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Question Paper Version : A

**Fifth Semester B.E./B.Tech. Degree Examination, June/July 2025
Environmental Studies and E-Waste Management**

Time: 1 hr.

Max. Marks: 50

INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** 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.**

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1. The source of energy in Ecosystem is
a) Green Plants and Algae b) Sun
c) Sugar d) ATP
 2. The ecosystem can be defined as :
a) Biotic and Abiotic components interacting with each other
b) A system governing the principles of economics
c) Atmosphere surrounding the earth
d) Solar system and galaxies
 3. In an ecosystem Phytoplankton can be considered as
a) Consumer b) Macro consumers
c) Producers d) Saprotropic organisms
 4. In a desert ecosystem, the decomposers are significantly in lesser numbers because:
a) Deserts experience less rain fall and humidity
b) Deserts have extremely low density of plants and animals
c) Desert have low concentration of Detritus
d) All of these
 5. Organisms that feed directly on producers are :
a) Decomposers b) Herbivorous c) Carnivorous d) Abiotics
 6. Which among the following is a climate factor?
a) Humidity b) Temperature c) Pressure d) All of these
 7. Which ecosystem is most stable:
a) Grass Land b) Riverine c) Ocean d) Forest

8. As per United Nation SDG stands for
 - a) Solid Dry Grass
 - b) Diesel Generator Set
 - c) Sustainable Development Goals
 - d) None of these
9. The SDG targets are to be attained by member nation by
 - a) 2015
 - b) 2030
 - c) 2028
 - d) 2025
10. Find the odd one out from the 17 SDGs.
 - a) End Poverty
 - b) Clean water and sanitation for all
 - c) Attain Gender Equality
 - d) Deep Space Explorations
11. Out of worlds total water availability, the net water available to human have for its use (fresh water) is :
 - a) 10%
 - b) 20%
 - c) less than 1%
 - d) 50%
12. In order to prevent dental caries, the limiting standard for fluoride in drinking water is
 - a) 0.5 mg/l
 - b) 1.5 mg/l
 - c) 5 mg/l
 - d) 10 mg/l
13. Which among the following is a water borne disease?
 - a) Typhoid
 - b) Brain Stroke
 - c) Dehydration
 - d) Asthma
14. The presence of Pesticides in water may lead to
 - a) Colouration of water
 - b) Higher rates of evaporation
 - c) Development of cancer, if consumed for long time
 - d) Eutrophication in water bodies
15. Higher levels of Nitrates in water may cause
 - a) Asthma
 - b) Blue-baby syndrome
 - c) Jaundice
 - d) High fever
16. Coal is designated as an unclean fuel because the combustion of coal emits
 - a) Nitrogen gas
 - b) Hydrogen gas
 - c) Water gas
 - d) Sulphur Di-oxide gas and particulate matter
17. Hydrogen is considered as cleaner fuel, due to
 - a) Its combustion does not emit any pollutant gases
 - b) The end product of combustion is water only
 - c) Can be obtained through electrolysis of water using solar or wind energy
 - d) All of these
18. Which of the following is not a source of renewable energy?
 - a) Solar Panels
 - b) Wind Turbines
 - c) Fossil Fuels
 - d) Agriculture Biomass
19. Liquefied Petroleum Gas (LPG) comprises of
 - a) $N_2 + H_2S$
 - b) $CH_4 + C_2H_6$
 - c) Propane + Butane
 - d) $H_2 + CO$
20. Solar energy can be harnessed through
 - a) Solar Photo Voltaic Panels
 - b) Solar Thermal Water Heating Systems
 - c) Solar Cookers
 - d) All of these

21. The gas leak in Bhopal in 1984 was
a) Potassium Isothiocyanate
b) Methyl Isocyanate
c) Sodium Isothiocyanate
d) Ethyl Isocyanate
22. Biochemical Oxygen Demand (BOD) is measurement of
a) Industrial Pollution
b) Oxygen needed by car engine
c) Dissolved Oxygen needed by organisms to decompose organic matter
d) Oxygen required by plants
23. Which of the following is an air pollutant?
a) Carbon monoxide (CO)
b) Oxygen (O₂)
c) Nitrogen (N₂)
d) All of these
24. "Smog" can be defined as
a) Natural Phenomenon
b) Combination of smoke and fog
c) Moisture present in atmosphere
d) None of these
25. The limiting sound beyond which sound levels becomes pollutant :
a) 40 dB
b) 60 dB
c) 80 dB
d) 120 dB
26. The high level occupational noise may cause
a) Deafness
b) Neurological Disorders
c) Sleeplessness
d) All of these
27. The water pollution can be caused by
a) Domestic sewage
b) Industrial Effluents
c) Overuse of Pesticides and Fertilizers
d) All of these
28. Air Pollutants from light petrol vehicles are :
a) Dust Particles
b) CH₄ and SO₂
c) N₂ + SO₂
d) Carbon monoxides (CO) and unburnt Hydrocarbon
29. Electric cars are being promoted by the Government because
a) Electric cars do not emit any air pollutants
b) These cars are helpful in reducing Green House effect on climate
c) These cars are free from creating Noise Pollution
d) All of these
30. Which of the following is not a Green House Gas?
a) Carbon dioxide
b) Methane
c) Oxygen
d) Hydro Chloro Fluoro Carbons
31. Municipal Solid Waste (MSW) is generated from
a) Residential, Commercial and Institutional areas
b) Mining areas
c) Orbiting Satellites
d) None of these

