



Daily Current Affairs Prelims Quiz 24-09-2022 (Online Prelims Test)

1) Consider the following statements regarding Algae bio-fuels:

1. They are alternative to both liquid fossil fuels and biofuel sources.
2. Algae biomass is converted to oil using the catalytic hydrothermal liquefaction technology.
3. In the above process water is used as solvent to extract oil from the biomass.

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

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

Answer : d

Algae biofuels

- They are alternative to fossil fuels that uses algae as its source of energy-rich oils.
- They are also an alternative to commonly known biofuel sources, such as corn and sugarcane.
- Algae can synthesize large volumes of oil (20 times more than that of mustard per acre), grow fast (10 times quicker than terrestrial plants) and capture carbon dioxide (CO₂).
- Microalgae are excellent at converting CO₂ and sunlight into oil-rich biomass, especially when compared to land-based crop plants like oil palm and soy.
- By adapting microalgae to function as cell factories producing energy-dense oils that can easily be refined into renewable diesel and jet fuel, we can reduce greenhouse gas emissions by 70 per cent.
- The major challenges associated with algae biofuel include large water requirements, high cost of growth nutrients, expensive biomass harvesting, and difficult oil extraction from algae cells.
- Catalytic hydrothermal liquefaction technology is used to convert algae biomass to oil.
- Under this process, water is used as solvent under high temperature and pressure to extract oil from the biomass.

2) Consider the following statements regarding Breakthrough Agenda Report 2022:

1. It is an international clean technology plan to help keep 5°C in reach.
2. It has been released by the World Resources Institute and Intergovernmental Panel on Climate Change.

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 : a

Breakthrough Agenda

- The Breakthrough Agenda is an unprecedented international clean technology plan to help keep 1.5°C in reach.
- It provides a framework for countries and businesses to join up and strengthen their actions every year, in every sector.
- It is done through a coalition of leading public, private and public-private global initiatives, and signposts the leading global initiatives that will help ensure success.
- It has been released by the International Energy Agency, the International Renewable Energy Agency and the UN Climate Change High-Level Champions.

3) Which of the following countries is/are the members of Asian Palm Oil Alliance?

1. Afghanistan
2. Sri Lanka
3. Bangladesh
4. Nepal
5. Bhutan
6. India

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

- a. 1, 2, 3, 4 only
- b. 2, 3, 4, 5, 6 only
- c. 2, 3, 4, 6 only
- d. 1, 2, 5, 6 only

Answer : c

Asian Palm Oil Alliance

- It is formed by five major palm oil importing countries, including- India, Pakistan, Sri Lanka, Bangladesh and Nepal.
- It was formed based on the idea to gain collective bargaining power and make imports sustainable.
- The alliance will work to

1. Change negative image of palm oil and ensure that it is recognized as a high-quality, economical, and healthy vegetable oil.
2. Safeguard economic and business interests of palm oil consuming countries and increase its consumption in member countries.

4) Consider the following statements:

1. C-Band spectrum is the middle of the radio spectrum with frequency bands of 3.7-3.98 GHz and it supports 5G services.
2. A radio altimeter is an instrument that is used in measuring the frequency of 5G signals at the mobile signal towers.

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 : a

C Band and Radio altimeters

- A radio altimeter is an instrument that provides direct height-above-terrain information to various aircraft systems.
- For aircraft operations, the use of altimeters in this band ensures highly precise measurements of the plane's altitude.
- The radio altimeters pick up the faintest signals reflected off the ground in the assigned frequencies to achieve highly accurate results.
- C-band falls in the middle of the radio spectrum used for 5G networks.
- It refers to the frequency bands of 3.7–3.98 GHz.

5) Consider the following pairs of Indigenous toys and the states they belong to:

| Indigenous toys | State |
|---------------------|----------------|
| 1. Etikoppa toys | Telangana |
| 2. Channapatna toys | Andhra Pradesh |
| 3. Bamboo toys | Mizoram |
| 4. Ghuggu | Gujarat |

How many of the above pairs are matched **incorrectly**?

- a. Only one pair
- b. Only two pairs
- c. Only three pairs
- d. All four pairs

Answer : d

Indigenous toys

- Terracotta toys from Gujarat, Kondapalli and Etikoppa toys of Andhra Pradesh, Channapatna toys of Karnataka and Bamboo toys of Tripura.
- A novel method being deployed by the government to promote indigenous toys for learning among very young children.
- The Ministry of Women and Child Development has compiled a State-wise national repository of indigenous toys and shared this with all States and Union Territories as part of its month-long special nutrition campaign.
- The Ministry is using these local, indigenous and DIY toys in anganwadi centres for creating awareness and educating children and their families about healthy living and good nutritional practices.
- States have also been directed to share and exchange their local play materials, folk stories as well as indigenous toys with each other.
- The Ministry has in fact paired the States to ensure diversity, for example: Andhra Pradesh with Punjab and Arunachal Pradesh with Madhya Pradesh.
- Ghuggu is indigenous to the state of Punjab.