

Chapter – 11 | Organisms and Populations

QUIZ-01

1. Ecology is the study of interactions between:
- A. Only organisms
 - B. Organisms and their environment
 - C. Only abiotic factors
 - D. Only populations (B)

Explanation : Ecology deals with interactions among organisms and between organisms and their physical (abiotic) environment.

2. A group of individuals of the same species living in a defined area is called:
- A. Community
 - B. Ecosystem
 - C. Population
 - D. Biome (C)

Explanation : A population consists of individuals of the same species sharing resources and potentially interbreeding in a geographical area.

3. Which of the following is a population attribute but not an individual attribute?
- A. Growth
 - B. Birth rate
 - C. Respiration
 - D. Body size (B)

Explanation : Birth rate, death rate, sex ratio and age distribution are characteristics of populations, not individual organisms.

4. The graphical representation of age distribution in a population is called:
- A. Growth curve
 - B. Age pyramid
 - C. Population density curve
 - D. Survival curve (B)

Explanation : Age pyramid represents the proportion of individuals in different age groups and indicates whether a population is growing, stable or declining.

5. Increase in population density due to addition of individuals from outside is called:
- A. Emigration
 - B. Mortality
 - C. Immigration
 - D. Natality (C)

Explanation : Immigration refers to the movement of individuals of the same species into a habitat.

6. The population growth curve obtained under unlimited resources is:
- A. S-shaped curve
 - B. J-shaped curve
 - C. Bell-shaped curve
 - D. Linear curve (B)

Explanation : Exponential growth under unlimited resources produces a J-shaped growth curve.

7. The maximum number of individuals that a habitat can support is called:
- A. Natality
 - B. Carrying capacity
 - C. Population density
 - D. Intrinsic rate (B)

Explanation : Carrying capacity (K) is the maximum population size that available resources can sustain.

8. In mutualism:
- A. One species benefits and other is harmed
 - B. Both species benefit
 - C. One species benefits and other is unaffected
 - D. Both species are harmed (B)

Explanation : Mutualism is an interaction where both participating species receive benefits, such as lichen association.

9. An orchid growing on a mango tree branch is an example of:
- A. Parasitism
 - B. Mutualism
 - C. Commensalism
 - D. Competition (C)

Explanation : Orchid gets support from the mango tree while the tree is neither benefited nor harmed.

10. The relationship between fig tree and fig wasp is an example of:
- A. Predation
 - B. Competition
 - C. Mutualism
 - D. Amensalism (C)

Explanation : Fig wasp pollinates the fig flower, while the wasp uses the fig fruit for laying eggs; both species benefit.