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# **PRELIMS QUESTION**

# Q1. Consider the following statements;

- 1. Poverty and shared prosparity report is released by the Food and Agriculture Organization.
- 2. As per the report, half of the world will be moved to poverty by 2030.
- 3. Secondary Activities will be worst affected

Which of the above statements is/are correct?

(a) 1 only

(b) 1 and 2 only

(c) 1, 2 and 3 only

(d) None of the above

Answer: (D)

**Explanation:** 

Statement 1: the report is released by The World Bank. So statement 1 is incorrect.

Statement 2: Under present scenarios, the combined effects of climate change could push between 68 million and 132 million more people into poverty by 2030. So statement 2 is incorrect.

**Statement 3:** With their livelihoods predominantly **based on primary activities**, the poorest are least able to adapt, more vulnerable and less resilient to the impacts of climate change. The impacts of climate change can also raise food prices, worsen people's health, and increase exposure to disasters. **So statement 3 is incorrect.** 

# Q2. Major advantages of Urban Water Bodies are;

- 1. Maintaining Water Hydrology
- 2. Protecting Biodiversity
- 3. Help adapt to Climate Change Effects
- 4. Helps in dumping management

Which of the above statements is/are the most probable option/s the question?

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

Answer: (A)

# Explanation:

Maintaining Hydrology: by recharging groundwater, channelizing water flow to prevent waterlogging and flooding, shoreline stabilization etc.

- Source of water supply: for Drinking, Industrial use, Irrigation etc.
- Water quality improvement: by removing excess Nutrients and many Chemical Contaminants.
- Helps cities adapt to climate change effects: such as the Heat Island Effect and Flash Floods



- **Preserving the biodiversity**: by hosting a wide variety of flora and fauna including migratory species.
- **Socio-economic functions**: Supports recreational activities, tourism, fishing, transportation etc. Some water bodies also act as sites of artistic, religious and spiritual pursuits.

# Q3. Climate action goal is under which international organization;

3. FAO 4. CBD

Answer: (A)

# Explanation:

Sustainable Development Goal 13 of UNDP is about climate action and is one of the 17 Sustainable Development Goals established by the United Nations in 2015. The official wording is to "Take urgent action to combat climate change and its impacts". The Goal has targets to be achieved by 2030.

# Q4. What do you understand by the term Blue Flag tag

- 1. Environmental Certification for Beaches
- 2. UN Peacekeeping Force Official Flag
- 3. Blue Ocean Initiative Flag
- 4. NASA Atmospheric Program

Answer: (A)

# Explanation:

Kasarkod and Padubidri beaches in Karnataka were accorded the **'Blue Flag' tag** from the international agency **Foundation for Environment Education (FEE),** Denmark.

# **About Blue Flag Certification**

- The 'Blue Flag' is a certification that can be obtained by a beach, marina, or **sustainable boating tourism operator, and serves as an eco-label.** 
  - o The certification is awarded annually by the Denmark-based non-profit Foundation for Environmental Education (FEE).
  - o It **sets stringent environmental, educational, safety-related** and access-related criteria that applicants must meet and maintain.
- A 'Blue Flag' beach is an eco-tourism model to provide tourists with clean and hygienic bathing water, facilities/amenities, a safe and healthy environment and sustainable development of the area.
- The certification is awarded by **the FEE based** on **33 stringent criteria** in four major heads:
  - o Environmental education and information

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- o Bathing water quality
- o Environment management and conservation
- o Safety and services on the beaches

# List of Beaches in India awarded Blue Fag certification

- Ghoghala beach (Diu)
- Shivrajpur beach (Gujarat)
- Padubidri and Kasarkod (Karnataka)
- Kappad beach (Kerala)
- Eden beach (Puducherry)
- Rushikonda beach (Andhra Pradesh)
- Golden beach (Odisha)
- Radhanagar beach (Andaman & Nicobar Islands)

# Q5. Consider the following statements regarding seagrasses

- 1. They are called Ecosystem Engineers
- 2. They are non-flowering Plants
- 3. One of the main function of them is to stabilise the sea bottom
- 4. Gujrat Government has taken initiative to restore them in the Gulf of Khambhat.

Which of the above statements is/are correct?

