



PRELIMS QUESTIONS

Q1. Mangrove Forests can be found in which of the following River Deltas?

1. Ganga-Brahmaputra
2. Mahanadi
3. Godavari
4. Krishna

Select the correct answer using the codes below.

- (a) 1 and 2 only
- (b) 2, 3 and 4 only
- (c) 1 and 4 only
- (d) 1, 2, 3 and 4

Answer: (D)

Explanation:

In India, the Mangrove Forests spread over 6,740 sq. km which is 7 per cent of the world's mangrove forests. They are highly developed in the Andaman and Nicobar Islands and the Sunderbans - the largest in the world, located in the Ganges River Delta in Bangladesh and West Bengal. Other areas of significance are the Mahanadi, the Godavari and the Krishna Deltas. The table below shows that Mangroves can be found in every Coastal State with West Bengal being the highest.

Q2. Estuaries are among the most Productive Ecosystems in the world. What could be a possible reason?

1. Some Estuaries Form an Ecotone of Freshwater and Salty Seawater.
2. Estuaries are not subject to disturbing forces like Tides and Waves.

Which of the above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None

Answer: (A)

Explanation:

Statement 1: Estuaries and their surrounding wetlands are bodies of water usually found where rivers meet the sea. Estuaries are home to unique plant and animal communities that have adapted to brackish water—a mixture of fresh water draining from the land and salty seawater. An ecotone is a transition area between two biomes. It is where two communities meet and integrate. It has some of



the characteristics of each bordering biological community and often contains species not found in the overlapping communities. For e.g. the mangrove forests represent an ecotone between marine and terrestrial ecosystem. Other examples are grassland (between forest and desert).

Statement 2: They are subject both to marine influences—such as tides, waves, and the influx of saline water—and to riverine influences—such as flows of fresh water and sediment. The inflows of both seawater and freshwater provide high levels of nutrients both in the water column and in sediment, making estuaries among the most productive natural habitats in the world. The banks of many estuaries are amongst the most heavily populated areas of the world.

Q3. Kelp Forests are Underwater Areas with a high Density of

- (a) Brown Algae Seaweed
- (b) Coral Reefs
- (c) Mangroves
- (d) Hydrothermal Vents with Vegetation

Answer: (A)

Explanation:

Kelps are large brown Algae Seaweeds. Kelp grows in "Underwater Forests" (kelp forests) in shallow oceans. They are recognized as one of the most productive and dynamic ecosystems on Earth. Frequently considered an ecosystem engineer, kelp provides a physical substrate and habitat for kelp forest communities E.g., along the Norwegian coast these forests cover 5800 km², and a wide range of sea life uses kelp forests for protection or food, including fish, particularly rockfish, and many invertebrates. However, the influence of humans has often contributed to kelp forest degradation. Of particular concern are the effects of overfishing nearshore ecosystems, which can release herbivores from their normal population regulation and result in the overgrazing of kelp and other algae. Charles Darwin once said, "I can only compare these great aquatic forests...with the terrestrial ones in the intertropical regions. Yet if in any country a forest was destroyed, I do not believe so nearly so many species of animals would perish as would here, from the destruction of kelp.

Q4. Which of the following Particularly Vulnerable Tribal Groups Reside in the Andaman Archipelago?

- 1. Onges
- 2. Reangs
- 3. Shorn Pens
- 4. Jarawas
- 5. Todas

Choose the correct option using the codes below:

- (a) 2, 3 and 5 only



- (b) 1, 3 and 4 only
- (c) 1, 4 and 5 only
- (d) 1, 2, 3, 4 and 5

Answer: (B)

Explanation

- Five members of the Great Andamanese Tribe, a Particularly Vulnerable Tribal Group (PVTG), have tested positive for COVID-19. This is one of the first cases of COVID-19 infections among the endangered PVTGs of the region.
- The PVTGs are communities that are more vulnerable among tribal groups and are put under a special category by the Government of India.
- **Great Andamanese** are one of five PVTGs that reside in the Andaman archipelago. The other four PVTGs are **Jarawas, Onges, Sentinelese and Shorn Pens**.
- Anthropologists classify the Great Andamanese as part of the Negrito tribes that inhabit isolated parts of Southeast Asia and the Andaman Islands.

Recent studies by geneticists indicate that the Andamanese are possibly related to the **Negritos of the Malay Peninsula and in the Philippines**.

- Originally, the Great Andamanese were ten distinct tribes, including the **Jeru, Bea, Bo, Khora, and Pockiwar**, each with its separate language.
- The language of the Great Andamanese, **Sare**, has largely been lost, with the last surviving speaker dying earlier this year. The tribe now speaks mostly Hindi.

