

Chapter- 13

ORGANISMS AND POPULATIONS**VERY SHORT ANSWER QUESTIONS (1 mark)**

01. Define homeostasis.
02. What do you mean by stenohaline organisms? Site one example.
03. Justify how light plays a great role in life of animals.
04. Mention two important criterias taken for distribution of biome.
05. What are eurythermic species? Site an example.
06. How do snails escape from stressful time in summers?
07. What is niche?.
08. Write the equation derived for population density.
09. List any two adaptine features evolved in parasites enabling them to live successfully on their host
10. Name the interspecific interaction in which one is detrimental while the other is neutral.

SHORT ANSWER TYPE QUESTIONS (2 marks)

11. Name the interaction in each of the following.
 - (a) Ascaris worms living in the intestine of man.
 - (b) Sucker fish attached to shark
 - (c) Smaller barnacles disappeared when Balanus dominated in the coast of Scotland.
 - (d) Wasp pollinating fig inflorescence.
12. Define population density. Give one example where population estimation of an organism is done indirectly without actually counting the organism.
13. Enlist any two adaptation seen in Kangaroo rat for surviving in deserts.
14. How body temperature is maintained during summers and winters in human beings?
15. In a pond there were 40 lotus plants. After a year the numbar increased to 56. Calculate the birth rate of lotus plant.
16. What do you mean by altitude sickness and how it is recovered after sometime?
17. How can be know whether a population is flourishing or declining?
18. How does the increase and the decrease in the value of 'r' affect the population size?
19. Construct an age pyramid which reflects a stable growth status of human population.
20. Explain Gause's competition exclusion principle.

SHORT ANSWER TYPE QUESTIONS (3 marks)

21. (a) Enlist any four feature for plants which enable them to survive in water scarce environment.
(b) What do phytophagous insects feed on?

22. (a) Elaborate brood parasitism.
(b) Why female mosquito is not considered as a parasite?
23. (a) Explain why very small animals are rarely found in polar region?
(b) Why cattle and goats not seen browsing on calotropis growing in fields?
24. (a) Explain any two defense mechanisms plants evolved against their predators.
(b) How does predation differ from parasitism?
25. (a) Why are there more conformers than regulators in animal world?
(b) Name the interaction seen between orchid and mango tree.

LONG ANSWER TYPE QUESTIONS (5 marks)

26. (a) List all the different attributes that a population possess.
(b) Explain "Allen's rule" and write how seal enables to survive in polar seas.
27. (a) Name and explain the association between cattle egret and cattle.
(b) What is mutualism? Explain with a suitable example.
(c) Explain the behavioural response of lizard to cope with variation in their environment.
28. (a) Derive equation for both growth curve.
(b) Define carrying capacity. (c) Which growth curve is realistic and why?
(d) Describe the s-shaped growth curve. How is it different from the J - shaped growth curve?
29. (a) Mention the value of 'r' for Norway rat and Flour beetle
(b) What is pseudocopulations? (c) Discuss co-evolution with a suitable example.
30. (a) How do the fishes thrive in Antarctic water?
(b) What is diapause?
(c) Give reason why mango trees cannot grow in Canada and Germany?
(d) Write a brief note upon migration.

HOTS/MODEL QUESTIONS:

01. What is ecological niche?
02. Define camouflage with an example.
03. Why is thermoregulation more effectively achieved in larger animals than in smaller ones?
04. What type of population does triangle and bell shaped age pyramid signifies?
05. Explain the following terms:-
(a) Mimicry (b) Ectotherm
06. Explain carrying capacity.

07. "Organisms may be conformers or regulators". Explain this statement and give one example of each.
08. Different animals respond to changes in their surrounding in different ways. Taking one example each, explain. "Some animals undergo aestivation while some other hibernation". How do fungi respond to adverse climatic conditions?
09. Write a note upon amensalism.
10. Highlight the differences between the population interactions given below. Give an example of each:- (a) Parasitism
(b) Amensalism (c) Mutualism
11. Draw the exponential and logistic growth curve and give the status of food and space in both the curves.
12. What are partial regulators?
13. List any three important characteristics of a population and explain.
14. Explain parasitism and coevolution with the help of one example of each.
15. Why are there more conformers than regulators in the animal world?
16. In certain seasons we sweat profusely while in some other season we shiver. Explain.
17. Most living organisms cannot survive at temperature above 45°C . How are some microbes able to live in habitats with temperatures exceeding 100°C ?
18. If a marine fish is placed in a fresh water aquarium, will the fish be able to survive? Why or why not?
19. Describe soil profile.

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