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

# Answer: (D)

# **Explanation:**

# About Sea Grasses

- Seagrasses are flowering plants that grow **submerged in shallow marine waters like bays and lagoons** found in many parts of the world, from the tropics to the Arctic Circle.
- They have roots, stems and leaves, and **produce flowers and seeds**. They inhabit all types of substrata (layers) from mud to rock and **they are found extensively in muddy and sandy substrata**.
- Seagrass reproduce through **both sexual and asexual methods**.
- They evolved from terrestrial plants that recolonised the ocean 70-100 million years ago.
- It occurs all along with the coastal areas of India and is abundant in the Palk Strait and Gulf of Mannar in Tamil Nadu, however, threatened now.
  - Restoration of seagrasses has been taken up by the Tamil Nadu Forest Department in the Gulf of Mannar.



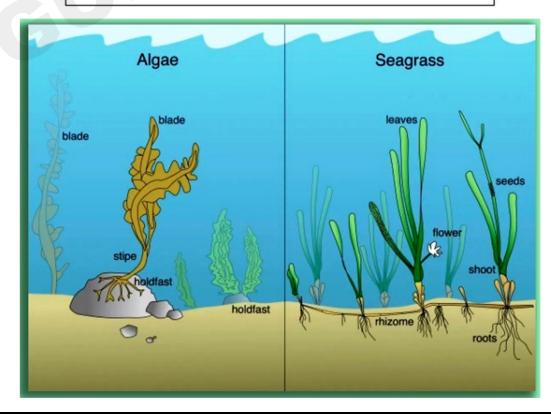
 Some of the important seagrasses are: Sea Cow Grass (Cymodocea serrulata), Thready Seagrass (Cymodocea rotundata), Needle Seagrass (Syringodium isoetifolium) and Flat tipped Seagrass (Halodule uninervis).

#### Threats to Seagrasses include:

- o Natural disturbances like Grazing, storms, Ice-scouring and Desiccation.
- Human disturbances like Eutrophication, Mechanical destruction of habitat, Overfishing and Release of nutrients, Siltation, trawling, Coastal engineering construction and Pollution.

#### Importance of Seagrasses

- They are considered to be 'Ecosystem Engineers' which help maintain water quality and trap fine sediments and suspended particles in the water column and increase water clarity.
- Seagrasses sequester up to 11% of the organic carbon buried in the ocean and can capture carbon from the atmosphere up to 35 times faster than tropical rainforests.
- They filter nutrients released from land-based industries before they reach sensitive habitats like coral reefs.
- They stabilize sea bottom similar to land grasses that prevent soil erosion as Ocean bottoms without seagrasses are prone to intense wave action from currents and storms.
- They protect juvenile and small adult fish from large predators.
- Seagrasses provide food as well as habitat for fishes, octopuses, shrimp, blue crabs, oysters, sponges, sea urchins, clams, etc. They are called 'the lungs of the sea' as they release oxygen into the water through photosynthesis.
- They are used as fertilizer for sandy soil.



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# Q6. Impact based Forecasting was recently in the news

- 1. It is a system developed to check climate change
- 2. It is a system developed to forecast cyclones
- 3. It is a system developed to check earthquake
- 4. It is a system developed to check rainfall forecast

# Answer: (B)

# **Explanation:**

# What is Impact-Based Forecasting (IBF)?

- IBF enables anticipatory actions and revolutionizes responses to weather and climate crises. It provides information on the level of risk a hazard poses to a specific area.
- IBF assess the impacts of the forecasted climate and weather phenomenon and consider their warnings based on the level and severity of those impacts at that particular location and /or for the target users/groups.
- It provides the information needed to act before disasters to **minimise the socioeconomic costs** of weather and climate hazards.