32. Most appropriate method to dispose city garbage is
a) Dump on the empty plots
b) Burial underground
c) Source segregation, composting of wet waste and recycling of dry waste
d) Dispose into the lakes and rivers
33. A Secured Land Fill (SLF) is used for :
a) Treatment of sewage and effluents
b) Safe disposal of inerts arising out of composting plants and incinerators
c) Landscape formation
d) Dumping of construction and Demolition waste
34. Solid wastes, if not properly managed can lead to :
a) Formation of leachate and contamination of ground waters
b) Formation of Unbearable foul smells around
c) Rodents and scavengers can be attracted at dump site
d) All of these
35. As per M.S.W. Rules 2016 :
a) Garbage can be dumped on empty plots
b) Garbage can be burnt on road sides
c) The gated communities are to manage the waste within their own premises
d) M.S.W. and B.M.W can be mixed together
36. Bio Medical Waste (BMW) originates from :
a) Agricultural farms and Dairy Industries
b) From B.M.W. car manufacturing plants
c) From hospitals, nursing homes, pathological labs etc.
d) Medical equipment manufacturing industries
37. The infectious waste is best disposed through
a) Shredding
b) Treatment in sewage treatment plants
c) Direct incineration at 1000°C and above
d) None of these
38. The colour coded bags as per BMW Rules 2016 are :
a) Black – Green – Blue – Orange
b) Yellow – Red – Blue – White
c) Brown – Black – Grey – White
d) Transparent bags without colour
39. Discarded needles and sharps are best disposed through :
a) Incineration
b) Disposal with other garbage
c) Disinfection, encapsulation in concrete blocks and disposal into secured landfill
d) None of these
40. Solid Waste Management Rules 2016 and Biomedical Waste Management Rules 2016 are notified under :
a) Water Prevention and Control of Pollution Act 1974
b) Air Pollution Control Act 1981
c) Environment Protection Act - 1986
d) Acts on Wild Life and Forests

41. Identify the correct statement :
- E-waste stands for "Wasted Economy"
 - E-waste signifies "Easily wasted Items"
 - E-waste signifies "Electrical and Electronic Wastes arising out of end of life gadgets"
 - E-waste is yet another name of garbage.
42. In the e-waste notification, C.R.T stands for :
- Composting – Recycling – Testing
 - Cause – Result – Trial
 - Cathod – Ray – Tube
 - None of these
43. e-waste comprises of :
- Discarded computers and cell phones
 - Large house hold appliances
 - Discarded Medical equipments
 - All of these
44. e-waste has been characterized as "Hazardous Waste" because
- It contains metals like Lead, Chromium and Arsenic
 - It contains Poly Chloro Biphenyls (PCB) and Brominated – Flame retardants
 - It contains Toxic materials such as Mercury, Cadmium
 - All of these
45. Globally what is rank of India in generation of e-waste:
- 1st
 - 3rd
 - 10th
 - 15th
46. E-waste Rules 2022 notified a new feature which is :
- No new feature, but replica of 2016 Rules
 - e-waste arising out of solar photovoltaic panels have also been included in notification
 - EPR (Extended Procedures Liability) was introduced
 - None of these
47. E-waste recycling units in India, are regulated by :
- Central and State Pollution Control Boards
 - Department of Industries
 - Department of Science and Technology
 - Department of IT and BT
48. Spot the correct statement :
- E-waste comprises of mainly Biodegradable Matter
 - Gold and other precious metals can be recovered from waste
 - e-waste is not called an "Hazardous Waste"
 - It is not possible to recover copper from e-waste
49. The sound strategy for e-waste management is :
- Recover Biogas from e-waste
 - Direct land filling of e-waste along with other hazardous wastes
 - Adopt Dismantle – Segregate – recover strategy
 - None of these
50. In e-waste Rules Extended Procedure Responsibility (EPR) means
- Holding Pollution Control Boards responsible for e-waste
 - Holding individual P.C. users in the country
 - Imparting responsibility to the manufacturers of electronic gadgets
 - None of these

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