

November 20, 2024



THE ENERGY AND
RESOURCES INSTITUTE

Creating Innovative Solutions for a Sustainable Future

INSTRUCTIONS

1. This paper contains a total of 22 pages.
2. This paper is a compilation of questions for all four levels, mentioned below.
3. There are 50 MCQs (multiple choice questions) for each level.
4. Please identify the question numbers as per your level.

Level	Class	Question Numbers	Page Numbers
Level I	Std. 4 and 5	Questions 1-50	Pg. No. 4 - 7
Level II	Std. 6, 7 and 8	Questions 51-100	Pg. No. 8 - 12
Level III	Std. 9 and 10	Questions 101-150	Pg. No. 13 - 17
Level IV	Std. 11 and 12	Questions 151-200	Pg. No. 18 - 22

5. The duration of the examination is one hour.
6. There is no negative marking.
7. For each attempted question, indicate your answer by darkening the appropriate oval in the OMR sheet only with an HB pencil or ball pen (in black or blue ink) as shown below.

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8. Please ensure that you are marking your answer against the correct question number in the OMR sheet.
9. Use of laptop, tablet, mobile phone, etc., are strictly prohibited during the examination.

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Level I – Std. 4 & 5

1. Which part of a plant absorbs water and nutrients from the soil?
 - a. Stem
 - b. Leaf
 - c. Root
 - d. Flower
2. Desert oak trees have thick and dark brown bark, and their fruits look like a woody cone. In which continent, which is also the natural home of the kangaroos, is the desert oak tree found?
 - a. Australia
 - b. Africa
 - c. North America
 - d. Europe
3. What happens to an aluminium foil when it is spread out and placed in water?
 - a. Sinks
 - b. Floats
 - c. Dissolves
 - d. Breaks
4. Which factor determines whether an object will float or sink in water?
 - a. Weight
 - b. Colour
 - c. Size
 - d. Shape
5. _____ provides support and helps transport nutrients and water in a plant.
 - a. Leaf
 - b. Root
 - c. Fruit
 - d. Stem
6. A plant converts sun's energy into food through a process called _____.
 - a. Transpiration
 - b. Evaporation
 - c. Photosynthesis
 - d. Chemosynthesis
7. What is the full form of SDG?
 - a. Sustainable Development Goal
 - b. Sustainable Development Game
 - c. Sustainability Development Goals
 - d. Sustainability Development Game
8. I am the first stage in the life of a plant. I am small and need soil and water to grow. Who am I?
 - a. Seed
 - b. Stem
 - c. Fruit
 - d. Root
9. Which of the following appropriately defines sustainable development?
 - a. Taking care of only ourselves
 - b. Taking care of future generations
 - c. Well-being of family
 - d. Taking care of ourselves and our future generations
10. Deforestation is the clearing of forest areas by humans to make land available for other uses. How does cutting trees impact climate change?
 - a. Reduces global warming
 - b. No effect
 - c. Worsens global warming
 - d. It makes the air cleaner
11. How does climate change impact water-related issues?
 - a. Leads to water crisis
 - b. Leads to flooding
 - c. Leads to water-borne diseases
 - d. All the options listed above
12. What is the disadvantage of burning damp wood for cooking?
 - a. Less smoke
 - b. Increases efficiency
 - c. More smoke
 - d. No health impact

13. Of all water on the Earth, saltwater makes up 97% of it, which means only 3% is freshwater, and of which only around 1% is readily available for our use. This is because most of the freshwater is frozen in glaciers, snow, ice caps, and ice sheets.
- True
 - False
14. Why should we avoid pouring harmful substances like medicines down the drain?
- It makes the water smell nice
 - It contaminates water and harms the environment
 - It makes the water look clean
 - It removes bacteria from the water
15. During a field trip, you see plastic bottles and wrappers littered near the waterbody. What action/s from the following options can help prevent water pollution?
- Collect the litter and throw it back into the water
 - Leave the litter as it is
 - Dispose of the litter properly in trash bins
 - Distribute and spread the litter all over the place
16. Why is it important to harvest rainwater?
- To overcome water shortage
 - To contaminate water
 - To increase water pollution
 - To degrade the environment
17. Which of the following is a source of freshwater?
- Seas
 - Oceans
 - Rivers
 - All the options listed above
18. How can we purify water at home?
- Boiling
 - Adding flavouring agents
 - Freezing
 - None of the options listed above
19. Why is it important to conserve water?
- To prevent water shortage
 - To increase water bills
 - To increase water pollution
 - None of the options listed above
20. Which of the following will not get converted into compost?
- Banana peel
 - Vegetable waste
 - Apple peel
 - Plastic straws
21. Rivers are special because they are a source of drinking water for plants, animals, and people who live nearby. What can be done to keep rivers clean?
- Throw garbage in the river
 - Keep a check on waste discharged from factories
 - Cut down trees along the banks
 - Stop the natural flow of water
22. Hazardous waste is a category of waste, which is toxic and reacts with other chemicals. Which of these is an example of hazardous waste?
- Soil
 - Food scraps
 - Old medicines
 - Paper
23. Adopting a cleanliness routine can lead to good health. We should follow simple _____ practices. These include regular hand washing, face washing, and bathing.
- Hygiene
 - Household
 - Kitchen
 - Water
24. Switching off lights when not in use is the first step to conserve energy. Young students can practice this at home and in school. Why is energy conservation important?
- To protect the environment
 - To save money
 - To provide electricity to all
 - All the options listed above
25. Which of the following is the most environment-friendly source to generate electricity in urban cities?
- Solar energy
 - Fossil fuels
 - Nuclear power
 - Coal deposits

