

Seat No.

Total No. of Pages : 12

Ph.D. Entrance Examination 2025
ENVIRONMENTAL SCIENCE
Subject Code: 58801

Day and Date : Tuesday, 09/09/2025

Total Marks : 100

Time : 04.00 pm to 06.00 pm

Instructions:

- 1) All questions are compulsory.
 - 2) Each question carries 2 mark.
 - 3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
 - 4) Follow the instructions given on OMR sheet.
 - 5) Rough work shall be done on the sheet provided at the end of question paper.
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Section I

1. Literature review is not usually concerned with helping in
 - a) objective setting
 - b) research instrument design
 - c) literary appreciation
 - d) subsequent data collection
2. A research problem is feasible only when:
 - a) it has utility and relevance
 - b) it is researchable
 - c) it is new and adds something to knowledge
 - d) all the above

3. Which of the following is not required in a reference list or bibliography?
- a) Call number
 - b) Name of Authors
 - c) Year of publication
 - d) Publisher
4. The last stage of research process is
- a) Review of literature
 - b) Report writing
 - c) Research design
 - d) Analysis of data
5. Which of the following would be a creative work protected by copyright?
- a) A list of all the UK post codes
 - b) A portrait of your family
 - c) An idea for a new gadget
 - d) The name of your pet dog
6. The first page of the research reports,
- a) Appendix
 - b) Bibliography
 - c) Index
 - d) Title page
7. Plagiarism can be defined as
- a) representing another person's work--their words and/or ideas--as your own
 - b) not acknowledging the sources your ideas build upon.
 - c) paraphrasing another's ideas with explicit attribution to the author,
 - d) a & b
8. Field study is related to
- a) real life situations
 - b) Laboratory situations
 - c) Experimental situations
 - d) None of these

9. A new way to process milk so that there is no fat in any cheese made from it
 - a) Copy rights
 - b) Trade mark
 - c) Patent
 - d) Industrial designs
10. Which of the following is not a type of non probability sampling?
 - a) Snowball sampling
 - b) Stratified random sampling
 - c) Quota sampling
 - d) Convenience sampling
11. Which of the following is the main reason for producing the atmospheric greenhouse effect?
 - a) Absorption and re-emission of ultraviolet radiations by the atmosphere
 - b) Absorption and re-emission of infrared radiations by the atmosphere
 - c) Absorption and re-emission of visible light by the atmosphere
 - d) None of the above
12. Questionnaire is filled by
 - a) Respondent
 - b) Everybody
 - c) Enumerator
 - d) None of the above
13. A company decides to use a logo that has the same shape as its competitor but with a different color
 - a) Copy rights
 - b) Trade mark
 - c) Patent
 - d) Industrial designs.
14. What type of chart is useful for comparing values over categories?
 - a) Pie Chart
 - b) Column Chart
 - c) Line Chart
 - d) Dot Graph

15. Copyright law applies to forms of expression contained in,.....
- a) Song lyrics and musical compositions
 - b) Sculptures and paintings
 - c) Dramatic and literary works
 - d) All of the above
16. Which technique is generally followed when the population is finite?
- a) Area Sampling Technique
 - b) Purposive Sampling Technique
 - c) Systematic Sampling Technique
 - d) None of the above
17. Trade in services includes which of the following?
- a) Computer hardware
 - b) Textiles
 - c) Insurance
 - d) Aerospace
18. The research which is exploring new facts through the study of the past is called
- a) Philosophical research
 - b) Historical research
 - c) Mythological research
 - d) Content analysis
19. Which of the following is Not a secondary treatment in wastewater treatment?
- a) Aeration Tank
 - b) Aerated lagoons
 - c) Sedimentation
 - d) Trickling filter

20. Which is the main objective of research?
- a) To review the literature
 - b) To summarize what is already known
 - c) To get an academic degree
 - d) To discover new facts or to make fresh interpretation of known facts
21. When contamination originates from a single source, it's called source pollution
- a) point
 - b) non-point
 - c) submerge
 - d) separate
22. Which one of the following is an indication of the quality of a research journal?
- a) Impact factor
 - b) h-index
 - c) g-index
 - d) 110-index
23. Which of the following is a waterborne disease
- a) Typhoid
 - b) Cholera
 - c) Diarrhoea
 - d) All of the above
24. Which of the following is mainly responsible for the causes of water pollution?
- a) Afforestation
 - b) Oil refineries
 - c) Paper factories
 - d) Both b and c
25. For the survival of fish in a river stream, the minimum dissolved oxygen is prescribed
- a) 3 ppm
 - b) 4 ppm
 - c) 6 ppm
 - d) 8 ppm

