



Fifth Semester B.E Degree Examination, June/July 2024

## Environmental Studies

(COMMON TO ALL BRANCHES)

[Max. Marks: 100

### INSTRUCTIONS TO THE CANDIDATES

1. Answer all the hundred questions, each question carries **ONE mark**.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, using whiteners** on the **OMR** sheets are strictly prohibited.

1. Atmosphere consists of 79 percent Nitrogen and 21 percent oxygen by  
a) Volume                      b) Weight                      c) Density                      d) All of these
2. Which of the following is a biotic component of an ecosystem?  
a) Fungi                      b) Solar light                      c) Temperature                      d) Humidity
3. In an ecosystem, the flow of energy is  
a) Bidirectional                      b) Cyclic                      c) Unidirectional                      d) Multidirectional
4. Which pyramid is always upright?  
a) Biomass                      b) Energy                      c) Numbers                      d) Food chain
5. The organisms which directly feed on producers are called.  
a) Saprophytes                      b) Decomposers                      c) Carnivores                      d) Herbivores.
6. The sequence of eating and being eaten in an ecosystem is called.  
a) Food chain                      b) Carbon cycle                      c) Hydrological cycle                      d) Anthroposystem
7. The largest reservoir of nitrogen in our planet is  
a) Oceans                      b) Atmosphere                      c) Biosphere                      d) Fossil fuels
8. In an aquatic ecosystem phytoplankton can be considered as a  
a) Consumer                      b) Producer                      c) Saprophytes                      d) Macroconsumer
9. In an ecosystem biological cycling of materials is maintained by  
a) Producer                      b) Consumer                      c) Decomposer                      d) All of these

10. The word "Environment" is derived from  
 a) Greek                      b) French                      c) Spanish                      d) English
11. The major atmospheric gas layer in stratosphere is  
 a) Hydrogen                      b) Carbon dioxide                      c) Ozone                      d) Helium
12. World Environment day is on  
 a) 5<sup>th</sup> May                      b) 5<sup>th</sup> June                      c) 18<sup>th</sup> July                      d) 16<sup>th</sup> August
13. A food web consists of  
 a) Portion of a food chain  
 c) Interlocking food chains  
 b) An organisms position in a food chain  
 d) A set of similar consumers.
14. Which of the following is not the environmental effects of industrialization, in general?  
 a) Solid waste  
 c) Air pollution  
 b) Water pollution  
 d) Economic growth
15. Mining means  
 a) Conserve and preserve minerals  
 b) To check pollution due to mineral resources  
 c) To extract minerals and ores  
 d) None of these
16. EIA can be expanded as  
 a) Environment and Industrial Act  
 c) Environmental Impact Assessment  
 b) Environment and impact Activities  
 d) Environmentally Important Activity
17. Which of the following is a key element of EIA?  
 a) Scoping  
 c) Identifying and evaluating alternatives  
 b) Screening  
 d) All of these
18. "Earth day" is held every year on  
 a) June 5<sup>th</sup>                      b) November 23<sup>rd</sup>                      c) April 22<sup>nd</sup>                      d) January 26<sup>th</sup>
19. Eutrophication is  
 a) Improved quality of water in lakes  
 b) A process in carbon cycle  
 c) Result of accumulation of plant nutrients in water bodies  
 d) Water purification technique
20. Which of the following is the most environmental friendly agriculture practice?  
 a) Using chemical fertilizers  
 c) Organic farming  
 b) Using insecticides  
 d) None of these
21. Forests prevent soil erosion by binding soil particles in their.  
 a) Stems                      b) Roots                      c) Leaves                      d) Buds
22. Blue baby syndrome is caused by the contamination of water due to  
 a) Phosphates                      b) Sulphur                      c) Arsenic                      d) Nitrates
23. India has the largest share of which of the following?  
 a) Manganese                      b) Mica                      c) Copper                      d) Diamond