26. Out of the following options, how can we save energy at home?
- Walk or cycle short distances
 - Using LED bulbs
 - Bring food to room temperature before keeping it in refrigerator
 - All the options listed above
27. Which of the following is a renewable energy source?
- Coal
 - Oil
 - Sunlight
 - Natural gas
28. When air is contaminated by unwanted substances which have harmful effects on both the living and the non-living, it is referred to as air pollution. True or False?
- True
 - False
29. What is the air quality of an Indian rural household where a traditional and indoor chullah (generating lot of smoke) is used for cooking?
- Bad
 - Good
 - Satisfactory
 - None of the options listed above
30. What is the effect of noise pollution on humans?
- Improves hearing
 - No effect
 - Causes hearing ailment
 - Decreases stress
31. Pick an example of natural contributor to air pollution from the below mentioned options.
- Burning of fossil fuels
 - Vehicular emission
 - Volcanic eruption
 - Burning of crackers
32. Which of the following is not an example of green transport?
- Vehicles running on compressed natural gas (CNG)
 - Vehicles running on petrol/diesel
 - Use of personal bicycles
 - Use of electric vehicles
33. Declared in 1973, name India's national animal.
- Elephant
 - Lion
 - Royal Bengal Tiger
 - Peacock
34. Tiger and Cheetah are examples of carnivores. Carnivore literally means a 'meat eater'. Which of the following is not a carnivore?
- Wolf
 - Leopard
 - Hyena
 - Deer
35. Wildlife conservation means helping protect animals, plants and communities to live in harmony in their respective habitats. Which of the following helps in conservation?
- Constructing roads for jungle safari
 - Planting trees
 - Increasing tourism
 - Building dams
36. For Kalbeliyas tribe of Rajasthan, _____ play an important role in their lives.
- Elephants
 - Lions
 - Snakes
 - Tiger
37. Name the chemical present in leaves that gives them green colour and helps with photosynthesis.
- Anthocyanin
 - Carotenoid
 - Chlorophyll
 - Antacidin
38. This tree grows mainly in desert, its bark is used for making medicines, and animals in the desert areas eat its leaves. Which tree are we mentioning here?
- Khejri tree
 - Neem tree
 - Sandalwood tree
 - Banyan tree
39. The fish of same species live in groups known as a _____.
- School
 - Herd
 - Pack
 - Flock

40. A dog can get an immediate understanding about its locality through which of the following features?
- Barking
 - Sniffing
 - Looking
 - Wagging
41. A root bridge is a type of bridge formed by roots of plants. These are most commonly seen in the northeastern part of India. Name the state.
- Meghalaya
 - Assam
 - Arunachal Pradesh
 - Tripura
42. Forests are lungs of the Earth. True or False?
- True
 - False
43. When do we celebrate World Environment Day?
- 22 April
 - 05 June
 - 23 March
 - 14 December
44. Who is the current Minister of Environment, Forest and Climate Change, Government of India (October, 2024)?
- Shri Ashwini Kumar Choubey
 - Shri Bhupender Yadav
 - Shri (Dr) Harsh Vardhan
 - Shri Ashwini Vaishnaw
45. How does Mission LiFE involve Indian citizens?
- Citizens take a pledge
 - Mascot of mission LiFE is promoted widely
 - Mass awareness events are organized
 - All the options listed above
46. In which year was Mission LiFE introduced?
- 2021
 - 2020
 - 2023
 - 2022
47. Mission LiFE is a public movement to mobilize individuals to become _____.
- Pro Planet People
 - Pro Poor People
 - Pro Prosperity Profit
 - Pro People Prosperity
48. What happens when you soak seeds in water?
- Shrink
 - Swell
 - Releases oxygen
 - No change is seen
49. Mention correct sequence of the process: (i) Harvesting, (ii) Applying organic fertilizers, (iii) Sowing seeds, (iv) Land preparation.
- i-ii-iii-iv
 - iv-iii-ii-i
 - ii-iv-i-iii
 - iii-ii-iv-i
50. Edible mushrooms are derived from?
- Algae
 - Fungi
 - Insects
 - None of the options listed above

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Level II - Std. 6, 7 & 8

- LEVEL - II
51. Non-biodegradable waste refers to materials that do not break down naturally and persist in the environment for an extended period of time. Which of the following is an example of non-biodegradable waste?
 - a. Fruit peels
 - b. Paper
 - c. Plastic bottles
 - d. Leaves
 52. A gradual process that removes the soil and causes it to deteriorate due to water flow or wind is known as soil erosion. Which of the following is the main cause of soil erosion in India?
 - a. Deforestation
 - b. Industrial pollution
 - c. Leachate
 - d. Wastewater
 53. Which type of pollution mostly occurs during the Diwali festival due to burning of firecrackers?
 - a. Water pollution
 - b. Air pollution
 - c. Soil pollution
 - d. All the options listed above
 54. Cooking with fossil fuels such as coal, wood, and traditional biomass (like animal dung) in households contributes significantly to indoor and outdoor air pollution. Which initiative launched by the Government of India aims to provide clean cooking fuel to rural households?
 - a. Swachh Bharat Abhiyan
 - b. Pradhan Mantri Ujjwala Yojana
 - c. National Rural Employment Guarantee Act
 - d. Make in India campaign
 55. Greenhouse gases (GHGs) are present in the Earth's atmosphere and they trap heat. During the day, the sun shines through the atmosphere, warming the Earth's surface. At night the Earth's surface cools, releasing the heat back into the air. However, some heat is trapped by the GHGs in the atmosphere. Which international agreement (2015) did India ratify to combat climate change by reducing GHG emissions?
 - a. Kyoto Protocol
 - b. Paris Agreement
 - c. Montreal Protocol
 - d. Copenhagen Accord
 56. Evidence indicates that parts of South Asia have become drier since the 1970s with an increase in the number of droughts. In 1987 and 2002-2003, _____ affected more than half of India's crop area and led to a huge fall in crop production.
 - a. Droughts
 - b. Rainfall
 - c. Cyclones
 - d. Floods
 57. Which term defines the process by which carbon dioxide is absorbed by oceans, leading to ocean acidification?
 - a. Carbon neutralization
 - b. Carbon sequestration
 - c. Ocean carbonization
 - d. Neutralization
 58. Methane is a potent greenhouse gas with a global warming potential roughly 30 times greater than carbon dioxide over a period of 100 years. Which sector contributes the most to methane emissions in India?
 - a. Energy production
 - b. Agriculture sector
 - c. Waste management
 - d. Deforestation
 59. According to the IPCC's sixth assessment report on the state of our climate, the past decade is likely to have been the hottest period in the last 125,000 years. Which of the following is a natural factor that influences Earth's climate?
 - a. Volcanic eruptions
 - b. Human population growth
 - c. Industrialization
 - d. Urban heat islands

