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Daily MCQs: 30-01-2025

1. Consider the following statements about Navigation with Indian Constellation (NavIC).

- 1. It is an independent regional navigation satellite system developed by the Indian Space Research Organization (ISRO).
- 2. It is designed to provide accurate position information service to users in India as well as the region extending up to 1500 km from its boundary.
- 3. The constellation consists of twenty satellites.

How many of the above statements is/are correct?

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

2. M 23 rebels captured large parts of Goma, the biggest city in the eastern part of a particular African country. Identify the country from the list given below.

- A. Nigeria
- B. Niger
- C. Democratic Republic of Congo
- D. South Sudan

3. Consider the following statements about ITER.

- 1. It is a collaborative project to build the world's largest magnetic fusion device to prove the feasibility of fusion reactions.
- 2. India is one of the countries which contribute to the construction of this facility.

Which of the above statements is/are correct?

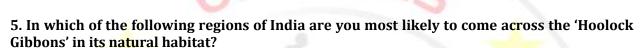
- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

4. Consider the following statements about the Archeological Survey of India

1) It is the premier organization for the archaeological research and protection of the cultural heritage of the nation.

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- 2) It is an attached office under the Ministry of Tourism.
- 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



- a) Sand deserts of northwest India
- b) High altitude wetlands of Ladakh
- c) Eastern Himalayas
- d) Western Ghats

Explanation:

1. Answer: B

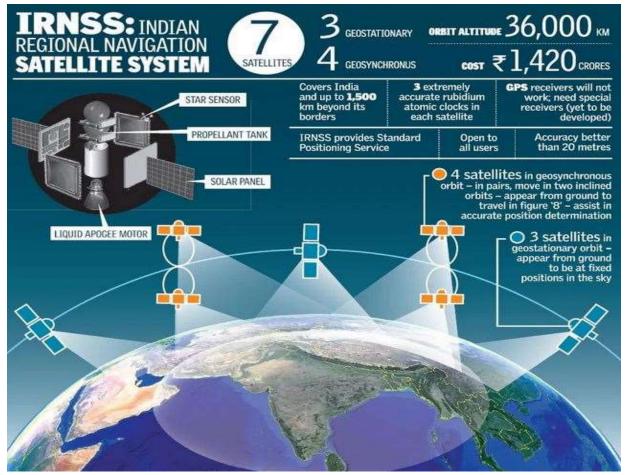
Explanation:

Indian Regional Navigation Satellite System (IRNSS) - NavIC

- IRNSS is an independent **regional navigation satellite system** developed by the **Indian Space Research Organization (ISRO). Hence, statement 1 is correct.**
- In 2016, with the last launch of the constellation's satellite, IRNSS was renamed **Navigation Indian Constellation (NAVIC).**



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• Hence, statement 3 is incorrect.

Why was NavIC developed?

- NavIC was developed partly because access to foreign government-controlled global navigation satellite systems is not guaranteed in hostile situations, as happened to the Indian military in 1999 when the United States denied the Indian request for Global Positioning System (GPS) data Kargil region.
- India could have had access to vital information had the US shared its GPS. Therefore, the Indian Government approved the project in 2013.

Range of NavIC

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- It is designed to provide accurate position information service to users in India as well as the region extending up to 1500 km from its boundary, which is its primary service area. Hence, statement 2 is correct.
- Beyond that lies an **Extended Service Area**, that can extend up to the edges of the area enclosed by the rectangle imagined by latitudes 30 degrees South and 50 degrees North, and longitudes 30 degrees East and 130 degrees East.
- IRNSS will provide **two types of services**, namely, **Standard Positioning Service (SPS)** which is provided to all the users and **Restricted Service (RS)**, which is an encrypted service provided only to the authorised users.
- The space segment consists of the IRNSS **constellation of eight satellites** (with one being a replacement). Three satellites are located in the **geostationary orbit** and the remaining four are located in **geosynchronous orbits**.
- NavIC is considered to be at par with US-based GPS, Russia's Glonass and Galileo developed by Europe. As far as the accuracy is concerned, the system is designed to provide an absolute position accuracy of fewer than 10 metres on the Indian landmass and less than 20 metres in the Indian Ocean.

2. Answer: C

Explanation:

- The Rwanda-backed M23 rebels captured large parts of Goma, the biggest city in the
 eastern part of the Democratic Republic of Congo, including its airport. Hence, option C is
 correct.
- The M23 rebels, who said that they captured the city on Monday after a weeks-long advance, are one of about 100 armed groups vying for a foothold in mineral-rich eastern Congo.

