

1. It is one of the largest freshwater lakes in India. It is located between Krishna and Godavari delta. It serves as an important habitat for migratory birds. The lake has been designated as a wildlife sanctuary and a wetland of international importance under the Ramsar Convention.

The above description refers to which of the following?

- a) Kolleru lake
- b) Chilika lake
- c) Pulicat lake
- d) Wular lake

Answer: A

Explanation:

Kolleru lake

- Kolleru, one of the largest freshwater lakes in India, is situated between the **Krishna and West Godavari districts of Andhra Pradesh**.
- Many birds migrate here in winter, such as Siberian crane, ibis, and painted storks.
- The lake is an important habitat for an estimated 20 million resident and migratory birds, including the grey or spot-billed pelican.
- The lake was declared as a wildlife sanctuary in November 1999 under India's Wildlife Protection Act of 1972,
- It is designated as a **wetland of international importance** under the international **Ramsar Convention**.

Chilika lake

- Chilika Lake is **Asia's largest brackish water lake** and a shallow lagoon with estuarine character spread across the districts of **Puri, Khurda and Ganjam in the state of Odisha** in eastern India.
- It is the **largest wintering ground for migratory waterfowl** found anywhere on the Indian sub-continent.
- Chilika lake is designated as a "Ramsar Site", that is a **wetland of International Importance**.

Pulicat lake

- **Pulicat Lagoon** is the **second largest brackish water lagoon** in India, after Chilika Lake. It is present in the Coromandel Region i.e. Andhra Pradesh-Tamil Nadu Border.

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- The barrier island of Sriharikota separates the lake from the Bay of Bengal and is home to the Satish Dhawan Space Centre.

Wular lake

- Wular Lake is also one of the largest freshwater lakes in Asia. The lake lies at an altitude of 1,580 m.
- The lake basin was formed as a result of tectonic activity and is fed by the Jhelum River.
- The lake is one of the Indian wetlands designated as a Ramsar site.

Ramsar convention:

- The Ramsar Convention on Wetlands is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.
- The inclusion of a wetland in the List embodies the government's commitment to take the steps necessary to ensure that its ecological character is maintained. The Convention includes various measures to respond to threats to the ecological character of Sites.

Why in the news?

The Kolleru lake bed villages in Krishna and West Godavari districts are buzzing with tourists once again, after months of pandemic break.

2. Which of the following is/are advantages of 5G technology?

- 1) Faster speed
- 2) Ultra Low latency
- 3) Increased connectivity

Select the correct answer using the codes given below

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

Answer: D

Explanation:

The fifth generation of mobile communication networks is 5g technology.

5G is projected to bring three main benefits:

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Faster speed: Data transfer speeds are projected to be about 10 times higher with 5G than is possible with 4G. That means significantly faster transmission of images and videos. With 4G/LTE, downloading a high-definition movie might take about 10 minutes. With 5G, it should take less than a second.

Shorter delays: Though it's not always noticeable, there is often a brief lag in time from when data is sent to when it's received. 5G should reduce this so-called latency, making it possible, for example, to watch high-speed virtual reality video with no delays or glitches.

Increased connectivity: Cell towers equipped with 5G technology would have greatly increased capacity over 4G/LTE. That means more people — and more devices — should be able to communicate at the same time.

Hence all three are advantages of 5G technology.

Why in the news?

The emerging 5G technology with Internet of Things (IoT) is becoming the most revolutionary technology in the world.

3. Consider the following statements about 'State Rooftop Solar Attractiveness Index' (SARAL)

- 1) SARAL is the first of its kind index to provide a comprehensive overview of state-level measures adopted to facilitate rooftop solar deployment.
- 2) SARAL has been designed by the Ministry of Science and Technology.
- 3) The State of Karnataka has been placed at the first rank in the Index .

Which of the above statements is/are correct?

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

Answer: C

Explanation:

- SARAL has been designed collaboratively by the **Ministry of New and Renewable Energy(not ministry of Science and Technology),Shakti Sustainable Energy Foundation (SSEF), Associated Chambers of Commerce and Industry of India (ASSOCHAM) and Ernst & Young (EY)**. Hence statement 2 is incorrect.
- The Ministry of New and Renewable Energy (MNRE) has set a target of 175 GW of renewable energy capacity by 2022, of which 100 GW solar power is to be operational by March 2022, of which 40 GW is expected to come from grid connected solar rooftops.
- State Rooftop Solar Attractiveness Index (SARAL) is the first of its kind index to provide a comprehensive overview of state-level measures adopted to facilitate rooftop solar deployment. Hence statement 1 is correct.

About SARAL Index:

- The Index evaluates Indian states based on their attractiveness for rooftop development.
- It was launched during the Review Planning and Monitoring (RPM) Meeting with States and State Power Utilities.

SARAL currently captures five key aspects –

- i. robustness of policy framework
 - ii. implementation environment
 - iii. investment climate
 - iv. consumer experience
 - v. business ecosystem
- The State of Karnataka has been placed at the first rank. Hence statement 3 is correct.
 - Telangana, Gujarat and Andhra Pradesh have got 2nd, 3rd and 4th rank respectively.

4. The term cellular agriculture seen in the news refers to

- (a) Production of electrical energy from agricultural fields without use of fossil fuel
- (b) The practice of agriculture that focuses on the production of proteins, fats, and tissues using

biotechnology

- (c) Production of hydrogen fuel cells
- (d) Method of zero budget farming technique

Answer: B

EXPLANATION

- **Cellular agriculture** refers to the practice of agriculture that focuses on the production of proteins, fats, and tissues using biotechnology
- **Cultured meat** is meat produced by in vitro cultivation of animal cells, instead of from slaughtered animals.
- It is a form of cellular agriculture.

5. Consider the following statements regarding the Intergovernmental panel on climate change (IPCC)

1. IPCC aims to provide governments at all levels with scientific information that they can use to develop climate policies
2. It is an initiative of World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP)
3. IPCC identifies the strength of scientific agreement in different areas and indicates where further research is needed.

Which of the statements given above is/are correct?

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

Ans: C

Explanation

- Created in **1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP)**, the IPCC aims to provide governments at all levels with scientific information that they can use to develop climate policies.
- The IPCC provides **regular assessments of the scientific basis of climate change**, its impacts and future risks, and options for adaptation and mitigation.
- The IPCC is an **organization of governments that are members of the United Nations or WMO**. The IPCC currently has 195 members. Thousands of people from all over the world contribute to the work of the IPCC.
- For the assessment reports, IPCC scientists volunteer their time to assess the thousands of scientific papers published each year to provide a comprehensive summary of what is known about the drivers of climate change, its impacts and future risks, and how adaptation and mitigation can reduce those risks.
- An open and transparent review by experts and governments around the world is an essential part of the IPCC process, **to ensure an objective and complete assessment** and to reflect a diverse range of views and expertise.
- **Statement 3 is correct:** Through its assessments, the **IPCC identifies the strength of scientific agreement** in different areas and indicates where further research is needed. **The IPCC does not conduct its own research.**