



Daily Current Affairs Prelims Quiz 06-07-2022 - (Online Prelims Test)

1) Consider the following statements:

1. The Astro Carta model is developed by NASA and is a framework for the sustainable use of outer space.
2. The Indian Space Research Organization (ISRO) has initiated 'Project NETRA' to monitor space debris.

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

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

Astro Carta

- The U.K. calls for an "Astro Carta" for space sustainability, based on the Artemis Accords model for sustainable space exploration.
- The U.K. Space Sustainability plan mentions four primary elements: to review the regulatory framework of the U.K.'s orbital activity; to work with organizations such as the G-7 and the UN to emphasize international engagement on space sustainability; to try and develop safety and quality-related metrics that quantify the sustainability of activities; and, to induce additional funding of \$6.1 million on active debris removal.
- **India:** The Indian Space Research Organization (ISRO) has initiated 'Project NETRA' to monitor space debris.
- The domestic surveillance system would provide first-hand information on the status of debris, which would aid further planning on protecting space assets.

2) Consider the following statements:

1. The hormone auxin is responsible for well-developed roots across all plants.
2. In plants, MADS-box genes are involved in controlling all major aspects of development, including male and female gametophyte development.

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

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

MADS-Box

- It is known that the hormone auxin is responsible for well-developed roots across all plants.
- A number of genes are known to help with auxin production, improved nitrate transport, and assimilation in plants.
- This regulatory miR444 switch is known to turn off at least five genes called MADS-box transcription factor genes.
- The specialty of the MADS-box transcription factors is that they function like switch boxes of their own.
- They bind to their favorite specific DNA sequences and they switch the neighboring genes “on.”
- In plants, MADS-box genes are involved in controlling all major aspects of development, including male and female gametophyte development, embryo and seed development, as well as root, flower, and fruit development.

3) Consider the following statements:

1. Quarks are elementary particles that come in six flavors namely up, down, charm, strange, top, and bottom.
2. Quarks combine together to form hadrons such as the protons and neutrons that make up atomic nuclei.

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

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

Quarks

- Quarks are elementary particles that come in six “flavors”: up, down, charm, strange, top, and bottom.
- They usually combine together in groups of twos and threes to form hadrons such as the protons and neutrons that make up atomic nuclei.
- But they can also combine into four-quark and five-quark particles called tetraquarks and pentaquarks.
- According to the CERN release, most exotic hadrons discovered in the past two decades are tetraquarks or pentaquarks containing a charm quark and a charm antiquark — with the remaining two or three quarks being an up, down or strange quark or their antiquarks.
- Open charm means that the particle contains a charm quark without an equivalent antiquark.

New exotic hadrons

- The first kind was observed in an analysis of “decays” of negatively charged B mesons.
- It is a pentaquark made up of a charm quark and a charm antiquark, and an up, a down, and a strange quark, CERN said.
- It is the first pentaquark found to contain a strange quark.
- The second kind is a doubly electrically charged tetraquark.
- It is an open-charm tetraquark composed of a charm quark, a strange antiquark, an up quark, and a down antiquark.
- It was spotted together with its neutral counterpart in a joint analysis of decays of positively charged and neutral B mesons, the CERN release said.

4) Consider the following statements:

1. The Global Findex is a report on the unbanked status of citizens of countries, released by the

International Monetary Fund (IMF).

2. According to the Global Findex Database, 2021, men are more likely to be unbanked than women.

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

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : d

The Global Findex Database 2021

- It is released by the World Bank.
- According to its findings: women are more likely to be unbanked than men.
- Brazil, China, Kenya, Russia, and Thailand have relatively high account ownership rates, yet a majority of those still unbanked are women.
- Women are often excluded from formal banking services because they lack official forms of identification, do not own a mobile phone or other forms of technology, and have a lower financial capability, the report said.
- Globally, 64 percent of unbanked adults have primary education or less.
- In Sub-Saharan Africa, 74 percent of the unbanked have only primary education or less.
- The Global Findex 2021 also conducted a survey to find out why 24 percent of adults are unbanked globally.
- The survey found lack of money as one of the multiple reasons.

5) Consider the following statements:

1. The Ministry of Environment Forest and Climate Change releases the State Energy and Climate Index (SECI).
2. The SECI uses indicators such as energy access, consumption, efficiency, and environmental protection of the States and Union Territories (UT).

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

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

State Energy and Climate Index (SECI)

- It is launched by the NITI Aayog, and aims to track and benchmark the efforts made by States and Union Territories (UTs) in the climate and energy sector, capturing dimensions such as energy access, consumption, efficiency, and environmental protection.
- India's Panchamrit elements, presented at the COP26 Conference in Glasgow, aim to meet 50 percent of India's power requirements from renewable energy sources by 2030; substantially reduce the carbon emissions and intensity of the economy by 2030; and, reach net-zero emissions by 2070.
- The conceptualization of SECI, and the commencement of benchmarking exercise through it, is a crucial step in that direction.