

Q: Consider the following statements with respect to the Thirty Meter Telescope (TMT) Project:

1. The project aims to study the moons of Venus.
2. It is a joint collaboration between U.S., Japan, China and Canada.
3. India is not a participatory to the project.

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

- a) Only one
- b) Only two
- c) All three
- d) None of the above

Ans: b

Explanation:

- The TMT has been conceived as a 30-metre diameter primary-mirror optical and infrared telescope that will enable observations into deep space.
- It is proposed as a joint collaboration involving institutions in the U.S., Japan, China, Canada, and India.
- Indian participation in the project was approved by the Union Cabinet in 2014.
- India to provide the project with hardware, instruments, software worth Rs.200 million.
- The project will be set up in Mauna Kea, an inactive volcano on the island of Hawai'i, United States.

Q: Consider the following statements with respect to Shankaracharyas:

1. It is a religious title for the heads of the peeths established by Adi Shankara.
2. Adi Shankara is associated with Advaita Vedanta, a Hindu philosophy and spiritual discipline.
3. The Statue of Oneness is associated with Shankaracharyas.

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

- a) Only one
- b) Only two
- c) All three
- d) None of the above

Ans: c

Explanation:

- Shankaracharya, is a religious title used by the heads of the four cardinal mathas or peeths believed to have been established by Adi Shankara (c 788 CE-820 CE).
- According to tradition, they are religious teachers who belong to a line of teachers going back all the way to Adi Shankara himself.
- However, there is little historical evidence for the existence of these mathas prior to the 14th century CE, when the Vijayanagara kingdom began to patronise the Sringeri matha.
- Adi Shankara's life-story, was born in Kalady village on the bank of the River Periyar in what is today Kerala's Ernakulam district.
- The Statue of Oneness depicts Adi Shankaracharya as a 12-year-old child, the age he was when he is said to have visited Omkareshwar.
- It is part of a larger temple tourism project in the state of Madhya Pradesh.

Q: Consider the following statements with respect to Prior Approval Requirement:

1. It is applicable to employees who held a rank higher than joint secretary.
2. Prior approval falls under the aegis of the Prevention of Corruption Act (PCA), 1988.
3. Supreme Court struck down this requirement in 2014.

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

- a) Only one
- b) Only two
- c) All three
- d) None of the above

Ans: c

Explanation:

- In 2003, the Delhi Special Police Establishment Act, 1946, which governs agencies like the CBI, was amended.
- Under Section 6A, it was required to seek approval from the central government before investigating alleged offences under the Prevention of Corruption Act (PCA), 1988, if the employee in question held a rank higher than joint secretary.
- The Supreme Court struck down this requirement in 2014.
- Four years later, the PCA was amended and a similar provision was introduced as Section 17A.
- Under this section, if a public servant commits an offence under the Act while discharging their official duties, investigators must receive approval from the central/ state government, or a competent authority to open an inquiry or investigation.

Q: Consider the following statements with respect to the Annual Status of Education Report (ASER):

1. It is released by the Ministry of Education and Niti Aayog.
2. The National Statistical Office provides the data for the report.
3. It records the education level of both school and college students.

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

- a) Only one
- b) Only two
- c) All three
- d) None of the above

Ans: d

Explanation:

- It is released annually by the Non-Government Organisation (NGO) Pratham.
- The report records trends in school enrolment, attendance, and reading and arithmetic abilities among children ages 6-14 years in rural areas of the country.
- The 2023 survey focused on an older group of 14-to-18-year-old children, specifically on their ability to apply reading and math skills to everyday situations, and their aspirations.
- It also sought to capture their access to digital technology, and whether they possess the skills to use it.

Q: Consider the following statements with respect to Rossby Waves:

1. These waves are a natural phenomenon in rotating fluids such as Earth's ocean and atmosphere, resulting from the planet's rotation.
2. It is also known by the name Planetary Waves.
3. These waves are also associated with the jet stream and pressure systems.

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

- a) Only one
- b) Only two
- c) All three
- d) None of the above

Ans: c

Explanation:

- Rossby Waves are massive meanders in the atmosphere, also referred to as planetary waves, which significantly impact the weather.
- Rossby waves are initial types of oscillations that are seen in rotating fluids in their natural state.
- These waves are named after Carl-Gustaf Rossby, who identified them in 1939.
- These waves are a natural phenomenon in rotating fluids such as Earth's ocean and atmosphere, resulting from the planet's rotation.
- Shear in the spinning fluid causes the Coriolis force to vary along the sheared coordinate, leading to Rossby waves' development.

- The Coriolis effect varies with latitude, which causes the Rossby wave to emerge in the planet's atmosphere and oceans.
- These waves are also associated with the jet stream and pressure systems.