



UPSC CURRENT AFFAIRS MCQS 24-02-2024

Q1:

Consider the following statements regarding Tupolev Tu-160M:

- 1. The Tu-160M, a modernized version of a Cold War-era bomber that the former Soviet Union would have deployed in the event of nuclear war to deliver weapons at long distances.**
- 2. It is a Russian supersonic variable-sweep wing strategic missile-carrying bomber.**
- 3. It is called "White Swan" in Russia, and is code-named "Blackjacks" by NATO.**

How many of the above statements is/are correct?

- A: Only one**
- B: Only two**
- C: All three**
- D: None**

Answer: (c)

Explanation:

The Russian President recently unveiled the newly modernised Tupolev Tu-160M nuclear-capable strategic bomber at Kazan Aviation Plant.

The Tu-160M, a modernized version of a Cold War-era bomber that the former Soviet Union would have deployed in the event of nuclear war to deliver weapons at long distances. It is a Russian supersonic variable-sweep wing strategic missile-carrying bomber. It is called "White Swan" in Russia, and is code-named "Blackjacks" by NATO. Russia claims it is the world's fastest-flying supersonic and heaviest payload-carrying bomber. It is designed to hit targets in remote areas with nuclear and conventional weapons. It can fly 12,000 km non-stop without refueling. It has a maximum speed of 2,220 kilometers per hour and ascends to heights of 16,000 meters. It showcases features like an innovative navigation system, an upgraded radar, and even a refueling probe for in-flight refuelling, which further extends its range. Hence, all statements are correct.



Q2:

With reference to Exercise Dosti, consider the following statements:

- 1. It is a trilateral coast guard exercise between India, Sri Lanka, and Bangladesh.**
- 2. It is a biennial exercise which was first conducted in 1991 between the Indian and Maldives Coast Guards.**

Which of the above statements is/are correct?

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

Answer: (b)

Explanation:

Indian and Sri Lankan coast guard ships reached the Maldives recently to take part in the trilateral coast guard exercise Dosti 16.

It is a trilateral coast guard exercise between India, Sri Lanka, and the Maldives. Hence, statement 1 is not correct.

It is a biennial exercise which was first conducted in 1991 between the Indian and Maldives Coast Guards. Sri Lanka joined the exercise for the first time in 2012. Dosti was last conducted in 2021. The aim of the exercise is to further fortify the friendship, enhance mutual operational capability, exercise interoperability and build cooperation between the Coast Guards of India, Sri Lanka, and the Maldives. Hence, statement 2 is correct.

Q3:

Consider the following statements regarding Singhbhum Craton:

- 1. It is a vast swathe of rocky land that stretches mainly across parts of Jharkhand and Odisha, between the Chhota Nagpur plateau and the Eastern Ghats.**
- 2. The craton's oldest rock assemblages are largely volcanic and sedimentary rocks also known as greenstone successions.**



Which of the above statements is/are correct?

A: 1 only

B: 2 only

C: Both 1 and 2

D: Neither 1 nor 2

Answer: (c)

Explanation:

Studying ancient cratons, like the Singhbhum Craton in India and their counterparts in South Africa and Australia offer unprecedented glimpses into our planet's formative years, dating back to 3.5 billion years ago.

Singhbhum Craton is a vast swathe of rocky land that stretches mainly across parts of Jharkhand and Odisha, between the Chhota Nagpur plateau and the Eastern Ghats. The craton's oldest rock assemblages are largely volcanic and sedimentary rocks also known as greenstone successions. Greenstones are rock assemblages made up mostly of sub-marine volcanic rocks with minor sedimentary rocks. They offer a clearer picture of Earth's early tectonic activities during the Archaean times, contributing to our understanding of the planet's formative years. Hence, both statements are correct.

Q4:

Consider the following statements, with reference to Cabinet Committee on Security (CCS):

- 1. Cabinet Committees are extra-constitutional, meaning; they are not mentioned in the Indian Constitution.**
- 2. CCS is headed by the Speaker.**
- 3. The CCS deals with all the issues related to the defence and security of India.**

How many of the above statements is/are correct?

A: Only one

B: Only two



C: All three

D: None

Answer: (b)

Explanation:

The Cabinet Committee on Security recently cleared the acquisition of over 200 BrahMos extended-range supersonic cruise missiles for deployment on its warships.

Cabinet Committees are extra-constitutional, meaning; they are not mentioned in the Indian Constitution. They are partly designed to reduce the burden on the Union Cabinet by allowing smaller groups of ministers to take decisions on specific policy areas. Hence, statement 1 is correct.

CCS is headed by the Prime Minister. The Committee discusses, debates, and is the apex body when it comes to the appointments of the officials in the national security bodies. It also makes all the important decisions on defence policy and expenditure and, generally, all matters of India's security. Hence, statement 2 is not correct.

The CCS deals with all the issues related to the defence and security of India. The CCS deals with all issues related to the law and order of our country and national security. The members of Cabinet Committee on Security are; Prime Minister of India, Union Minister of Defence, Union Minister of Home Affairs, Union Minister of Finance and Corporate Affairs, Union Minister of External Affairs. Hence, statement 3 is correct.

Q5:

With reference to Positronium, consider the following statements:

1. Positronium is a short-lived hydrogen-like atom, which consists of an electron and its antimatter equivalent, a positron (rather than an electron and a proton).

2. Due to its very short life, it annihilates with a half-life of 142 nano-seconds.

Which of the above statements is/are correct?

A: 1 only



B: 2 only

C: Both 1 and 2

D: Neither 1 nor 2

Answer: (c)

Explanation:

In a first, an international team of physicists from the Anti-hydrogen Experiment: Gravity, Interferometry, Spectroscopy (AEGIS) collaboration has achieved a breakthrough by demonstrating the laser cooling of Positronium. It is an experiment approved by CERN (European Organization for Nuclear Research) with the goal of studying antihydrogen physics. The primary goal of AEGIS is the direct measurement of the Earth's gravitational acceleration, g , on antihydrogen.

The matter, which forms the world around us, consists of atoms, the simplest of which is hydrogen, which is the most plentiful element in the Universe. This is made up of a positively-charged proton and a negatively-charged electron. Positronium, on the other hand, is a short-lived hydrogen-like atom, which consists of an electron and its antimatter equivalent, a positron (rather than an electron and a proton). Due to its very short life, it annihilates with a half-life of 142 nano-seconds. This hydrogen-like system is a great contender for attempting laser cooling and thereby performing tests of fundamental theories in physics. Positronium can generate huge amounts of energy. It can shed light on 'antimatter' which existed at the beginning of the Universe. Hence, both statements are correct.