60. What is the term that refers to long-term shifts in temperatures and weather patterns?
- Climate stability
 - Climate variability
 - Climate change
 - Climate inertia
61. Kyoto Protocol operationalizes the United Nations Framework Convention on Climate Change (UNFCCC) by committing industrialized countries and economies in transition, to limit and reduce greenhouse gases (GHG) emissions by agreed individual targets. Reduction in emission of which of the following gases is a part of the Kyoto Protocol?
- Nitrous oxide
 - Oxygen
 - Hydrogen
 - Argon
62. Groundwater contamination occurs due to percolation of gasoline, oil, road salt and chemicals, thus making it unfit for human usage. What is the main cause of groundwater contamination in residential urban areas of India?
- Industrial pollution
 - Agricultural runoff
 - Leakage from sewage systems
 - Oil spills
63. A campaign "Catch the Rain" with the tag line "Catch the rain, where it falls, when it falls" was implemented in 2020 to nudge the states and all stakeholders to create rainwater harvesting (RWH) structures. Which Indian city was the first to launch the 'Jal Shakti Abhiyan' to conserve water resources?
- New Delhi
 - Mumbai
 - Chennai
 - Bengaluru
64. Wastewater treatment is important to minimize pollution levels. Which of the following is not a method of wastewater treatment?
- Filtration
 - Sedimentation
 - Incineration
 - Biological treatment
65. In a hydroelectric power plant a dam is used to create a reservoir where river water is stored. When water is released from the reservoir, it passes through a turbine, causing it to spin. This rotational energy then drives a generator, which converts it into electricity. What is the primary purpose of constructing dams and reservoirs in India?
- Flood control
 - Water storage
 - Hydroelectric power generation
 - All the options listed above
66. Water pollution poses significant health hazards to human beings, resulting in ailments such as gastrointestinal issues, skin disorders, malnutrition, and even acute life threatening situations. Which of the following rivers in the state of Gujarat suffers from severe pollution due to industrial effluents and agricultural runoff?
- Godavari
 - Krishna
 - Cauvery
 - Sabarmati
67. Water conservation is the careful management and use of water to ensure long-term benefits to the future generation by preservation of water. Which term is used for the process of collection and treating of rainwater for reuse?
- Rainwater harvesting
 - Desalination
 - Groundwater recharge
 - Water conservation
68. E-waste refers to discarded electronics covering a broad spectrum of items, including televisions, computers, cell phones, and other similar devices. What is the practice of extending the lifespan of products through repair and refurbishment called?
- Upcycling
 - Downcycling
 - Re-manufacturing
 - Reprocessing
69. Recycled paper production reduces air pollution to up to 73% in comparison with the standard paper production. Which of the following materials can be recycled to produce new paper products?

- a. Glass
 - b. Plastic
 - c. Aluminium
 - d. Old newspapers
70. Upcycling means to recycle or reuse something in a way that increases an object's original value. Which of the following is an example of upcycling?
- a. Recycling used plastic bottles into new plastic products
 - b. Converting old tyres into rubber granules for playgrounds
 - c. Burning paper waste to generate energy
 - d. Disposing of electronic waste in landfills
71. Anaerobic digestion is a chemical process in which organic matter is broken down by microorganisms in the absence of oxygen, which results in generation of carbon dioxide (CO_2) and methane (CH_4). Which amongst the following goes through anaerobic digestion process?
- a. Incineration
 - b. Landfilling
 - c. Composting
 - d. Municipal wastewater
72. Proper sorting and separation of different kinds of waste to facilitate correct disposal method and recycling is known as _____.
- a. Waste accumulation
 - b. Waste segregation
 - c. Waste magnification
 - d. Waste disposal
73. Which of the following is not a hazardous waste?
- a. Acid
 - b. Paint
 - c. Pesticides
 - d. None of the options listed above
74. 'Just transition' is a framework that aims to protect frontline workers by prioritizing their needs during the transition away from an exploitative economy. In context of environmental policy, which section of society does the concept of "just transition" primarily focus on?
- a. Students
 - b. Teachers
 - c. Industry workers
 - d. Politicians
75. Which of the following renewable energy sources can be harnessed from agricultural waste, animal dung, and organic matter?
- a. Biomass energy
 - b. Geothermal energy
 - c. Tidal energy
 - d. Wave energy
76. Carbon capture technology is a way to reduce CO_2 from emissions sources using different technologies that separate CO_2 from the other gases coming out of a facility. The CO_2 is thus captured before entering the atmosphere and then permanently stored underground or incorporated into certain products, such as concrete or chemicals. Which among the following option has the highest carbon output?
- a. Construction
 - b. Industry
 - c. Electric vehicle
 - d. None of the options listed above
77. LED lights work by electroluminescence, which is the emission of light when an electric current or field passes through a semiconductor material. Which Indian initiative aims to promote the use of energy-efficient appliances and lighting through labelling and standards?
- a. Pradhan Mantri Ujjwala Yojana
 - b. Unnat Jyoti by Affordable LEDs for All (UJALA)
 - c. Deen Dayal Upadhyaya Gram Jyoti Yojana
 - d. National Solar Mission
78. Which renewable energy source is generated from the movement of water between high and low tides?
- a. Biomass energy
 - b. Geothermal energy
 - c. Tidal energy
 - d. Wave energy
79. What is the main source of indoor air pollution in rural households in India?
- a. Industrial emissions
 - b. Agricultural activities
 - c. Vehicular exhaust
 - d. Cooking with biomass fuels
80. Which of the following pollutants are associated with burning of fossil fuels and can lead to respiratory problems and cardiovascular diseases?