24. Out of the following nutrients in fertilizer, which one causes minimum water pollution  
a) Nitrogen                      b) Phosphorous                      c) Potassium                      d) Organic matter
25. What is the permissible range of  $p^H$  for drinking water as per the Indian standards?  
a) 6 to 9                      b) 6.5 to 7.5                      c) 6 to 8.5                      d) 6.5 to 8.5
26. What is the maximum allowable concentration of fluorides in drinking water?  
a) 1 mg per litre                      b) 1.25 mg per litre  
c) 1.50 mg per litre                      d) 1.75 mg per litres
27. Earths atmosphere contains \_\_\_\_\_ % of nitrogen  
a) 98                      b) 12                      c) 21                      d) 78
28. Conversion of ammonium to  $NO_3$  by chemical oxidation is termed as  
a) Mineralization                      b) Leaching                      c) Nitrification                      d) Denitrification
29. Nitrogen fixing bacteria exists in \_\_\_\_\_ of plants  
a) Leaf                      b) Roots                      c) Stem                      d) Flower
30. \_\_\_\_\_ are referred to as Earth's lungs  
a) Forests                      b) Carbon cycles                      c) Water sources                      d) Mines
31. Cholera and typhoid are caused by  
a) Worms                      b) Virus                      c) Fungus                      d) Bacteria
32. Disfigurement in the teeth is caused by excessive amount of  
a) Mercury                      b) Nitrate                      c) Fluoride                      d) Lead
33. The required iron content in drinking water as specified by BIS is  
a) 300 mg/l                      b) 30 mg/l                      c) 3 mg/l                      d) 0.3 mg/l
34. The most important fuel used by nuclear power plant is  
a) U-235                      b) U-238                      c) U-245                      d) U-248
35. Biogas is produced by  
a) Microbial activity                      b) Harvesting crop  
c) Both (a) and (b)                      d) None of these
36. Chernobyl nuclear disaster occurred in the year  
a) 1984                      b) 1952                      c) 1986                      d) 1987
37. Which of the following not a renewable source of energy?  
a) Fossil fuels                      b) Solar energy  
c) Tidal wave energy                      d) Wind energy
38. Hydrogen energy can be tapped through  
a) Heat pumps                      b) Fuel cells                      c) Photovoltaic cells                      d) Gasifiers
39. Nuclear fusion uses the following as a fuel:  
a) Carbon                      b) Helium  
c) Hydrogen                      d) Water
40. Which of the following is used as moderator in the nuclear reactor?  
a) Graphite                      b) Helium gas                      c) Heavy water                      d) All of these

41. Nuclear power plant in Karnataka is located at  
a) Bhadravathi  
b) Sandur  
c) Raichur  
d) Kaiga
42. Cow Dung can be uses as  
a) Manure  
b) Production of Bio gas  
c) Fuel  
d) All of these
43. Molasses from sugar industry is used to generate  
a) Biodiesel  
b) Hydrogen  
c) Bioethanal  
d) Biomethanal
44. Nuclear power is being produced from  
a) Carbon-14  
b) Nuclear fission  
c) Petroleum combustion  
d) Natural gas.
45. Wind energy generation depends on  
a) Direction of wind  
b) Velocity of wind  
c) Humidity  
d) Precipitation
46. Which of the following is considered as an alternate fuel?  
a) CNG  
b) Kerosene  
c) Coal  
d) Petrol
47. Livestock wastes release large amount of \_\_\_\_\_ in to environment  
a)  $\text{NH}_4$   
b)  $\text{NH}_3$   
c)  $\text{NO}_3$   
d)  $\text{NO}_4$
48. The depletion of trees is causing accumulation of  
a)  $\text{NO}_2$   
b)  $\text{SO}_2$   
c)  $\text{CO}_2$   
d)  $\text{O}_2$
49. Excess of fluorides in drinking water is likely to cause  
a) Blue babies  
b) Fluorosis  
c) Taste and odour  
d) Intestinal irritation
50. What percentage of its geographical area of a country should be under forest cover?  
a) 23  
b) 43  
c) 13  
d) 33
51. Environmental pollution is due to  
a) Rapid Urbanization  
b) Deforestation  
c) Afforestation  
d) a and b
52. Which of the following is air pollutant?  
a) CO  
b)  $\text{O}_2$   
c)  $\text{N}_2$   
d) Au
53. Which of the following are biodegradable pollutants?  
a) Plastics  
b) Domestic sewage  
c) Detergent  
d) All of these
54. Mining practices lead to  
a) Population growth  
b) Rapid urbanization  
c) Loss of grazing and fertile land  
d) None of these
55. The liquid waste from baths and kitchens is called  
a) Sullage  
b) Domestic sewage  
c) Storm waste  
d) Run off

56. BOD means  
a) Biochemical Oxygen Demand  
b) Chemical Oxygen Demand  
c) Biophysical Oxygen Demand  
d) All of these
57. Physical pollution of water is due to  
a) Dissolved oxygen  
b) Turbidity  
c)  $p^H$   
d) None of these
58. Sound beyond which of the following level can be regarded as a pollutant  
a) 40dB  
b) 80dB  
c) 120dB  
d) 150dB
59. Smog is  
a) A natural phenomenon  
b) Combination of Smoke and fog  
c) Colourless  
d) All of these
60. Air pollution from automobiles can be controlled by fitting:  
a) Electrostatic Precipitator  
b) Wet scrubber  
c) Catalytic converter  
d) All of these
61. "Minamata disease" is caused due to  
a) Lead  
b) Arsenic  
c) Mercury  
d) Cadmium
62. Increase in asthma attacks has been linked to high levels of  
a) Nitrogen  
b) Oxygen  
c) Air borne dust particles  
d) All of these
63. Population explosion will cause  
a) Biodiversity  
b) Stress on ecosystem  
c) More employment  
d) None of these
64. Which of the following is having high population density?  
a) India  
b) China  
c) USA  
d) Europe
65. The average life expectancy around the world is currently.  
a) Decreasing  
b) Increasing  
c) Not changing  
d) Stabilizing
66. The major objectives of family welfare programs in India is  
a) Disease control  
b) Population growth rate control  
c) Employment generation  
d) None of these
67. Which of the following is not population characteristic?  
a) Doubling time  
b) Total fertility rate  
c) Gross domestic product growth rate  
d) Infant mortality rate
68. Demography is the study of  
a) Animal behavior  
b) Population growth  
c) River  
d) None of these

