



Daily Current Affairs Prelims Quiz 10-03-2023 (Online Prelims Test)

1) Consider the following statements with respect to Floating Solar Panels

1. Floating solar panels considered to be more efficient than terrestrial solar panels because of the cooling effect of water beneath that.
2. Floating photovoltaics prevent the strongest winds from eroding the shores.

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

Answer : c

Floating Solar Panels

- Floating solar plants or floating photovoltaics (FPV) are called floatovoltaics.
- Floatovoltaics are panel structures that are installed on water bodies like lakes, basins, and reservoirs instead of on solid structures like a roof or terraces.
- The floating PV uses pontoons (pontoons can float while carrying heavy loads) as floats.
- The components of the Floating PV system include power converters, anchoring system, cabling, PV modules, transformers, etc. for functioning.

Advantages

- They do not take up much land which can be used for other purposes.
- The water's cooling effect makes them more efficient than land-based ones.
- They don't interfere with desert ecosystems.
- They keep precious water from evaporating.
- They reduce algal blooming.

Disadvantages

- High requirements for the racking system
- Higher cost

2) Match the following statements with respect to Holi and their ingredients

1. Black - Mercury sulfate
2. Green - Copper sulfate
3. Silver - Aluminum bromide
4. Red - Lead oxide

How many of the pairs given above is/are correct?

- a. 1 pair only
- b. 2 pairs only
- c. 3 pairs only
- d. 4 pairs

Answer : b

Holi and their Ingredients

- Black - Lead oxide
 - Green - Copper sulfate and malachite green
 - Silver - Aluminum bromide
 - Blue - Prussian blue
 - Red - Mercury sulfate
-
- Synthetic colors have chemicals that can harm your skin, respiratory tract, and eyes.
 - These chemicals also harm the environment, adding particulate matter (PM) 10 to the air and taking years to decompose.
 - Holi powders contained more than 75 % of PM10 particles.
 - Particulate matter are tiny pieces of solids or liquids suspended in the air, that can get into your eyes, nose, throat, and lungs, causing infections and breathing trouble.
 - Mica dust is often added as a sparkling agent to the dry powders that can lead to multiple microtraumas of skin and predisposition to infections.
 - Natural gulaal or color is made from dried flower petals, vegetable dyes, starch, and leaves have a short shelf life.
 - The more vibrant color having more chemicals mixed in but natural products give off a more muted color.
 - Sourcing materials and making natural colors costs time and money than the synthetic variety.

3) Consider the following statements regarding UN High Seas Treaty

1. The treaty was negotiated under the United Nations Convention on Laws of the Sea (UNCLOS).
2. The treaty was agreed at the 2022 UN biodiversity conference.
3. The treaty recently included a provision that every country has the right to access open seas for drilling and trawling operations for catching fish.

Which of the statements given above is/are correct?

- a. 1 and 2 only
- b. 2 only
- c. 3 only
- d. 1, 2 and 3

Answer : a

UN High Seas Treaty

- Two-thirds of the world's oceans are currently considered international waters but 1% of these waters known as "high seas" have been protected.
- The UN High Seas Treaty was negotiated under the United Nations Convention on Laws of the

Sea (UNCLOS).

- It will help achieve the global goal of protecting 30% of the world's oceans by 2030 – 30*30 goal.
- At present every country has the right to access open seas resulting in large-scale drilling and trawling operations for catching fish and other animals for commercial purposes.
- It provides arrangements for sharing marine genetic resources.
- It provides requirements for environmental impact assessments (EIA) for deep sea activities like mining.
- It will only enter "into force" once 60 countries have signed up and legally passed the legislation in their own countries.

The EU recently announced nearly 820m euros (£722.3m) for international ocean protection.

4) Consider the following statements regarding NISAR satellite

1. It is a cooperation between ISRO and NASA.
2. It aims to create high-resolution images of the earth's surface working on the all-weather.
3. NISAR is the first satellite mission that will collect radar data in two microwave bandwidth ranges namely L-band and S-band.

Which of the statements given above is/are correct?

- a. 1 and 2 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

Answer : d

NISAR satellite

Recently, Indian Space Research Organisation (ISRO) received the NASA-ISRO Synthetic Aperture Radar (NISAR) satellite from the U.S. space agency in Bengaluru.

- NISAR is the first satellite mission that will collect radar data in two microwave bandwidth ranges.
- L-band (1-2 GHz, commonly used for satellite communication and remote sensing)
- S-band (2-4 GHz, commonly used for satellite communication and weather monitoring). ‘
- ‘SAR’ is a type of remote-sensing technology that uses radars instead of optical sensors to create high-resolution images of the earth's surface.
- It can penetrate clouds and vegetation to generate accurate data.
- NISAR will image the entire land and ice masses of the earth four to six times a month.
- The output is expected to be available within a couple of days of the observation and within hours in cases of disasters.

5) Consider the following statements with respect to the facts about Antarctica

1. Adelie Penguins are endemic in Antarctica.
2. Antarctica is the largest desert in the world, it contains no indigenous people.
3. Recently, India's research station Dakshin Gangotri is become active.

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

- a. 1 and 2 only
- b. 1 and 3 only

- c. 2 only
- d. 1, 2 and 3

Answer : a

Facts about Antarctica

Adélie penguins north and east of the 'Adélie gap' declines elsewhere in the Antarctic Peninsula region because of climate changes.

- Adélie penguin (*Pygoscelis adeliae*) is found only in the Antarctic continent.
- Blood falls is a waterfall in Antarctica where saltwater is contaminated by iron oxide.
- Adélie Gap is situated between Anvers Island and Livingston Island.
- There are no indigenous people in Antarctica.
- Antarctica is the largest desert in the world.
- India has two research centres in Antarctica: Maitri and Bharati.
- The third one Dakshin Gangotri is not active and is used as a supply base.



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