Dwindling Population

- In 1788, when the British first tried to colonise the islands, the Great Andamanese numbered between 5,000 and 8,000.
- Several members of the tribe were killed in encounters with the British to protect their territories. Later, many were wiped out in epidemics brought in by the colonisers, such as measles, syphilis and influenza.
- By 1901, the population of the Great Andamanese was down to 625. At present, only about 59 members of the community survive — 34 live in the Strait Island, the rest are in Port Blair.
- Major factors contributing to the diminishing population of the Great Andamanese include environmental 'disturbances', contagious diseases as a result of contact with city dwellers, and a high mortality rate assisted by addictions to alcohol, tobacco and opium.

Q5. Failure to Report a Notifiable Disease is:

- (a) Criminal Offence.
- (b) Civil Offence.
- (c) Both a Criminal Offence and a Civil Offence.



(d) Neither a Criminal Offence nor a Civil Offence.

Answer: (A)

Explanation:

- The National Cancer Registry Programme Report, 2020 was recently released by The Indian Council of Medical Research (ICMR) and the National Centre for Disease Informatics and Research (NCDIR).
- The report contains 5 years (2012-2016) data from the network of cancer registries working under the National Cancer Registry Programme (NCRP).
- The NCRP was initiated by the Indian Council of Medical Research in 1982 at select hospitals in the country. Since then it has continuously and systematically collected data on cancer incidence, mortality and clinical aspects of cancer, which helps in the estimation of trends, survival and burden of disease.
- The report recommends making cancer a notifiable disease in all the states of the country, which will help to improve tracking of the disease.

Highlights Of The Report

- The highest incidence of cancer in India was observed in the northeastern region.
- Sikkim was the only state in India to show a decrease in cancer prevalence for both genders, reflecting their good public health system.
- The report estimates that cancer cases in the country will rise by 10% from 2016 (12.6 lakh cases) to 13.9 lakhs cases in 2020.
- In 2020, tobacco-related cancers are estimated to contribute to 27.1% of the total cancer burden and will be highest in the north-eastern region of the country.
- The incidence of other forms of cancers in 2020 will be cancers of the gastrointestinal tract (19.7%), breast cancer (14.8%) and cervix cancer (5.4%).
- Further, cancer cases in the country are likely to increase to 15.6 lakhs by 2025-a a 12% increase from currently estimated cases (2020).

Male-Female Distribution

- o According to the report, cancer of the lung, mouth, stomach and oesophagus were the most common cancers among men, while for women, cancer of the breast and cervix uteri were the most common.
- o Going by the data from 2016, cancer impacts more women than men in terms of overall numbers and it is projected that this will continue in the years to come.
- o The **Cancer Incidence Rate for Men**, ranges from 269.4 per 1,00,000 population in the Aizawl district (highest in India) to 39.5 per 1,00,000 population in Maharashtra's Osmanabad and Beed districts (lowest in the country).
- o The **Cancer Incidence Rate for Women**, ranges from 219.8 per 1,00,000 population in Arunachal Pradesh's Papumpare district to 49.4 per 1,00,000 population in Osmanabad and Beed.



Cancer As A Notifiable Disease

- Majority of states in India have not declared cancer as a notifiable disease. So far, **only nine states** in India have declared cancer as a notifiable disease.
- A notifiable disease is any disease that is required by law to be reported to government authorities. This means every government hospital, private hospital, laboratories, and clinics have to report cases of the disease to the government.
- Any failure to report a notifiable disease is a **Criminal Offence** and the state government can take necessary actions against defaulters.
- The process helps the government to keep track of the disease and formulate a plan for elimination and control. In less infectious diseases, it improves information about the burden and distribution of disease.

National Centre for Disease Informatics and Research (NCDIR)

- The primary focus of NCDIR is to establish a nationwide database for cancer through the National Cancer Registry Programme.
- The broad objective of NCDIR is to sustain and develop a national research data-base on cancer, diabetes, cardiovascular diseases (CVD), and stroke through recent advances in electronic information technology.
- It also facilitates and coordinates research activities through clinical studies in diabetes, CVD and strokes.

Q6. Which of the following categories are eligible to get loans under Priority Sector Lending?

1. Agriculture
2. MSMEs
3. Export Credit
4. Housing
5. Start-ups

Choose the correct option using the codes below:

- (a) 1 and 2 only
- (b) 1, 2 and 4 only
- (c) 3, 4 and 5 only
- (d) 1, 2, 3, 4 and 5

Answer: (D)

Explanation

To increase the focus on inclusive development, the Reserve Bank of India (RBI) has revised the guidelines for Priority Sector Lending.