- a. Carbon dioxide (CO_2)
b. Carbon monoxide (CO)
c. Nitrogen dioxide (NO_2)
d. Sulphur dioxide (SO_2)
81. The odd-even scheme is a traffic rationing measure under which private vehicles with registration numbers ending with an odd digit will be allowed on roads on odd dates and those with an even digit on even dates. In which Indian city was the "Odd-Even" scheme implemented to reduce vehicular pollution by restricting the use of cars on alternate days?
a. Kolkata
b. Hyderabad
c. Chennai
d. New Delhi
82. Volatile organic compounds (VOCs) are organic compounds and are usually human-made chemicals such as paints, cleaning supplies, pesticides, and markers. Which of the following is a common measure to improve indoor air quality in Indian households?
a. Using air fresheners
b. Ventilating rooms regularly
c. Burning incense sticks
d. Keeping windows closed
83. Which air pollutant is primarily responsible for formation of acid rain, which can harm ecosystems and infrastructure?
a. Carbon monoxide (CO)
b. Ozone (O_3)
c. Sulphur dioxide (SO_2)
d. Particulate matter (PM_{10})
84. Air pollution causes hundreds of thousands of premature deaths and millions of cases of respiratory illnesses and other health issues annually in India. What are tiny particles suspended in the air that can penetrate deep into the lungs and cause respiratory problems, called?
a. Carbon particles
b. Dust
c. Particulate matter (PM)
d. Soot
85. The ozone layer is a thin part of Earth's atmosphere that absorbs almost all of the sun's harmful ultraviolet light. Where is the ozone layer found in the atmosphere?
a. Troposphere
b. Stratosphere
c. Mesosphere
d. Thermosphere
86. Asiatic lions are slightly smaller than African lions. Adult males weigh 160 to 190 kg, while females weigh 110 to 120 kg. The height at the shoulders is about 3.5 ft (110 cm). What is the scientific name of Asiatic Lion?
a. *Panthera tigris*
b. *Camelus dromedarius*
c. *Panthera leo persica*
d. Aves
87. A bird sanctuary is a place with protected habitat established for the purpose of the conservation and care of birds. Which Indian bird sanctuary, in the state of Rajasthan is famous for its large population of migratory birds, especially during the winter season?
a. Kanha National Park
b. Bharatpur Bird Sanctuary
c. Sunderbans National Park
d. Jim Corbett National Park
88. What is the term used for the financial incentives provided to organizations or countries for reducing carbon emissions by conserving forests?
a. Carbon analysis
b. Carbon sequestration
c. Carbon credits
d. Carbon offsetting
89. The most trafficked animal in the world is a pangolin, a scaly mammal that lives in a dense forest, eats ants, and rolls into a tiny ball when it's scared. What is the illegal trade of endangered species and their parts, known as?
a. Poaching
b. Conservation
c. Rehabilitation
d. Ecotourism
90. What is the name of the integrated conservation flagship programme launched by the Union Government of India in June 2014, to clean and rejuvenate the river Ganges?