# Q7. Consider the following statement regarding circular bio-economy;

- 1. It is the intersection of bio-economy and circular economy.
- 2. Bio-economy substitutes fossil carbon with renewable carbon

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: (C)

# **Explanation:**

# About Circular Bioeconomy

- The "Circular Bioeconomy" is defined as the intersection of bio-economy and circular economy.
  - o The **bio-economy substitutes fossil carbon with renewable carbon** from biomass from agriculture, forestry and marine environment (including by-products and wastes).
  - A circular economy is an industrial system that is restorative or regenerative by intention and design.
    - ✓ It replaces the end-of-life concept with restoration, shifts towards the use of renewable energy eliminate the use of toxic chemicals and aims for the elimination of waste through the superior design of materials, products, systems and business models.

website : www.guidanceias.com Pillar No. 108, Near Karol Bagh Metro Station, New Delhi - 5 ✓ Nothing that is made in a circular economy becomes waste, moving away from our

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# Q8. Consider the following statements regarding Wetland of International Importance;

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1. It should contain a Rare or Unique Natural or Near-Natural Wetland.

current linear 'take-make-dispose economy.

- 2. It should Support 200000 or more Waterbirds.
- 3. Supports 1% of the individuals in a population of one species or subspecies.

Which of the above statements is/are correct?

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

(d) 1 and 3 only

Answer: (D)

# **Explanation:**

Nine criteria for identifying wetland of international importance;

- 1. Contains a representative, rare, or unique example of a natural or near-natural wetland the type found within the appropriate biogeographic region. So statement 1 is correct.
- 2. Supports vulnerable, endangered, or critically endangered species or threatened ecological communities.
- 3. Supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region.
- 4. Supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.
- 5. Regularly supports 20,000 or more waterbirds. So statement 2 is incorrect
- 6. Supports 1% of the individuals in a population of one species or subspecies of waterbird.
- 7. Supports a significant proportion of indigenous fish subspecies, species or families, life-history stages, species interactions and/or populations that are representative of wetland benefits and/or values and thereby contributes to global biological diversity.
- 8. An important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend. Specific criteria based on other taxa
- 9. Supports 1% of the individuals in a population of one species or subspecies of wetlanddependent nonavian animal species. So statement 3 is correct.



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# Q9. MOSAiC experiment was recently in news;

- 1. Observatory for Arctic climate studies
- 2. NASA rover mission for mars studies
- 3. Indian Neutrino observatory experiment for neutron
- 4. Study of extra-terrestrial life

Answer: (A)

# **Explanation:**

MOSAiC is the largest first of its kind one-year-long polar expedition into the central Arctic exploring the Arctic climate system that lasted from 2019 to 2020.

The objective of the expedition is to measure the atmospheric, geophysical, oceanographic and all other possible variables in the Arctic, and use them to more accurately forecast the changes in our weather systems due to climate change in the Arctic.

The project was designed by the International Arctic Science Committee (IASC)

# Q10. Consider the following statements about the Stockholm Convention

- 1. It is a global treaty to protect human health and the environment from persistent organic pollutants.
- 2. India ratified the Stockholm Convention in 2006

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 the Union Cabinet has approved the ratification of seven chemicals listed under Stockholm Convention on Persistent Organic Pollutants (POPs).
- The Cabinet further delegated its powers to ratify chemicals under the Stockholm Convention to Union Ministers of External Affairs (MEA) and Environment, Forest and Climate Change (MEFCC) in respect of POPs already regulated under the domestic regulations thereby streamlining the procedure.
- MoEFCC had notified the 'Regulation of Persistent Organic Pollutants Rules, on March 5, 2018, • under the provisions of the Environment (Protection) Act, 1986. The regulation inter alia prohibited the manufacture, trade, use, import and export of seven chemicals namely Chlordecone, Hexabromobiphenyl, Hexabromodiphenyl ether (i) (ii) (iii) and Heptabromodiphenylether (Commercial octaBDE), (iv) Tetrabromodiphenyl ether and ether (Commercial penta-BDE), Pentachlorobenzene, Pentabromodiphenyl (v) (vi) Hexabromocyclododecane, and (vii) Hexachlorobutadiene, which were already listed as POPs under Stockholm Convention.



#### **About Stockholm Convention**

- The Stockholm Convention is a legally binding global treaty to protect human health and the environment from Persistent Organic Pollutants (POPs), which are identified chemical substances that persist in the environment, bio-accumulate in living organisms, adversely affect human health/ environment and have the property of long-range environmental transport (LRET).
- Exposure to POPs can lead to cancer, damage to central & peripheral nervous systems, diseases of the immune system, reproductive disorders and interference with normal infant and child development.
- POPs are listed in various Annexes to the Stockholm Convention after thorough scientific research, deliberations and negotiations among member countries. The Convention require each party to prohibit and/or eliminate the production and use, as well as the import and export, of the intentionally produced POPs that are listed in various Annexes.
- India had ratified the Stockholm Convention on January 13, 2006.