Priority Sector Lending Norms

- As per priority sector lending norms, all scheduled commercial banks have to give 40% of their loans (measured in terms of Adjusted Net Bank Credit), to certain specified sectors.
- These sectors include agriculture, micro, small and medium enterprises (MSMEs), export credit, education, housing, social infrastructure, renewable energy etc.
- This is to ensure that certain vulnerable sectors of the economy, who generally find it difficult to borrow loans from banks, can do so.

New Guidelines

- As per the revised guidelines, start-ups will be able to borrow funds from banks under the priority sector lending category.
- Borrowing limits for the renewable energy sectors-- solar power and compressed bio-gas plants-- would also be increased.
- The central bank would also increase the targets for lending to 'small and marginal farmers and 'weaker sections' under the PSL.
- The **M.K. Jain panel**, set up by RBI to study credit in rural areas, found that funds released by the government under the Rural Infrastructure Development Fund flowed more to states that had a higher share of rural bank credit.
- The panel also noted that few states like Kerala, Tamil Nadu, Telangana and Karnataka were getting agri-credit higher than their agriculture GDP, indicating the possibility of diversion of credit for nonagricultural purposes.
- Thus, in addition to continuing with the past practice of granting priority sector status for loans to underprivileged segments, weightage will be given to the region in which the loan is distributed.
- Higher weight will be given to priority sector loans in the identified districts where credit flow is comparatively lower. Further, a lower weight will be given in identified districts where the credit flow is comparatively higher.

Rationale Behind The Revision

- According to a FICCI survey, 70% of start-ups stated that their businesses have been impacted by covid-19, while 12% of the start-ups have shut operations and 60% are operating with disruptions. With uncertainty in the business environment, many start-ups are struggling to run their operations.
- Further, many early-stage start-ups have to shut down their companies because of lack of funds.
- Banks generally do not give loans to start-ups because of their low creditworthiness. Thus, they have to depend on other expensive sources of funds like venture capital funding.
- The revised guidelines will help start-ups to borrow funds at easier norms and free up their equity. Now, even a pre-revenue stage start-up, without customers, may also be able to get loans from banks.



- This would help them to sustain their operations, increase their operational efficiency and grow their business.

Venture Capital

- Venture Capital (VC) is a form of private equity financing that is provided by venture capital firms or funds to start-ups, early-stage, and emerging companies that have high growth potential.
- Venture capital firms or funds invest in these early-stage companies in exchange for equity, or an ownership stake.
- Venture capitalists take on the risk of financing risky start-ups in the hopes that some of the firms they support will become successful. As start-ups face high uncertainty, VC investments have high rates of failure.

Q7. In terms of self-sustenance and endurance, which among the following is the most stable Ecosystem?

- (a) Forest
- (b) Desert
- (c) Ocean
- (d) Mountains

Answer: (C)

Explanation:

Ocean is a self-sustaining ecosystem and covers nearly 2/3rd of the earth's area. It is the oldest ecosystem. It is least affected by natural calamities. It is highly diverse (from phytoplankton to seagrass to whales) and a productive ecosystem and contains the earliest evolutionary life forms. Evolutionary history has also been more stable than in Terrestrial Environments.

Q8. Regarding Peatlands, consider the following statements.

1. Peatlands are wetlands that contain a mixture of decomposed organic material.
2. Peatlands often lack oxygen as they are partially submerged in a layer of water.
3. If they are drained, their high carbon content makes them vulnerable to incineration.

Select the correct answer using the codes below.

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

Answer : (D)



Explanation:

The complex biodiversity of peatlands means they are home to a variety of species. Their high carbon content makes them uniquely vulnerable to incineration if they are drained. They are a globally important carbon store. The unregulated exploitation of peatlands can potentially be detrimental to the environment and climate, as it could release carbon emissions that have been locked in for millennia.

Learning and Context: The Brazzaville declaration was signed to promote better management and conservation world's largest tropical peatlands-Cuvette Centrale region in Congo Basin from unregulated land use and prevent its drainage and degradation. It was signed jointly by the Democratic Republic of Congo (DRC), Republic of Congo and Indonesia on the sidelines of the Third Partners Meeting of Global Peatlands Initiative held in Brazzaville, Republic of Congo. The Cuvette Centrale region in Congo Basin is the world's largest natural tropical peatlands, which are about the size of England. It stores three years the equivalent of global greenhouse gas emissions.

