EXERCISE – I (Conceptual Question) Build Up your Understanding

1. The population of an insect species shows an explosive increase in numbers during rainy season followed by its disappearance at the end of the season. What does this show ?
(1) The population of its predators increases enormously
(2) S-shaped or sigmoid growth of this insect
(3) The food plants mature and die at the end of the rainy season.
(4) Its population growth curve is of J-type

2. The formula for exponential population growth is
(1) dt/dN = rN (2) dN/rN = dt (3) rN/dN = dt (4) dN/dt = rN

3. Regarding life history variations. Which among the following is incorrect ?
(1) Breeding once in life time - Bamboo
(2) Breeding many times in life time - Birds
(3) Production in large number of small size offspring - Mammals
(4) Production in small number of large size offspring - Birds

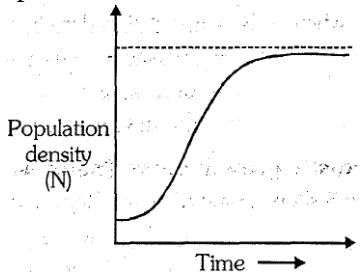
4. $\frac{dN}{dt} = rN\left(\frac{K-N}{K}\right)$

In above equation $\left(\frac{K-N}{K}\right)$ represent :-
(1) Carrying capacity (2) Environmental resistance
(3) Rate of change in population density (4) Intrinsic rate of growth

5. In a pond there are 400 lotus plant last year; through reproduction 16 new lotus plants are added, taking the current population to 416, then calculate the birth rate.
(1) 0.4 offspring per year (2) 0.6 offspring per year
(3) 0.08offspring per year (4) 0.04 offspring per year

6. A country has a high number of reproductive individual than pre-reproductive individual, what is correct about the population ?
(1) Population is expanding (2) Population is declining
(3) Population is stable (4) Cannot be predicted

7. In a logistic growth curve of population, environmental resistance is maximum when :-



(1) value of 'r' is high (2) value of 'r' is low
(3) N approaches K (4) K approaches N

ANSWER KEY

EXERCISE-I (Conceptual Question)

1. (4) **2.** (4) **3.** (3) **4.** (2) **5.** (4) **6.** (2) **7.** (3)

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