- a. Namami Gange
 - b. Clean Ganga Mission
 - c. Ganga Action Plan
 - d. Swachh Bharat Abhiyan
91. Plastic waste makes up 80% of all marine pollution. Around 8 to 10 million metric tonnes of plastic end up in the ocean each year. Which among the options below is at immediate risk due to marine plastic?
 - a. Birds
 - b. Forest cover
 - c. Polar ice caps
 - d. Coral reefs
 92. True or False: In 2024, India announced a nationwide ban on single-use plastics, aiming to eliminate all such items by 2025 to combat environmental pollution.
 - a. True
 - b. False
 93. Forest accounts for the second-largest land use in India after agriculture. Roughly, 275 million rural people in India depend on forests for at least a part of their subsistence and livelihood. Which Indian state has the highest forest cover by area (2024 record)?
 - a. Madhya Pradesh
 - b. Tamil Nadu
 - c. Gujarat
 - d. Arunachal Pradesh
 94. Lithium-ion batteries, often abbreviated as Li-ion, are a type of rechargeable battery in which lithium ions move from the negative electrode through an electrolyte to the positive electrode during discharge, and back when charging. What role do lithium-ion batteries play in transitioning to a greener economy?
 - a. They facilitate the extraction of fossil fuels
 - b. They store renewable energy generated from sources like solar and wind
 - c. They accelerate deforestation efforts
 - d. They increase air pollution in urban areas
 95. Which aspect of Mission LiFE aligns with India's vision for becoming a global leader in clean energy technology?
 - a. Developing advanced healthcare systems
 - b. Implementing smart city initiatives
 - c. Strengthening indigenous manufacturing capabilities for lithium-ion batteries
 - d. Expanding traditional fossil fuel industries
 96. How does Mission LiFE contribute to India's economic growth and job creation?
 - a. By promoting traditional energy sources like coal and oil
 - b. By supporting innovation and entrepreneurship in the renewable energy sector
 - c. By investing in heavy industries with high carbon emissions
 - d. By importing lithium-ion batteries from other countries
 97. True or False: Hydroponics is growing plants without soil, using a water-based nutrient solution.
 - a. True
 - b. False
 98. What are carrots, turnips, radishes, collectively known as?
 - a. Tuber crops
 - b. Root vegetables
 - c. Short vegetables
 - d. Compact vegetables
 99. Apiculture is
 - a. Apple culture
 - b. Bee farming
 - c. Apricot farming
 - d. None of the options listed above
 100. True or False: Organic farming system is a method which aims at sustainable agricultural production. It employs use of naturally available resources to release nutrients to crops and protect them from insect pest and diseases. The overall objective is to increase safe agricultural production.
 - a. True
 - b. False

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Level III - Std. 9 & 10

101. Environment, social and economic developments contribute to Sustainable Development. True or false?
a. True
b. False
102. Which catastrophic nuclear accident occurred in 1986, leading to a widespread radioactive contamination?
a. Three-mile island
b. Fukushima Daiichi
c. Chernobyl
d. Windscale
103. A carbon sink is anything that absorbs more carbon from the atmosphere than it releases. Which is the Earth's biggest carbon sink?
a. Cities
b. Oceans
c. Soil
d. Clouds
104. What do you call a scientist who studies weather patterns over a period of time?
a. Meteorologist
b. Climatologist
c. Seismologist
d. Geologist
105. Which of the following does not help scientists to learn about climate of the past?
a. Tree rings
b. Layers of ice
c. Archaeological ruins
d. Thermometer records
106. Okhla sewage treatment plant is envisaged as the biggest plant in India as well as in Asia. In which Indian state/UT is this located?
a. Delhi
b. Gujarat
c. Punjab
d. Puducherry
107. What is eutrophication?
a. The process of removing pollutants from water
b. The natural cleansing of a water body
c. The excessive growth of algae due to high nutrient levels, leading to oxygen depletion
d. The increase in water temperature due to industrial discharge
108. What is the effect of heavy metals, such as mercury and lead, on water bodies?
a. They are harmless to aquatic life
b. They accumulate in the food chain, causing health problems in animals and humans
c. They evaporate quickly
d. None of the options listed above
109. The International Convention for the Prevention of Pollution from Ships is the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes. It was adopted on November 2, 1973 at IMO. What is this convention commonly known as?
a. Kyoto Protocol
b. MARPOL Convention
c. Paris Agreement
d. Montreal Protocol
110. Which substance is commonly used to disinfect drinking water?
a. Chlorine
b. Mercury
c. Lead
d. Calcium
111. "ENSO" refers to a global climate phenomenon that emerges from variations in winds and sea surface temperatures over the tropical Pacific Ocean. What is the full form of ENSO?
a. Environment National Space Operation
b. Emergency National Space Operation
c. EL Nino Southern Oscillation
d. None of the options listed above

112. Which household activity is known to significantly increase indoor levels of formaldehyde?
- Cooking with gas
 - Using air conditioning
 - Smoking tobacco
 - Painting and varnishing
113. Which of the following can be a significant source of indoor pollution?
- Scented candles
 - Air purifiers
 - Potted plants
 - Gas heaters
114. Soot, also known as _____ is made up of tiny particles of smoke, dust, chemicals, soil, or allergens in the form of either gas or solids that are carried in the air.
- Smog
 - Particulate matter
 - Dioxins
 - Furans
115. The AQI is divided into six categories. Each category has a specific colour that corresponds to a different level of health concern. Which of the following option represents the correct set of colours, in ascending order of pollution levels?
- Green, blue, yellow, red, grey, black
 - Green, yellow, blue, violet, red, black
 - Green, yellow, orange, red, purple, maroon
 - White, green, orange, grey, red, black
116. Ozone is a gas. Its molecular formula is:
- O
 - O₂
 - O₃
 - O₄
117. A carbon negative economy means that it absorbs more CO₂ emission than it emits. Which of the following represent carbon negative countries?
- Australia and Mexico
 - Bhutan and Suriname
 - Italy and Finland
 - Tanzania and Brazil
118. A term that was created in the 1960s refers to the marketing practices of companies to claim their products as more environmentally friendly than they are, in order to increase their sales. Name this term.
- Green marketing
 - Green products
 - Sustainable production
 - Corporate greenwashing
119. In order to move to a circular economy we need to extend shelf life of the product. Which of the following strategies is/ are helpful to extend the product shelf life?
- Adopting good maintenance practice
 - Repair and reuse of the product
 - Redesign and recycling of the product
 - All the options listed above
120. Inert waste is waste which is neither chemically or biologically reactive nor will decompose. An example of this is _____.
- Yard waste
 - Hospital waste
 - Agricultural waste
 - Sand
121. A potential geo-engineering technique to combat climate change involves introduction of aerosols into the stratosphere to create a cooling effect via global dimming and increased albedo. What is this technique called?
- Stratospheric aerosol injection
 - Fossil fuel extraction
 - Energy efficiency
 - None of the options listed above
122. Increasing population and development pressures have led to an increase in consumption of _____.
- Food
 - Energy
 - Water
 - All the options listed above
123. Match the following historic events with their corresponding years of occurrence.
- | | |
|-----------------------|------------|
| I. Paris Agreement | (i) 1987 |
| II. Montreal Protocol | (ii) 2015 |
| III. Kyoto Protocol | (iii) 2005 |
| IV. Rio Declaration | (iv) 1992 |
- I-ii; II-i; III-iii; IV-iv
 - I-iv; II-ii; III-i; IV-iii
 - II-ii; I-i; III-iii; IV-iv
 - I-iii; II-iv; III-ii; IV-i