Q9. Consider the following statements about Pokkali Rice:

1. Pokkali rice has saltwater resistance qualities.
2. Pokkali rice has been given a GI tag.

Which of the statements given above is/are correct?

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

Answer: (C)

Explanation:

- Recently farmers in West Bengal have started experimenting with the pokkali variety of rice from Kerala to deal with the crisis created by **severe seawater inflow into paddy fields** in Sundarbans after the cyclone, Amphan hit West Bengal.
- The Pokkali is a **unique saline tolerant rice variety** flourishes in the rice paddies of coastal Alappuzha, Ernakulam and Thrissur districts of Kerala.

Characteristics:

- o To survive in the water-logged field, the **rice plants grow up to 2 m**. Pokkali is famed for its peculiar taste, extra-large grains size and high protein content.
- o The **single-season paddy** is raised in saltwater fields **between June and November** followed by a season of fish-farming.
- o **It is organically-grown and doesn't require other fertilizer or manure** as the tidal flows make the fields highly fertile and they draw nutrients from the prawns' excrement and other remnants.



- o Pokkali has medicinal properties and its higher value of antioxidants and low carbohydrate content makes it preferable to those on a low sugar diet.
- The uniqueness of the rice has **brought it the Geographical Indication (GI) tag** and is the subject of continuing research.
- **Vyttila-11 is the latest variety of the Pokkali Rice.** It promises a better yield of about 5 tonnes per hectare than the previous varieties and is crossed with the Jyoti variety of rice popular in Kerala. The crop duration is about 110 days.

Q10. Consider the following statements regarding Teesta River:

1. It is a Tributary of the Brahmaputra River which flows through India, Bhutan and Bangladesh.
2. It rises in the Himalayas near Chunthang in Sikkim.

Which of the above statements is/are correct?

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (B)

Explanation:

Bangladesh is discussing an almost \$1 billion loan from China for Comprehensive Management and Restoration Project on the Teesta river. The project is aimed at managing the river basin efficiently, controlling floods and tackling the water crisis in summers. India and Bangladesh have been engaged in a long-standing dispute over water-sharing in the Teesta. Bangladesh's discussions with China come at a time when India is particularly wary about China following the standoff in Ladakh.

Teesta River

- Tista River, a Tributary of the Jamuna River (Brahmaputra River), flowing through India and Bangladesh.
- It rises in the Himalayas near Chunthang in Sikkim (India), flows to the south, cutting a deep gorge through the Siwalik Hills east of Darjiling (in West Bengal, India), and turns southeast to run through the Sivok Khola pass onto the plains of West Bengal.
- Originally, the river continued southward to empty directly into the upper Padma River (Ganges [Ganga] River).
- However, later, the river changed its course to flow eastward, crossing the Rangpur region of Bangladesh to join the Jamuna River near Chilmari. The Teesta is one of the 54 rivers that enter Bangladesh from upstream India before flowing into the Bay of Bengal. Teesta Dispute
- In 1983, India and Bangladesh had agreed to an ad hoc sharing of the water during the dry season (October to April) with an allocation of 36 per cent for Bangladesh and 39 per cent for



India, leaving 25 per cent to be decided later. But this has remained pending for several decades.

- Bangladesh wants a fair and equitable distribution of Teesta Waters from India, on the lines of the Ganga Water Treaty of 1996.
- In 2011, both sides had agreed to share the river's water 50:50. This agreement was not signed due to opposition from the chief minister of West Bengal.

Recent Strains In India – Bangladesh Relation

- Citizenship Amendment Act (CAA) – Bangladesh PM said that while the CAA is an internal matter of India, the act was “not necessary”.
- Tablighi Jamaat - The continued custody of Tablighi Jamaat members is turning into another friction point.

Q11. Intergovernmental Oceanographic Commission (IOC) has been established by

- (a) World Meteorological Organization
- (b) UNESCO
- (c) International Council for the Exploration of the Sea
- (d) International Institute of Ocean Technology

Answer: (B)

Explanation

- UNESCO's Intergovernmental Oceanographic Commission has granted “**Tsunami Ready**” **Recognition** to the two Coastal Villages of Odisha.
- These villages are - **Venkatraipur** (Ganjam district) **and Noliasahi Villages** (Jagatsinghpur District).
- With this, **Odisha became the First State** in the country to have such villages and **India the First in the Indian Ocean Region** to achieve the honour from Commission.
- Odisha State Disaster Management Authority was set up in the state following the 1999 super cyclone that claimed 10,000 lives. It has implemented the Tsunami Ready programme in the State.

