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Daily MCQs: 13-11-2024

1. Which of the following closely describes 'Geo engineering'?

- A. Mining operations undertaken by developed countries in developing countries.
- B. Random, minimal actions taken to exploit the Earth's systems for economic gain.
- C. Intervention carried out in the Earth's natural systems to reverse the impacts of climate change.
- D. Drilling deep borewells in desert areas in search of water.

2. Consider the following statements about Fluorescent Nanodiamonds.

- 1) They are made up of carbon nanoparticles.
- 2) They are produced in a process involving high temperature and high pressure.
- 3) They have applications in high-resolution imaging.

How many of the above statement(s) is/are correct?

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

3. Consider the following statements about the appointment of Chief Justice of India

- 1) As per the Constitution, the senior most Judge of the Supreme Court is appointed as the Chief Justice of India.
- 2) This seniority principle has never been violated in appointing the Chief Justice.

Which of the statement(s) given above 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 Mohiniyattam.

- 1) Roots of this dance form are found in Natya Shastra.
- 2) It also involves singing in malayalam language.
- 3) It is a classical dance form from Karnataka.

How many of the above statement(s) is/are correct?

- A. Only one
- B. Only two
- C. Only three
- D. None

5. Consider the following statements about the S-400 missile.

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- 1) It is a mobile surface-to-air missile.
- 2) It was developed by China.
- 3) Its capabilities are roughly comparable with the USA's Patriot.

How many of the above statement(s) is/are correct?

- A. Only one
- B. Only two
- C. Only three
- D. None

Solutions:

1. Answer: C

Explanation

What is Geo engineering?

- It refers to **deliberate, large-scale intervention** carried out in the **Earth's natural systems** to reverse the impacts of climate change. Hence, **answer is option C.**
- This involves **techniques** to **physically manipulate** the global climate to cool the planet.
- Geo engineering technologies mainly consist of **Carbon Dioxide removal technologies** and **Solar radiation management.**

2. Answer: C

- Fluorescent Nanodiamonds (FNDs) are **nanometre-sized diamonds** made of **carbon nanoparticles.** Hence, **statement 1 is correct.**
- They are produced in a process that involves **high temperature and high pressure.** Hence, **statement 2 is correct.**
- FNDs are **stable under light** and **aren't toxic** to living things, so they have **many applications in high-resolution imaging, microscale temperature sensing, and correlative microscopy,** among others. Hence, **statement 3 is correct.**
- In **biology,** scientists use FNDs to **track cells and their progeny over long periods.**

3. Answer: D

Explanation

Appointment of CJI

- The **Chief Justice of India and the Judges of the Supreme Court** are appointed by the President under **Article 124 (2) of the Constitution.**
- As per the convention, the **senior most Judge of the Supreme Court** (based on years of experience as a judge in the apex court) considered fit to hold the office will be appointed as the Chief Justice of India (CJI). Hence, **statement 1 is incorrect.**

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- This convention was **violated in 1973** when A.N.Ray was appointed as the Chief Justice of India by superseding three senior judges. Hence, **statement 2 is incorrect**.
- Later, the Supreme Court in the **Second Judges Case (1993)**, ruled that the senior most judge of the Supreme Court should alone be appointed to the office of the chief justice of India.

Role of Central Government in the appointment

- The **final decision** on appointing the next CJI technically rests **with the Centre**.
- By **convention**, the **government generally follows the recommendation of the sitting CJI** regarding their successor.

4. Answer: A

Explanation

- Mohiniyattam is a **classical dance form** originating from the state of **Kerala**. Hence, **statement 3 is incorrect**.
- It is traditionally a **solo dance** performed by women after extensive training.
- The dance gets its name from **Mohini** – the female enchantress avatar of the Hindu deity Vishnu.
- The roots of Mohiniyattam are in the **Natya Shastra** (the **ancient Hindu Sanskrit text on performance arts**). Hence, **statement 1 is correct**.
- It follows the **Lasya style** described in **Natya Shastra**, ie, a dance which is **delicate and feminine**.
- It comprises **delicate footsteps, undulating body movements, and subtle yet poignant facial expressions**.
- Mohiniyattam emotes a play through **dancing and singing**, where the **language** of the song texts is **Manipravala**, a mixture of **Malayalam and Sanskrit**. Hence, **statement 2 is incorrect**.
- The musical instruments usually used in Mohiniyattam are **Mridangam or Madhalam** (barrel drum), **Idakka** (hourglass drum), **flute, Veena, and Kuzhitalam** (cymbals).

5. Answer: B

Explanation:

- The S-400 Triumf is a mobile **surface-to-air missile (SAM) system developed by Russia**. Hence, **statement 1 is correct and statement 2 is incorrect**.
- The system can engage all types of aerial targets including aircraft, unmanned aerial vehicles (UAV) and ballistic and cruise missiles within the **range of 400km, at an altitude of up to 30km**.
- The system can track 100 airborne targets and engage six of them simultaneously.
- The S-400's mission set and capabilities are roughly comparable to the famed **US Patriot system**. Hence, **statement 3 is correct**.

Why in News?

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- India is set to receive the remaining two squadrons of the S-400 air defence missile system by 2025.

Background

- India had contracted **five S-400 Triumph regiments** from Russia under a \$5.43 billion deal signed in 2018.
- As of now, India has received three squadrons of the air defence system which have been operationalized and deployed along the **borders with China and Pakistan**.