124. What is the main goal of the Paris Agreement?
- To promote global free trade
 - To limit global warming to well below 2 degrees Celsius above pre-industrial levels
 - To enhance the use of coal and other fossil fuels
 - To establish a single global currency
125. This tropical cyclone struck East Pakistan (now Bangladesh) and India in November 1970, killing an estimated 500,000 people. It is considered to be the deadliest tropical cyclone on record. What is its name?
- Cyclone Bhola
 - Cyclone Nargis
 - Cyclone Sidr
 - Cyclone Fani
126. How long does it take for carbon dioxide (CO_2) in the atmosphere to disperse?
- 300–1000 years
 - 50 years
 - 700–800 years
 - 80–100 years
127. What does the method of "Enhanced Weathering" mean?
- Spraying sulphate aerosols to reduce the greenhouse effect
 - Reducing the contribution of clouds to the greenhouse effect
 - Removing carbon dioxide from the air
 - None of the options listed above
128. Which of the following is an example of ex-situ conservation?
- National park
 - Zoo
 - Wildlife sanctuary
 - Sacred groves
129. The concept of naming, describing and classifying organisms and includes all plants, animals, and microorganisms is known as _____.
- Stratification
 - Hierarchy
 - Taxonomy
 - Genus
130. The Red Data list is used by governments, non-profit organizations, businesses, and individuals. Many countries also develop their own national Red Lists to help them monitor their biodiversity and develop conservation policies. Which of the following organization publishes the red data list of species?
- ICFRE
 - IUCN
 - UNEP
 - WWF
131. Sacred forests are _____.
- A group of plants that are grown for purpose of food cultivation
 - Protected by indigenous communities and local societies due to their religious sanctity
 - Inhabited by human beings for the purpose of urbanization
 - None of the options listed above
132. Of the following, which biome is characterized by having the highest biodiversity?
- Tundra
 - Desert
 - Rainforest
 - Grassland
133. Which forest management practice involves selectively removing trees to promote forest health and regeneration?
- Clear-cutting
 - Slash-and-burn
 - Selective logging
 - Monoculture planting
134. Which of the following best describes an invasive species?
- A species that is native to the area and helps maintain ecosystem balance
 - A species introduced to a new environment that outcompetes with native species, disrupting the ecosystem
 - A species that migrates seasonally within its natural habitat
 - A species that has gone extinct
135. Which of the following is a direct consequence of habitat fragmentation?

- a. Increased biodiversity
 - b. Enhanced gene flow among population
 - c. Reduced genetic diversity and population size
 - d. Improved ecosystem services
136. What is the primary component of solar panels that allows them to convert sunlight into electricity?
- a. Copper
 - b. Silicon
 - c. Aluminium
 - d. Carbon
137. Which of the following best describes the photovoltaic effect?
- a. The conversion of chemical energy into electrical energy
 - b. The conversion of thermal energy into electrical energy
 - c. The conversion of light energy into electrical energy
 - d. The conversion of mechanical energy into electrical energy
138. Which element is most commonly used as a fuel in nuclear reactors?
- a. Uranium
 - b. Thorium
 - c. Plutonium
 - d. Hydrogen
139. What is the primary source of tidal energy?
- a. Solar radiation
 - b. Gravitational pull of the moon and the sun on Earth's oceans
 - c. Wind patterns over the ocean
 - d. Heat from the Earth's core
140. What is the term for the difference in height between high tide and low tide?
- a. Ocean height
 - b. Tidal range
 - c. Sea level
 - d. Ocean depth
141. The best environment-friendly way to heat water is _____.
- a. To use an electrical geyser
 - b. To heat water on the gas stove
 - c. To use a solar water heater
 - d. To heat water on firewood
142. Mission LIFE nudge individuals and communities to practice a lifestyle that is synchronous with nature and does not harm it. Which of the following is a major highlight of mission LIFE?
- a. Green warriors
 - b. Climate warriors
 - c. Green champs
 - d. Pro Planet People
143. Of the examples listed below, which constitutes 'sustainable lifestyle' in its truest sense?
- a. Using sensors to switch off light when not in use
 - b. Delaying the repair of leaking taps
 - c. Using single-use plastic as a carry bag
 - d. Using plastic cutlery
144. Mission LIFE promotes the use of 'bamboo toothbrushes and neem combs' as this practice helps in _____.
- a. Promoting alternatives to plastic
 - b. Reducing the demand for plastics
 - c. Both a and b
 - d. Neither a nor b
145. Mission LIFE is designed with the objective to mobilize at least one billion Indians and other global citizens to take individual and collective action for protecting and conserving the environment. What is the implementation timeline of Mission LIFE?
- a. 2020-2035
 - b. 2022-2028
 - c. 2022-2030
 - d. 2020-2030
146. What are companion plants known as?
- a. Group of plants which can be grown together and which benefit from each other
 - b. Group of plants which can talk to each other
 - c. Group of plants which can never be grown together
 - d. None of the options listed above
147. True or false: In sustainable farming, focus is more on increasing the crop yield than biodiversity.
- a) True
 - b) False