3. Answer: C

Explanation:

- In southern France, 33 nations (As of 2024) are collaborating to build the world's largest tokamak, a magnetic fusion device that has been designed to prove the feasibility of fusion as a large-scale and carbon-free source of energy based on the same principle that powers our Sun and stars. Hence, statement 1 is correct.
- The experimental campaign that will be carried out at ITER is crucial to advancing fusion science and preparing the way for the fusion power plants of tomorrow.

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- Thousands of engineers and scientists have contributed to the design of ITER since the idea for an international joint experiment in fusion was first launched in **1985**.
- The ITER Members—China, the European Union, India, Japan, Korea, Russia and the United States—are now engaged in a decades-long collaboration to build and operate the ITER experimental device, and together bring fusion to the point where a demonstration fusion reactor can be designed. Hence, statement 2 is correct.

4. Answer: A

Explanation

- **Statement 1 is correct:** The Archaeological Survey of India is the premier organization for the **archaeological research and protection of the cultural heritage** of the nation.
- Statement 2 is incorrect: It is an attached office under the Ministry of Culture.
- Maintenance of ancient monuments and archaeological sites and remains of national importance is the prime concern of the ASI.
- Besides, it regulates all archaeological activities in the country as per the provisions of the Ancient Monuments and Archaeological Sites and Remains Act, 1958. It also regulates the Antiquities and Art Treasure Act, 1972.

History

- Archaeological and historical pursuits in India started with the efforts of **Sir William Jones**, who put together a group of antiquarians to form the **Asiatic Society in 1784 in Calcutta**.
- The Archaeological Survey of India was eventually formed in **1861** by a statute passed into law by **Viceroy Lord Canning** with **Alexander Cunningham** as the **first Archaeological Surveyor**.

PRELIMS

5. Answer: C

Explanation

- Hoolock Gibbons are native to the **forests of the Eastern Himalayas** in India, specifically in the northeastern states such as **Assam**, **Arunachal Pradesh**, and parts of Meghalaya.
- These regions provide the dense, **tropical rainforests** that form the natural habitat necessary for the survival of Hoolock Gibbons.
- They are **arboreal animals**, meaning they live in trees, and they require large stretches of contiguous forest canopy to move around using brachiation (swinging from branch to branch).

Types of Gibbons Found in India

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- **Hoolock gibbons** are the **only apes found in India**. They were divided into two species: the Western Hoolock Gibbon and the Eastern Hoolock Gibbon.
 - Western Hoolock Gibbon: It is found in the northeastern states of India, including Assam, Arunachal Pradesh, and Meghalaya. Western Hoolock gibbons have a white or pale browband, distinguishing them from Eastern Hoolock gibbons.
 - Eastern Hoolock Gibbon: Also found in northeastern India, particularly in Arunachal Pradesh and Nagaland. Eastern Hoolock gibbons have a distinct dark browband.
- Until 2021 there were two known species of Gibbon, however a study conducted by the
 Centre for Cellular and Molecular Biology (CCMB) in Hyderabad could not find any
 genetic differences between the two gibbons which were earlier differentiated based on
 skin coat colour.
- This study revealed that there is only one species of Hoolock Gibbon in India

Threats

- **Habitat Loss and Fragmentation**: One of the primary threats to gibbons is habitat loss due to deforestation, agriculture, logging, and urban expansion.
- **Illegal Wildlife Trade**: Gibbons are sometimes captured and sold for their body parts, which are used in traditional medicine or for ornamental purposes.
- **Infrastructure Development**: The construction of roads, dams, and other infrastructure projects can fragment gibbon habitats, disrupt their movement patterns, and increase the risk of accidental deaths due to collisions with vehicles.

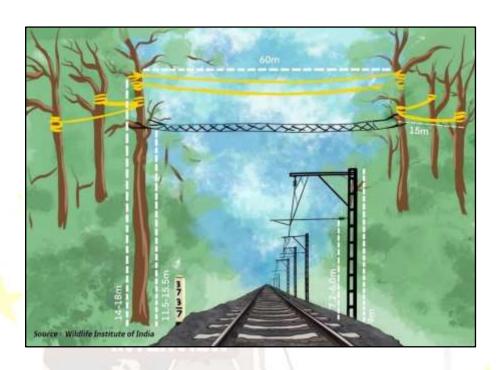
Conservation status

- Western hoolock gibbon is classified as endangered and the eastern hoolock gibbon as vulnerable as per the IUCN Red list
- Hoolock gibbons are protected under Schedule I of the Wildlife Protection Act 2022.

Why in news?

- As railway lines are going to be laid through the Hollongapar gibbon sanctuary, Canopy bridges will be constructed on top of railway tracks for gibbons to move across regions in the sanctuary with ease.
 - Canopy bridges refer to artificial and natural crossing structures, built across roads and railway tracks to enable arboreal animals to traverse with ease. Refer to the image provided below.

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MAINS

SACADEM