Section II

- 1 Eutrophication means
 - a) Thermal change in water
 - b) Filling up of water body with aquatic weeds due to extra nourishment
 - c) Solid waste
 - d) None of the above.
2. Biochemical oxygen demand means.....
 - a) Industrial pollution
 - b) Air pollution
 - c) Polluting capacity of effluent
 - d) Dissolved O₂ needed by microbes to decompose organic waste
3. The main components of photochemical smog is
 - a) Water vapour
 - b) Sulphur dioxide
 - c) Oxides of nitrogen
 - d) All of the above
4. is defined as an ecological state of a species being unique to a specific geographic location.
 - a) Exotic species
 - b) Endemic species
 - c) Ecosystem
 - d) None of the above
5. 5th June is observed as.....
 - a) World forest day
 - b) World environment day
 - c) World wildlife day
 - d) World population day

- 6 The Ecological pyramid that is always upright
- a) Pyramid of energy
- b) Pyramid of biomass
- c) Pyramid of number
- d) None of these
- 7 Which of the following pollutants can cause cancer in humans?
- a) Pesticides
- b) Mercury
- c) Lead
- d) Ozone
- 8 Detritus food chain starts from
- a) Green plants
- b) Grass
- c) Dead organic matter
- d) Phytoplankton
- 9 Acid rain reacts with marble and limestone to form
- a) calcium carbonate
- b) calcium hydroxide
- c) calcium sulphate
- d) None of the above
10. In the recently launched Air Quality Index in India, which of the following pollutants is not included?
- a) Carbon monoxide
- b) Fine particulate matter
- c) Ozone
- d) Chlorofluorocarbons
11. Which of the anthropogenic activity accounts for more than -2/3rd of global water consumption?
- a) Agriculture
- b) Hydropower generation
- c) Industry
- d) Domestic and Municipal usage

12. One of the anthropogenic sources of gaseous pollutants chlorofluorocarbons (CFCs) in air is
- a) Cement industry
 - b) Fertiliser industry
 - c) Foam industry
 - d) Pesticide industry
13. Which of the following element make e-waste hazardous in nature?
- a) Lead
 - b) Glass
 - c) Plastic
 - d) Iron
14. What is common to the techniques (i) in vitro fertilization, (ii) Cryo preservation and (iii) tissue culture?
- a) All are in situ conservation methods
 - b) All are ex situ conservation. methods
 - c) All require ultra-modern equipment and large space
 - d) All are methods of conservation of extinct organisms
15. Red data book contains data of
- a) All plant species
 - b) All animal species
 - c) Threatened species
 - d) Economically important species
16. Yellowing of Taj Mahal is an effect of
- a) Acid rain
 - b) Global warming
 - c) Ozone depletion
 - d) All of the above

17. The biogas is referred to as
- a) Bio ethanol.
 - b) Biodiesel
 - c) Bio butanol
 - d) Bio methane
18. What is Kyoto Protocol?
- a) It is an agreement among countries to take steps for reducing global warming
 - b) It is an agreement among countries to take steps for reducing acid rain take steps for planting trees to
 - c) It is an agreement among countries to control pollution
 - d) It is an agreement among countries to start using nuclear energy
19. Which of the following is used to produce biogas from biomass?
- a) Anaerobic treatment
 - b) Aerobic treatment
 - e) Fermentation
 - d) Pyrolysis
20. Order of basic processes involved in succession is
- a) Invasion -> stabilization -> completion and coaction -> reaction >> nudation
 - b) Nudation-> stabilization > completion and coaction > invasion > reaction
 - c) Nudation-> stabilization -> completion and coaction invasion. → reaction
 - d) Nudation > invasion -> completion and coaction -> reaction > stabilization.
21. First International Conference on "Wetland Conservation" was held in
- a) Ramsagar
 - b) Ramsar
 - c) Ramsahar
 - d) Stockholm

22. The lowest layer of atmosphere is
- a) Mesosphere
 - b) Stratosphere
 - c) Troposphere
 - d) Ionosphere
23. Biomagnification means increase in the
- a) Increase in concentration of pollutants in living organisms
 - b) number of species
 - c) size of living organisms
 - d) biomass
24. In a fuel cell driven vehicle, the energy is obtained from the combustion of
- a) Methane
 - b) Hydrogen
 - c) LPG
 - d) CNG
25. Which of the following is called the secondary air pollutant?
- a) PANs
 - b) Ozone
 - c) Carbon monoxide
 - d) Nitrogen Dioxide

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-- ROUGH WORK --