148. Which of the following practices will enhance soil fertility and structure?
- Burning crop residue
 - Manuring
 - Dumping waste in soil
 - Monoculture
149. True or false: Neem oil is used for preventing and controlling various pests and pathogens.
- True
 - False
150. _____ is the capability of a seed to germinate and produce normal seedlings.
- Seed vitality
 - Seed viability
 - Seed dormancy
 - Compatibility

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151. Katabatic wind refers to?
- Wind blowing down slope of mountain
 - Wind blowing up slope of mountain
 - Cold air mass displaces warm air mass
 - Wind that flows from the land towards the sea
152. Which of the following is considered to be the purpose for establishing national parks and sanctuaries?
- Encourage conservation
 - Encourage poaching
 - Serve as picnic spots
 - None of the options listed above
153. The term biodiversity consists of which of the following?
- Genetic diversity
 - Species diversity
 - Ecosystem diversity
 - All the options listed above
154. Which of the following are the primary pollutants responsible for air pollution?
- Carbon monoxide
 - Sulphur dioxide
 - Volatile organic compound
 - All the options listed above
155. What is the phenomenon when NO_x and volatile organic compounds (VOCs) react with sunlight to generate brown cloud over cities known as?
- Polar stratospheric cloud
 - Photochemical smog
 - Fog
 - Wave propagation
156. According to World Health Organization, the annual mean of $\text{PM}_{2.5}$ and PM_{10} should not exceed, respectively?
- $5\mu\text{g}$ and $15\mu\text{g}$
 - $20\mu\text{g}$ and $15\mu\text{g}$
 - $20\mu\text{g}$ and $40\mu\text{g}$
 - $30\mu\text{g}$ and $20\mu\text{g}$
157. Which among the following is measured as a pollutant in Air Quality Index (AQI)?
- $\text{PM}_{2.5}$
 - PM_{10}
 - O_3
 - All the options listed above
158. A "green muffler" is used in cases of which of the following?
- Air pollution
 - Water pollution
 - Soil pollution
 - Noise pollution
159. Under Mission LIFE, a list of ____ unique LIFE acts has been established for climate action under 7 categories.
- 50
 - 75
 - 60
 - 100
160. Mission LIFE envisions which core shift/s in our collective approach towards sustainability?
- Change in demand
 - Change in supply
 - Change in policy
 - All the options listed above
161. Who all are included under the Mission LIFE scheme?
- Individuals
 - Communities
 - Organizations
 - All the options listed above
162. Which organization had hosted Life-A-Thon 2023?
- UNDP
 - NITI AAYOG
 - Both a & b
 - UNEP

163. The Next Frontier : Human Development and Anthropocene report (2020) was published by:
a. UNEP
b. Ministry of Environment, Forest and Climate Change
c. UNDP
d. NITI AAYOG
164. Which one of the following individual actions contributes to sustainable and environment-friendly lifestyle?
a. Reduced E-waste
b. Reduced usage of single-use plastic
c. Switching off lights when not in use
d. All the options listed above
165. What were the key outcomes of the United Nations Framework Convention on Climate Change (Conference of the Parties) COP28 held in Dubai?
a. Global Green Credit Initiative
b. Loss & Damage Fund Operational
c. Both a and b
d. None of the options listed above
166. What was the theme for the World Environment Day 2024?
a. Our Land Our Future
b. Pro Planet People
c. Living for Environment
d. Only One Earth
167. The phenomenon of land subsidence occurred in India in 2023. This major event occurred in Uttarakhand state and took a toll on lives of the people, and cracks emerged on buildings, bridges, etc. Where exactly did it take place?
a. Joshi Math
b. Coimbatore
c. Nagpur
d. Mumbai
168. What is the total number of Ramsar Sites in India as of August 2024?
a. 55
b. 65
c. 85
d. 105
169. The urban heat dome concept is related to:
a. Temperature
b. Ozone
c. Both a & b
d. None of the options listed above
170. Ketoprofen and Diclofenac drugs are banned due to their impact largely on which species?
a. Vultures
b. Zebra
c. Dolphin
d. Deer
171. In which of the following Indian states is the Gir Forest located?
a. Gujarat
b. Rajasthan
c. Assam
d. Sikkim
172. I am the State Animal of Manipur. I am also called as Dancing Deer found in Keibul Lamjao National Park. Who am I?
a. Sangai deer
b. Pangolin
c. Tahr
d. Himalayan black bear
173. According to recent Tiger census report released in 2024, some of the tiger reserves in India show zero presence of tiger. Which of the following reserves have no tigers in them?
a. Dampa National Park
b. Kamlang Tiger Reserve
c. Both a & b
d. Jim Corbett National Park
174. What is Earth Overshoot Day?
a. The day when Earth completes one full rotation around the sun
b. The day when humans consume all the resources that the Earth can regenerate in a year
c. The day when Earth experiences an eclipse
d. The day when Earth reaches its closest point to the sun
175. High-GWP (Global Warming Potential) gases trap substantially more heat than CO₂ for a given amount of mass. The GWPs for these gases can be in the thousands or tens of thousands. Pick the high-GWP gas from below.