69. The meaning of global warming is  
a) Increase in temperature of climate  
b) A planet hotter than earth  
c) Solar radiation  
d) Cooling effect
70. The first of the major environmental protection act to be promulgated in India was  
a) Water act  
b) Air act  
c) Environmental act  
d) Noise pollution rules
71. The international protocol to protect the ozone layer is  
a) Vienna protocol  
b) Kyoto protocol  
c) Cartagena protocol  
d) Montreal protocol
72. The protocol that reduces green house gas emissions are  
a) Kyoto protocol  
b) Cartagena protocol  
c) Montreal protocol  
d) Vienna protocol
73. Population explosion will cause  
a) Socio economical problems  
b) Food scarcity  
c) Energy crisis  
d) All of these
74. Which of the following is not a green house gas  
a) Hydro chlorofluoro carbons  
b) Methane  
c) CO<sub>2</sub>  
d) SO<sub>2</sub>
75. Primary cause of acid rain around the world is due to  
a) Carbon dioxide  
b) Sulphur dioxide  
c) Carbon monoxide  
d) Ozone
76. Acid rain can be controlled by  
a) Reducing SO<sub>2</sub> and NO<sub>2</sub> emissions  
b) Reducing oxygen emission  
c) Increasing number of lakes  
d) Increasing the forest cover
77. Atmospheric oxidation of SO<sub>2</sub> to SO<sub>3</sub> is influenced by  
a) Sunlight  
b) Humidity  
c) Presence of hydrocarbons  
d) All of these
78. Reduction in brightness of the famous Taj Mahal is due to  
a) Global warming  
b) Air pollution  
c) Ozone depletion  
d) Afforestation
79. The process of movement of nutrients from the soil by the acid rain is called  
a) Transpiration  
b) Evapo transpiration  
c) Leaching  
d) Infiltration
80. Major compound responsible for the destruction of stratospheric ozone layer is  
a) Oxygen  
b) CFC  
c) Carbon dioxide  
d) Methane
81. Ozone layer thickness is measured in  
a) ppm  
b) ppb  
c) Decibels  
d) Dobson units

82. Chloro Fluro Carbons (CFC) are  
a) Non toxic  
b) Non flammable  
c) Non carcinogenic  
d) All of these
83. Formation of ozone layer is explained by  
a) Resentment reaction  
b) Henderson's reaction  
c) Chapman's reaction  
d) Perkins reaction
84. Each chlorine free radical can destroy the following number of ozone molecules  
a) 1000  
b) 10,000  
c) 1,00,000  
d) 100
85. Which of the following is the purpose of animal husbandry?  
a) Conservation of animals  
b) Production of meat  
c) Conservation of wildlife  
d) Conservation of forests
86. Domesticated animals are used for  
a) Dairy products  
b) Production of fiber  
c) Production of meat  
d) All of these
87. Ozone hole was first discovered over  
a) Arctic  
b) Antarctica  
c) Tropical region  
d) Africa
88. World ozone day is being celebrated on  
a) 5<sup>th</sup> September  
b) 15<sup>th</sup> October  
c) 16<sup>th</sup> September  
d) 11<sup>th</sup> September
89. Bhopal gas tragedy caused due to leakage of  
a) Methyl Iso Cyanate (MIC)  
b) SO<sub>2</sub>  
c) Mustard gas  
d) Methane
90. Animal husbandry results in  
a) Global warming  
b) Acid rain  
c) Ozone depletion  
d) None of these
91. Environmental (protection) Act was enacted in the year  
a) 1986  
b) 1992  
c) 1984  
d) 1974
92. The first of the major environmental protection Act to be promulgated in India was  
a) The Wild life protection Act  
b) The Air Act  
c) The Noise pollution Act  
d) None of these
93. The Karnataka State Pollution Control Board (KSPCB) was established in the year  
a) 1974  
b) 1982  
c) 1986  
d) 1976

94. Environmental protection is the responsibility of  
a) Govt-of India  
b) NGO's  
c) Individual  
d) All of these
95. The leader of chipko movement is  
a) Sunderlal Bahuguna  
b) Medha Patkar  
c) Vandana Shiva  
d) Suresh Heblkar
96. Which of the following animals is endangered species of India?  
a) Elephant  
b) Black buck  
c) Fox  
d) Giraffe
97. Environmental protection is the fundamental duties of the citizen of India under the Article  
a) 51-A(g)  
b) 48-A  
c) 47  
d) 21
98. ISO 14000 standards deal with  
a) Pollution Management  
b) Risk Management  
c) Environmental Management  
d) None of these
99. An important NGO involved in Global Environmental protection is  
a) UNICEF  
b) Green peace  
c) WHO  
d) CPCB
100. The committee which submitted its report to Govt. of India on Environmental education is  
a) Tiwari Committee  
b) Mehta Committee  
c) Banerjee Committee  
d) Agarwal Committee

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