Indian Ocean Tsunami Ready Programme of IOC-UNESCO

- It is a community performance-based programme that facilitates tsunami preparedness as an active collaboration of the community, community leaders, and national and local emergency management agencies.
- The main objective of this programme is to **improve coastal community preparedness** for tsunami emergencies, **minimize the loss of life and property** and **ensure a structural and systematic approach** in building community preparedness.



About Intergovernmental Oceanographic Commission

- The Intergovernmental Oceanographic Commission of UNESCO (IOC/UNESCO) was established by a resolution adopted by the **General Conference of UNESCO**.
- The **Commission aims to improve** the governance, management, institutional capacity, and decision-making processes of its Member States with respect to marine resources and climate variability and to foster the sustainable development of the marine environment, in particular in developing countries.
- The IOC is the **only UN body specialized in ocean science and services**.
- **UNESCO-IOC is co-convenor** with the World Meteorological Organization of the **World Climate Change Conference**.

Q12. Consider the following statements regarding Bru (Reang) community:

1. Ethnically, Brus are different from the Mizos.
2. This community does not have their own distinct language and dialect.
3. They form one of the different scheduled tribes of Tripura.

Which of the above statements is/are correct?

- (a) 1 and 2 Only
- (b) 1 and 3 Only
- (c) 2 and 3 Only
- (d) 1, 2 and 3

Answer: (B)

Explanation:

Three organisations representing the Bru community have rejected the sites proposed for their resettlement. These sites were proposed by the Joint Movement Committee (JMC), an umbrella group of non-Brus in Tripura.

Key Highlights

- The JMC comprising the Bengali, Mizo, Buddhist Barua and other communities had submitted a memorandum to the Tripura Government.
- The memorandum specified six places in Kanchanpur and Panisagar subdivisions of North Tripura District for the Resettlement of the Brus.

Why Bru Rejected The Sites

- Bru representatives contended that the people involved in site selection were not a part of either the quadrilateral agreement or signatory.

Background

- The quadrilateral agreement was signed among the Bru groups, the Centre and the State governments of Mizoram and Tripura in New Delhi in January 2020.



- According to the agreement, the Bru tribes will be settled in Tripura. Earlier, an agreement was signed in 2018 to send them back but it could not be implemented due to their protest.
- The government announced a package of Rs. 600 crore under this agreement.
- A fixed deposit of Rs. 4 lakh will be given to each family as an amount of government aid. They will be able to withdraw this amount after two years.
- According to the agreement, each of the displaced families will be given 40x30 sq ft residential plots.
- Apart from them, each family will be given Rs. 5,000 cash per month for two years.
- The agreement highlights that each displaced family will also be given free ration for two years and aid of Rs. 1.5 lakh to build their houses.

About Bru-Reang Refugee Crisis

- In 1997, about 30,000 Bru-Reang tribals fled from Mizoram due to ethnic tension. They took shelter in Tripura's refugee camps.
- The Government of India has been making several efforts for the permanent rehabilitation of Bru-Reang since 2010.
- In 2018, the government offered a package to these refugees for their peaceful return to the Mizoram. However, only a few families accepted the offer and went back to the Mizoram.

About BRU:

- The Brus—spread across Tripura, Mizoram and Parts of Southern Assam—are the most populous tribe in Tripura.
- Also known as Reangs in the state, they are Ethnically Different from the Mizos, with their own distinct language and dialect and form one of the 21 scheduled tribes of Tripura.

Q13. India's first Snow Leopard Conservation Centre will be opened in which among the following states?

- (a) Uttarakhand
- (b) Arunachal Pradesh
- (c) Jammu and Kashmir
- (d) Himachal Pradesh

Answer: (A)

Explanation:

- Taking another step towards conservation of elusive snow leopards, India's first Snow Leopard Conservation Centre will be opened in **Uttarkashi Forest Division in Uttarakhand**.
- The conservation centre will be built by the Uttarakhand forest department along with **United Nations Development Programme (UNDP)** as part of its six-year-long project, the **SECURE Himalayas**.



About Snow Leopard

- **Habitat and Distribution:** Snow leopards are **found in 12 countries**—including China, Bhutan, Nepal, India, Pakistan, Afghanistan, Russia, and Mongolia. In India, their Geographical Range Encompasses the States of Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh.

