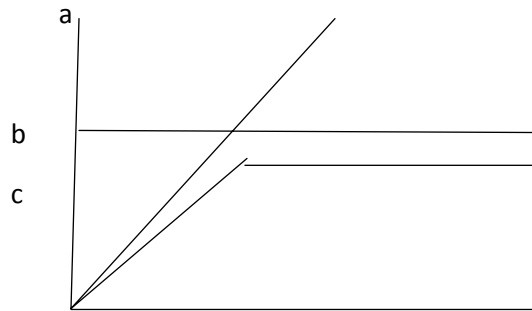


Organism and Population

1. Who is aptly described as father of ecology in India?
 - a) H. Reiter
 - b) Ernst Haeckel**
 - c) Pro, R. Misra
 - d) Arthur Transely
2. Ecology studies:
 - a) Relation of an individual organism to its environment
 - b) Relation of a particular population to its environment
 - c) Relation of a community to its environment
 - d) All the above**
3. The major ecological factors responsible for the formation of biomes on earth are
 - a) Temperature and rain fall
 - b) Temperature and snow
 - c) Temperature and humidity
 - d) Both a) and b)**
4. Permafrost is the characteristic of which biome?
 - a) Tropical rain forests
 - b) Arctic and Alpine tundra**
 - c) Deserts
 - d) Sea coasts
5. The average salt concentration of ponds and lakes is
 - a) 30-35ppm
 - b) 20-25ppm
 - c) Less than 5 ppm**
 - d) More than 100 ppm
6. Snow leopards, tuna fish and mango are examples for
 - a) Eurythermal
 - b) Euryhaline
 - c) Stenothermal**
 - d) Stenohaline
7. Diapauses in many zooplanktons in ponds and lakes is a state of
 - a) Inactivation during summer
 - b) Inactivation during winter
 - c) Suspended development**
 - d) All the above

8. The figure given below is a diagrammatic representation of response of organisms to abiotic stress, what do a, b and c represent respectively.



- a) **a – Lizard, b – pigeon, c – shrews**
 b) a – shrews, b – pigeon, c – lizard
 c) a – pigeon, b – lizard, c – Shrews
 d) a – Lizard, b – shrews, c – pigeon
9. According to Allen's rule, the mammals from colder climate
- a) Shorter ears and longer limbs
 b) Longer ears and shorter limbs
 c) Longer ears and longer limbs
 d) **Shorter ears and shorter limbs**
10. In a pond there were 20 hydrilla plants. Through reproduction 10 new hydrilla plants were added in a year. Calculate birth rate of the population.
- a) **33.3%**
 b) 50%
 c) 0.33%
 d) 0.5%
11. In an area there are 200 *Parthenium* plants but only a single huge banyan tree with large canopy. Which is the meaningful way of measuring population density in this case?
- a) Total count
 b) Relative densities
 c) Indirect count
 d) **Biomass or percent cover**
12. The following age pyramid of a population indicates that population is
- a) **Growing**
 b) Stable
 c) Declining
 d) Cannot come to conclusion
13. In a symbiotic association of lichens, phycobiont refers to
- a) **Algae**
 b) Fungus
 c) Bacteria
 d) Cyanobacteria

Ecosystem

1. Identify the correct sequence of species occupying the different strata from top to bottom in a forest ecosystem.
 - a) Trees, shrubs, herbs and grasses
 - b) Trees, herbs, shrubs and grasses
 - c) Grasses, herbs shrubs and trees
 - d) Trees, shrubs, herbs and grasses**
2. The amount of biomass or organic matter left in primary producers after some amount of organic matter being utilized by them during their respiration is known as
 - a) Primary Productivity
 - b) Secondary productivity
 - c) Gross primary productivity
 - d) Net primary productivity**
3. The annual NPP of the whole biosphere is estimated to be approximately
 - a) 170 billion tons per year**
 - b) 130 billion tons per year
 - c) 55 billion tons per year
 - d) 115 billion tons per year
4. Which of the following pair represents product in the process of decomposition?
 - a) Fragmentation
 - b) Catabolism
 - c) Mineralization
 - d) Humification**
5. The rate of decomposition is controlled by various occur in the soil?
 - a) Fragmentation and mineralization
 - b) Leaching and humification
 - c) Catabolism and mineralization
 - d) Humification and mineralization**

6. In an ecosystem standing crop includes:
- Mass of living material at a particular time**
 - The amount of nutrients in the soil at any time
 - Total biomass of producers during photosynthesis
 - Total organic matter synthesized by consumers
7. If in a grazing food chain, the total energy available at primary producer level is 1000kcal. What percentage of energy is available in tiger?
- 1000kcal
 - 100kcal
 - 10kcal**
 - 1kcal
8. What is the shape of pyramid of numbers in a large tree ecosystem?
- Upright
 - Inverted**
 - Spindle shaped
 - Can never be inverted
9. The entire sequence of communities that successively change in a given area is known as
- Seral community
 - Sere**
 - Pioneer community
 - Climax community
10. Identify the pioneer species among the following
- Phytoplankton
 - Zooplanktons
 - Mosses
 - Lichens
 - Both a) and d)**
11. What is not true successive seral stages in an ecological succession
- There is a change in the diversity of species of organisms
 - There is an increase in the number of species and organisms
 - There is an increase in the total biomass
 - There is a decline in the productivity of organisms**
12. Identify the perfect nutrient cycling among the following
- Carbon cycle**
 - Phosphorus cycle
 - Sulphur cycle
 - Calcium cycle
13. The question consists of two statements each printed as Assertion and Reason. Choose any one of the following four responses given below.
- Assertion (A) : Atmospheric inputs of phosphorus through Rain fall are very much smaller than carbon cycle.
- Reason (R) : Atmospheric phase is absent for phosphorus cycle.
- If both A and R are true and the R is the correct explanation of the A.**
 - If both A and R are true and R is not a correct explanation of the A.

- c) If A is true but R is false
 - d) If both A and R are false
14. According to Robert Constanza and his colleagues, the total price tag on the nature's life supporting system is estimated to be
- a) US\$33 trillion a year
 - b) Twice the value of the global GNP
 - c) **Both a) and b)**
 - d) US\$ 50 trillion