# MAINS QUESTION

- Q1. Poverty due to Climate Change is a new reality. What India can do to Eradicate this issue? (10M, 150W)
- Q2. Recently green buildings were in news. What do you understand by the term Green Building? What are the Advantages and Challenges of Green Building in India? (15M, 250W)
- Q3. Climate Change making Cyclones Fiercer, more Frequent. What do you understand by the term Tropical Cyclone, briefly quotes its features and what are the possible ways to protect society from such disasters? (10M, 150W)
- Q4. Where is the world Headed towards as per IPCC's 1.5oC report? What are the bottlenecks in Implementing Pro-environment Policies? (10M, 150W)



# Report by VDem (Varieties of Democracy) Institute

- VDem, a Sweden Based firm has released a report grading the quality of liberal Democracies across the world.
- According to this data, India is an Elected Autocracy.
  - The classification means that elections in India simply assert that autocratic power.
  - V-Dem downgraded India as a democracy and placed it below neighbours such as Bangladesh and Nepal.
  - Reasons behind degrading rank:
    - Muzzling of media
    - Frequent use of sedition clauses
    - Defamation cases
- Autocracy is defined as "a system of government by one person with absolute power".
  - V-Dem classified India as a Complete Autocracy during an Emergency.
- The report pointed towards the 'steep' global decline of liberal democracies in the past 10 years in the Asia-Pacific region, Central Asia, Eastern Europe and Latin America.
- Apart from India, countries like **Brazil and Turkey** figured among the top 10 countries that slipped in rankings that were part of the G-20 nations.

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- The findings are similar to the recently published report by a US-based NGO, Freedom House.
  - Freedom House also lowered India's status as 'partly free' in terms of political rights and civil liberties.

# National Employability through Apprenticeship Programme (NETAP)

#### In News

According to the study by the National Employability Through Apprenticeship Program (NETAP), India's apprenticeship ecosystem is currently witnessing a positive momentum.

# National Employability Through Apprenticeship Programme

- It is India's fastest growing blended apprenticeship training program. •
- Set up in 2014 as a **100% employer-funded Public-Private Partnership (PPP).**
- The program was launched by the Ministry of Skill Development and Entrepreneurship and TeamLease Skills University (Gujarat), India's first vocational skills university.
- It is in accordance with the **National Employability Enhancement Mission** of the AICTE.
- Aim: To help organizations develop a qualified, robust and sustainable workforce and a productive human supply chain.
  - It is output-driven and helps employers to design training programs relevant to their organization and industry to create the right talent.

# **Key Findings of the Apprenticeship Outlook Report**

- 41% of the employers in India are keen on hiring apprentices.
- 58% of enterprises want to increase the quantum of their apprenticeship hiring this year.
- Out of the 18 sectors reviewed more than 16 were keen on hiring apprentices.
- The manufacturing (55%), automobiles and ancillaries (51%) and retail (48%) are the leaders, sectors like travel and hospitality and beauty and wellness, the spaces severely hit by the pandemic.
- Overall the preference for women apprentices has increased by 10% y-o-y and this trend was more visible in Bengaluru, Mumbai and Kolkata.

#### **Projections for Climate Change**

- While advanced economies had historically contributed the major share of emissions, China and India, as fast-growing emerging economies, were significant emitters and are expected to account for growing shares of carbon emissions.
- The report pointed that, advanced economies cannot successfully mitigate climate change by themselves, as they accounted for a declining share of global emissions.
- In contrast, the five largest countries/economic union - the United States, China, the European Union, Japan, and India — acting jointly could make a huge \*India's figures are for fiscal years. All figures in % impact in global emissions.

		2		
	Region	2020	2021	
Sliding further India's economy is project- ed to contract by 10.3% in 2020, the slowest among BRICS countries. The table lists projections by the IMF for 2020 and 2021	India*	-10.3	8.8	
	Brazil	-5.8	2.8	
	Russia	-4.1	2.8	
	China	1.9	8.2	
	South Africa	-8	3	
	World	-4.4	5.2	