Conservation Status:

- o **IUCN:** Vulnerable.
- o **CITES- Appendix I Wildlife Protection Act:** Schedule I

Threats:

- o **Retaliatory Killings:** Snow leopards are often killed by local farmers because they prey on livestock such as sheep, goats, horses, and yak calves.
- o **Habitat Fragmentation:** The snow leopard habitat range continues to decline from human settlement and increased use of grazing space.
- o **Climate Change:** Impacts from climate change could result in a loss of up to 30 per cent of the snow leopard habitat in the Himalayas alone.
 - Snow Leopards play a key role as both top predators and as an indicator of the health of their high altitude habitat.

Additional Information

The SECURE Himalayas

- Started in 2017, it is a six-year-long project which aims at securing livelihoods, conservation, sustainable use and restoration of high range Himalayan ecosystems.
- The project also looks into the conservation of snow leopards and other endangered species and their habitats, found in the Himalayas.

Global Snow Leopard and Ecosystem Protection Program (GSLEP)

- In the **2013 Bishkek Declaration**, the 12 snow leopard range countries endorsed a comprehensive, long-term Global Snow Leopard Conservation Program – this was the birth of GSLEP.
- It seeks to address high-mountain development issues using the conservation of the snow leopard as a flagship.



Q14. The Oak Trees of the Himalayan Region are a Concern to Region because:

1. They are exotic species.
2. Their decay produces alkaline compounds that disturb the natural pH of forest soil.
3. Their introduction has reduced the population of keystone species in the region.
4. They soak a large amount of groundwater.

Select the correct answer using the codes below.

- (a) 4 only
- (b) 1 and 3 only
- (c) 1, 2 and 4 only
- (d) 2 and 3 only

Answer: (A)

Explanation:

Statement 1: Exotic means introduced from outside. But, these Oka trees are native to the region.

Statement 2: Decay of organic matter, in this case, would yield acidic products, not alkaline.

Statement 3: Based on statement 1, statement 3 is also wrong, because native trees help maintain ecosystem balance rather than hurting keystone species.

Statement 4: Though they soak nearly 60% of the groundwater of the region.



Q15. Milne Ice Shelf, recently in news, is located in which among the following Country?

- (a) Canada
- (b) Russia
- (c) Greenland
- (d) None of the above

Answer: (A)

Explanation:

- The collapse of **Canada's Milne Ice Shelf — the country's last one** — in a corner of the country's **Ellesmere Island**, has increased fears of the Arctic region being under severe stress due to Global Warming.
- The Milne ice shelf lost more than 40 per cent of its ice over two days end of July 2020. This has increased concerns over the rapid melting of ice and the breaking of old **ice shelves-large floating pieces of ice that form when a glacier or ice sheet flows into the sea surface**.
- This also meant the last known **epishelf lake — a water body dammed by the ice shelf and floating on the ocean surface** — in the northern hemisphere and on the Milne ice shelf, no longer exists. Ellesmere Island also lost two of its polar ice caps along with the Milne ice shelf.
- Ellesmere Island has **two other prominent ice shelves — Murray and Simmons** — that have also reduced in size and are likely to disappear in the next 10 years.

Q16. Eravikulam National Park, recently in news, is located in which among the following states?

- (a) Arunachal Pradesh
- (b) Kerala
- (c) Mizoram
- (d) None of the above

Answer: (B)

Explanation:

- A landslide has happened at Pettimudi, a hamlet in Rajamala ward in **Kerala's Idukki district**. Rajamala includes **Eravikulam National Park**, and the landslide was triggered from a shola forest region in the national park.
- The location where the landslide was triggered, according to the Kerala Geology Department, has a 40° slope, and any slope above 20° is **Vulnerable to Slipping during Heavy Rain**. The soil has a high content of sand, which absorbs more water, takes a loose form, and is at risk of slipping down.
- An analysis of landslides in Idukki by the State Disaster Management Authority has shown that highintensity rainfall saturates the soil on the slopes. Soil with higher clay content has high water retention capacity and low drainage capacity, leading to high water pressure in the slope material.



About Eravikulam National Park

- Eravikulam National Park was managed as a **Game Reserve** by Kannan Devan Hill Produce Company till 1971. The imperatives of land reforms led to the enactment of the **Kannan Devan Hills (Resumption of Lands) Act 1971** by which all lands that were not under cultivation by the company were vested with the Government of Kerala.
- The Government of Kerala declared the area as 'Eravikulam-Rajamalai' Wildlife Sanctuary in 1975 for the protection of the Nilgiri Tahr and subsequently, in 1978 it was upgraded to a National Park.

Game Reserve: A game reserve (also known as a wildlife preserve or a game park) is a large area of land where wild animals live safely or are hunted in a controlled way for sport.

