Aperture Radar refers to a **technique for producing high-resolution images**. Because of the precision, the radar can penetrate clouds and darkness, which means that it **can collect data day and night in any weather**.

5. Answer: C

Explanation What is a VPN?

- A virtual private network gives you online privacy and anonymity by creating a private network from a public Internet connection. Hence statement 1 is correct.
- VPNs mask your Internet protocol (IP) address so your online actions are virtually untraceable. Hence statement 2 is correct.
- VPN services establish secure and encrypted connections, guaranteed to provide greater privacy than even a secured Wi-Fi hotspot.

Why do you need a VPN service?

• Surfing the web or transacting on an unsecured Wi-Fi network means you could be exposing your private information and browsing habits. That's why a virtual private network, better known as a VPN, should be a must for anyone concerned about their online security and privacy. Hence **statement 3 is correct.**

What does a VPN hide?

- browsing history
- IP address and location
- location for streaming
- web activity to maintain internet freedom

How can a VPN help protect against identity theft?

- Identity theft occurs when thieves steal your personal information and use it to commit crimes in your name like taking over or opening new accounts, filing tax returns in your name, or renting or buying property. A VPN can help protect against identity theft by helping protect your data. It creates an encrypted tunnel for the data you send and receive that's out of reach of cyberthieves.
- If your smartphone's Wi-Fi is enabled at all times, your device could be vulnerable without you ever knowing it. Everyday activities like online shopping, banking and browsing can expose your information, making you vulnerable to cybercrime.

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A VPN can protect the information you share or access using your devices. That's especially
important when using a public Wi-Fi network, where a cyberthief on the same network
could capture your login credentials and the credit card number you type in when you shop
online.