- a. Water vapour
 - b. Carbon dioxide
 - c. Methane
 - d. Sulphur hexafluoride
176. True or false: Water vapour is the most abundant greenhouse gas (GHG) in the atmosphere. However, human activities have a negligible direct influence on its atmospheric concentrations. It is the surface warming caused by human production of other GHGs that leads to an increase in the atmospheric water vapour. This creates a positive 'negative loop' in which warming leads to more warming.
- a. True
 - b. False
177. The amount of radiation reflected by a surface is referred to as its albedo and can range from a value of 0 (no reflection) to a value of 1 (100% reflection). Which among these would have the highest albedo?
- a. Oceans
 - b. Forests
 - c. Cities
 - d. Snow
178. What does the term "weather" denotes?
- a. It is momentary state of atmosphere
 - b. It refers to average of weather condition for longer period of time
 - c. It refers to sum total of temperatures taken for a specific period
 - d. None of the options listed above
179. Which of the following parts of India receives the first phase of summer monsoon?
- a. Western Ghats
 - b. Himalayas
 - c. Coastal areas of Bengal
 - d. Eastern Ghats
180. What do you understand by the term carbon sequestration?
- a. A process of storing carbon in carbon pool
 - b. A tax levied on the carbon emissions from producing goods and services
 - c. Total amount of greenhouse gases (including carbon dioxide and methane) that are generated by our actions
 - d. A way of compensating for emissions of carbon dioxide
181. Artificial rains/ cloud seeding are considered as solution for drought prone areas. What type of chemicals is used for this?
- a. Dry ice
 - b. Silver iodide
 - c. Potassium iodide
 - d. All the options listed above
182. The salinity of the ocean is determined by:
- a. Winds
 - b. Ocean currents
 - c. Atmospheric pressure
 - d. All the options listed above
183. Which ocean has the highest level of salinity?
- a. Atlantic Ocean
 - b. Indian Ocean
 - c. Pacific Ocean
 - d. Antarctic Ocean
184. Which tide occurs when the Earth, Moon, and Sun are aligned, causing higher high tides and lower low tides than normal? This happens during new and full moons, when the gravitational forces of the sun and the moon combine to pull the Earth's oceans more strongly.
- a. Neap tide
 - b. Spring tide
 - c. Diurnal tide
 - d. Semidiurnal tide
185. The highest tide in the world occurs in _____.
- a. Bay of Fundy
 - b. Gulf of Mexico
 - c. Gulf of Tonkins
 - d. Gulf of Kutch
186. The term BOD is a measure of how much oxygen is needed to break down organic matter in water. What does it stand for?
- a. Biological Oxygen Demand
 - b. Biological Oxygen Deficient
 - c. Biochemist Oxygen Depressant
 - d. Biological Oxygen Depressant
187. Waste management has been prevalent in certain parts of the world since the onset of ancient civilizations. Which was the first city in the world to have a waste removal system?

- a. Delhi
b. Athens
c. Rome
d. Madrid
188. Vermicomposting is used as a biofertilizer because it is rich in which nutrient?
a. Calcium
b. Nitrogen
c. Phosphorous
d. All the options listed above
189. Waste management in India is the responsibility of which Union Ministry? This Ministry also released the Solid Waste Management (SWM) Rules in 2016 to improve the collection, segregation, recycling, treatment, and disposal of solid waste.
a. Ministry of Environment, Forest and Climate Change
b. Ministry of Housing and Urban Affairs
c. Ministry of Jal Shakti
d. Ministry of Culture
190. E-Waste regulation comes under which Indian ministry?
a. Ministry of Electronics and Information Technology (MeitY)
b. Ministry of Housing and Urban Affairs
c. Ministry of Rural Development
d. Ministry of Agriculture
191. A national mission aims to make India a Global Hub for production, utilization and export of green hydrogen and its derivatives. This Mission will help in India becoming energy independent and in decarbonization of major sectors of the economy. Name this mission.
a. Gobardhan
b. National Green Hydrogen Mission
c. National Solar Mission
d. National Wind Mission
192. Energy conversion that takes place in an electric iron is _____.
a. Electrical energy to heat energy
b. Heat energy to electrical energy
c. Chemical energy to heat energy
d. Electrical energy to light energy
193. When energy is converted from one form to another, some portion of the energy produced is lost, and cannot be used for work. This second law of thermodynamics states that some fraction of the energy output in an energy conversion is always 'wasted.' What is this wastage known as?
a. Potential energy
b. Thermal energy (heat)
c. Waste energy
d. Unavailable energy
194. Which of the following statements is true?
a. Composting happens at a particular temperature
b. There has to be adequate moisture for composting to proceed
c. Composting is brought about by micro-organisms in the compost pit
d. All the options listed above
195. Grey revolution is associated with the production of which product?
a. Fertilizers
b. Soil
c. Steel
d. Milk
196. True or False: Precision farming is the management of the productivity of crops, by adding right inputs, in right quantities and at the right time.
a. True
b. False
197. Which practice will increase soil erosion?
a. Contour farming
b. Cover cropping
c. Excessive tilling
d. Intercropping
198. Crops need both macro-nutrients and micro-nutrients to grow. Which of the following is a micro-nutrient?
a. Iron
b. Nitrogen
c. Potassium
d. Calcium

199. Nitrogen fixation in soil is important for agriculture as its saturation in a digestible form is a necessary condition for crop health. Apart from nitrogen, which other two nutrients are vital for crop development?
- Oxygen and water vapour
 - Carbon dioxide and methane
 - Potassium and phosphorus
 - All the options listed above
200. The science of soil-less gardening is called _____. It basically involves growing healthy plants without the use of traditional soil mediums.
- Hydroponics
 - Vivipary
 - Parthenogenesis
 - None of the options listed above