Significance:

- o The park holds the largest viable population of the **endangered Nilgiri Tahr** and is a famous **habitat of Neelakurinji which blooms once in 12 years**.
- o The park represents the largest and least disturbed stretch of unique **Montane Shola Grassland vegetation** in the Western Ghats.
- o The National Park is regionally important as a **catchment area for both east (Tributaries of River Pambar) and West (Tributaries of River Periyar and Chalakkudy) Flowing Rivers**.
- o The **Highest Peak in Peninsular India, Anamudi (2695 m)**, is situated in this park.
- o The park in continuity with the neighbouring **Chinnar Wildlife Sanctuary, Anamudi Shola National Park, Pampadum Shola National Park, Kurinjimala Sanctuary and Anamalai Tiger Reserve** forms the largest conservation landscape in the Western Ghats.

Q17. Consider the following statements regarding Agatti Island

1. It is Situated on a Coral Atoll in the Union Territory of Lakshadweep
2. It is located to the West of Kavaratti Island.

Which of the following statements given above is/are correct?

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (C)

Explanation:

- The southern bench of the National Green Tribunal has granted an **interim stay on the felling of Coconut Trees on Agatti Island in Lakshadweep** form a beach road.
- The Tribunal has constituted a committee to find out whether there has been any violation of the Integrated Island Management Plan (IIMP) approved by the Lakshadweep Administration.



About Agatti Island

- Agatti Island is a 7.6 km long island, situated on a **Coral Atoll called Agatti atoll** in the Union Territory of Lakshadweep, India.
- The Agatti Island is at a distance of 459 km (248 nautical miles) from Kochi and is **located the West of Kavaratti Island**. It has a north-east, south-west trend with a long tail on the south.
- Fishing is the most important industry of Agatti which is perhaps the only island besides Minicoy getting surplus fish.
- **Integrated Island Management Plan (IIMP), 2015:** It governs management activities on 10 islands of the Lakshadweep. IIMP for Lakshadweep was formulated on the basis of a report submitted by the Supreme Court-appointed Expert Committee, headed by Justice R.V. Raveendran.

Q18. Consider the following statement about the Association of Renewable Energy Agencies of the States (AREAS)

1. AREAS has been formed on the initiative of the Ministry of New and Renewable Energy.
2. Prime Minister is the ex-officio President of AREAS.

Which of the statements given above is/are correct?

- (a) 1 Only
- (b) 2 Only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer: (A)

Explanation:

Union Minister of Power and New & Renewable Energy Graced the Ceremony of **6th Foundation Day of AREAS** on 27th August 2020 and launched the AREAS website and also Telephone Directory of AREAS.

About the Association of Renewable Energy Agencies of the States (AREAS)

- AREAS has been formed on the **initiative of the Ministry of New and Renewable Energy**.
- It aims to interact and learn from each other's experiences and also share their best practices and knowledge regarding technologies and schemes/programmes.
- The AREAS got registered under the **Society Registration Act 1860 on 27 August 2014**.
- Union Minister for New & Renewable Energy is the Patron of the Association and **Secretary, MNRE is the ex-officio President of the Association**. All SNAs (State Nodal Agencies) are a member of the Association.



Q19. Sandalwood and Mulberry Trees together can be found in

- (a) Tropical Deciduous Forests
- (b) Tropical Evergreen Forests
- (c) Montane Forests
- (d) Temperate Evergreen Forests

Answer: (A)

Explanation:

These forests are found in areas where the rainfall is between 100cm to 200 cm. They are found in the states of Jharkhand, West Orissa and Chhattisgarh. Moist Deciduous Forests are also found on the eastern slopes of the Western Ghats. Teak trees are the most dominant species of trees found in these forests. Bamboos, Sal, Shisham, Sandalwood, Khair, Kusum, Arjun, Mulberry are some of the other commercially important species found here.

Q20. Desert Plants have which of the following Adaptations for Survival?

1. Stomata arranged in deep pits to minimise water loss through transpiration
2. Special photosynthetic pathway enabling their stomata to remain closed during day time
3. Roots performing photosynthetic functions

Select the correct answer using the codes below.

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

Answer: (A)

Explanation:

Many desert plants have a thick cuticle on their leaf surfaces and have their stomata arranged in deep pits to minimise water loss through transpiration. So, 1 is correct. They also have a Special Photosynthetic Pathway (CAM) that enables their stomata to remain closed during day time. So, 2 is correct. Some desert plants like Opuntia, have no leaves – they are reduced to spines—and the photosynthetic function is taken over by the flattened stems. So, 3 is correct.



