

B.Sc. Fourth Semester- (Zoology)
Paper-1: Ecology and Environment

1. The natural place where the organism or communities live is known as:

- a. Niche
- b. Habit
- c. Habitat
- d. Biome

Answer: c

2. According to Shelford's Law of Tolerance, the organism's wide environmental factor tolerance limit show

- a. Narrow distribution with low population size
- b. Wide distribution with high population size
- c. Narrow distribution with high population size
- d. Wide distribution with low population size

Answer: b

3. Which biogeochemical cycles are driven primarily by physical processes?

- a) Hydrologic cycle b) Nitrogen cycle c) Carbon cycle d) Phosphorus cycle

Answer: a

4. Nitrogen fixation

- a) Increases soil phosphate levels.
- b) Results in the loss of nitrogen from the soil back to the atmosphere.
- c) Is performed by bacteria in most systems.
- d) All of the above

Answer: b

5. Photosynthesis and respiration belong to which cycle?

- a) Nitrogen cycle b) Carbon cycle
c) Phosphorus cycle d) Hydrologic cycle

Answer: b

6. Process by which atmospheric nitrogen gas is changed to which form, that plants can use:

- a) Biogeochemical Fixation b) Hydrologic Fixation
- c) Nitrogen Fixation d) Carbon Fixation

Answer: c

7. Which ecological cycle is directly driven by sunlight?

- a). Hydrologic b). Phosphorus
- c). Nitrogen d). Sulphur

Answer: a

8. Nitrogen is assimilated /absorbed in to plants in what form?

- a) NO_2 b) NH_3
- c) NO_3 d) choices b and c

Answer: d

9. Definition of ecosystems is

- A) The community of organism together with the environment in which they live
- b) The abiotic component of the habitat
- c) The part of the earth and its atmosphere which inhibits living organism
- d) A community of organism interacting with one another

Answer: a

10. In a food chain of grassland ecosystem the top consumers are

- a) Herbivores
- b) Carnivores
- c) Bacteria
- d) either carnivorous and or herbivorous

Answer: b

11. Who proposed the term ecosystem?

- a) Grinnel
- b) Turesson
- c) A.G. Tansley
- d) Lindeman

Answer: c

12. Name the organisms that manufacture organic compounds from simple inorganic compounds without using sunlight?

- a) Detrivores
- b) Organotrophs
- c) Phototrophs
- d) Chemotrophs

Answer: d

13. Which of the following type of productivity counts the total fixation of energy by photosynthesis?

- a) Secondary productivity
- b) Primary productivity
- c) Net primary productivity
- d) Gross primary productivity

Answer: d

14. Which of the following statement is CORRECT about the pyramid of energy?

- a) It is always upright
- b) It is always inverted
- c) It doesn't exist
- d) It varies with the trophic level

Answer: a

15. Pyramid of numbers for grassland ecosystem is:-

- a) Decreases
- b) Lateral
- c) Inverted
- d) Upright

Answer: d

16. Which of the following ecosystem consists of forest, grassland and deserts?

- a) Artificial ecosystem
- b) Aquatic ecosystem
- c) Natural ecosystem
- d) Terrestrial ecosystem

Answer: d

17. The collection of individuals which belongs to the same species when live together in a region is known as:-

- a) Keystone species
- b) Community
- c) Guild
- d) Population

Answer: d

18. Which of the following term defines the ability of the individual in the population to produce new individuals?

- a) Dispersion
- b) Mortality
- c) Natality
- d) Population dispersal

Answer: c

19. group of people coexist within space and time and interact with each other is known as:-

- a) Keystone species
- b) Community
- c) Guild
- d) Population

Answer: b

20. Which is not the characteristic of a population?

- a) Natality
- b) Mortality
- c) Stratification
- d) Sex ratio

Answer: c

21. The ability of a population to increase under ideal environmental conditions is called

- a) Natality
- b) Carrying capacity
- c) Biotic potential
- d) Absolute natality

Answer: c

22. Which of the following is an air pollutant?

- (a) Nitrogen
- (b) Carbon dioxide
- (c) Carbon monoxide
- (d) Oxygen

Answer: c

23. Smog is:

- (a) A natural phenomenon
- (b) A combination of smoke and fog
- (c) Is colourless
- (d) All of the above

Answer: b

24. Biochemical Oxygen Demand (BOD) measures:

- (a) Industrial pollution
- (b) Air pollution
- (c) Pollution capacity of effects
- (d) Dissolved O₂ needed by microbes to decompose organic waste.

Answer: d

25. Noise is:

- (a) Loud sound
- (b) Sound of high frequency
- (c) Unwanted sound
- (d) Constant sound

Answer: c

26. Which of the following gases are main contributors to acid rain?

- a) Carbon dioxide and carbon monoxide
- b) Sulphur dioxide and carbon dioxide
- c) Sulphur dioxide and nitrogen dioxide
- d) Sulphur dioxide and nitrous oxide

Answer: d

27. Sound becomes hazardous noise pollution at decibels:

- (a) Above 80
- (b) Above 30
- (c) Above 100
- (d) Above 120

Answer: a

28. Carbon dioxide is primarily called a greenhouse gas because

- a) Traps heat
- b) Traps light
- c) Traps warm currents
- d) None of the above

Answer: a

29. The presence of which of the following in a water body is an indicator of water pollution.

- a) Zygosporangium
- b) E. Coli
- c) Deinococcus radiodurans
- d) None of the above

Answer: b

30. Measuring BOD (biological oxygen demand) is primarily used for

- a) Estimating the types of microbes
- b) Determine the level of dissolved oxygen
- c) Estimating the quantity of organic matter in sewage water
- d) none of the above

Answer: c

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