SNIPPETS

DE-NOTIFIED TRIBES (DNT)

Minister for Social Justice and Empowerment informed Rajya Sabha about initiatives for the development of Nomadic Tribes.

About:

- To promote the socio-economic development of De-notified, Nomadic and Semi-Nomadic Communities, the Development and Welfare Board for De-notified, Nomadic and Semi-Nomadic Communities (DWBDNCs) have been constituted on 21.02.2019 for a period of three years extendable up to 5 years.
- Also, the following schemes are being implemented by the Central Government through State Government/UT Administrations for the DNTs:-
 - Ambedkar Pre-Matric and Post-Matric Scholarship for DNT Boys and Girls.
 - Nanaji Deshmukh Scheme of Construction of Hostels for DNT Boys and Girls.
- As per the Cabinet decision, a Committee under the Chairmanship of Vice-Chairman NITI Aayog is in place, which has taken up the task of identification of DNT communities that are yet to be formally classified.
- NITI Aayog has assigned the task of an ethnographic survey of 62 tribes to the Anthropological Survey of India (ANSI) to conduct the studies of these communities in different parts of the country.

FIRST VIRTUAL TRADE FAIR (VTF) BY APEDA

First Virtual Trade Fair (VTF) organised by APEDA to boost the exports potential of India's agricultural and processed food products during the COVID19 pandemic drew a huge response from participants, exporters and buyers from countries.

About:

- The VTF was organised during March 10-12, 2021.
- The fair with the theme 'India Rice and Agro Commodity', focussed on showcasing the exports potential of various agricultural commodities.
- Because of COVID19 related restrictions on physical travel and trade, APEDA has initiated the concept of VTF for sustaining India's agricultural and processed food products exports and also exploring new markets for expanding export footprints.

Do you know?

- Agricultural and Processed Food Products Export Development Authority (APEDA) is an Apex-Export Trade Promotion Active government body set up by the Ministry of Commerce and Industry.
- It was formed in 1986 under the Agriculture and Processed Food Products Export Development Authority Act, 1985.



AIR POLLUTION

A report on Global air pollution was released from IQ Air, a Swiss air quality technology company specialising in protection against airborne pollutants, and developing air quality monitoring and air cleaning products.

Key findings:

- Delhi remained the most polluted capital city in the world but India, on the whole, had improved its average annual PM_{2.5} (particulate matter) levels in 2020 than in 2019,
- India is the third most polluted country in 2020, unlike in 2019 when its air was the fifth most noxious.
- Bangladesh and Pakistan were the countries in 2020 with worse average PM_{2.5} levels than India.
- China ranked 11th in the latest report, a deterioration from the 14th in the previous edition of the report.
- When ranked by cities, Hotan in China was the most polluted, with an average concentration of 110.2 µg/m³, followed by Ghaziabad in Uttar Pradesh at 106. Of the 15 most polluted cities, 13 were in India.
- In the 2020 report, 106 countries were evaluated. The pollution levels are weighted averages, meaning that the population of a country influences the pollution values reported.
- In 2020, 84% of all monitored countries observed air quality improvements.
- However, of the 106 monitored countries, only 24 met the World Health Organization annual guidelines for PM 2.5.

WORLD ENERGY TRANSITIONS OUTLOOK: 1.5°C PATHWAY

The International Renewable Energy Agency (IRENA) released the World Energy Transitions Outlook report.

Key highlights of the report:

- Previewed at the virtual Berlin Energy Transition Dialogue, which began on March 16, 2021, the report proposes energy transition solutions for the narrow pathway available to contain the rise of temperature to 1.5 degree Celsius.
- The COVID-19 crisis offers an unexpected opportunity for countries to decouple their economies from fossil fuels and accelerate the shift to renewable energy sources,
- It estimated that by 2050, 90% of total electricity needs would be supplied by renewables, followed by 6% from natural gas and the remaining from nuclear.
- The agency has identified 30 innovations for the integration of wind and solar PV in power systems.



GUIDANCE IAS

MORE THAN A COACHING

Office: 3B, 4th Floor, Croma Building, Pusa Road, Opp.
Pillar No. 108, Near Karol Bagh Metro Station, New Delhi - 5

011-45586829

9718793363

website : www.guidanceias.com

Important Info :

- The International Renewable Energy Agency (IRENA) is an intergovernmental organisation mandated to facilitate cooperation and promote the adoption and sustainable use of renewable energy.
- It was founded in 2009 and its statute entered into force in 2010.
- The agency is headquartered in Masdar City, Abu Dhabi.
- IRENA is an official United Nations observer.