

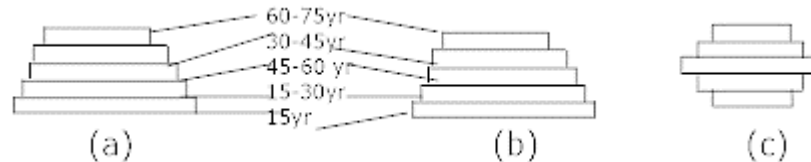
Board – CBSE

Class – 12

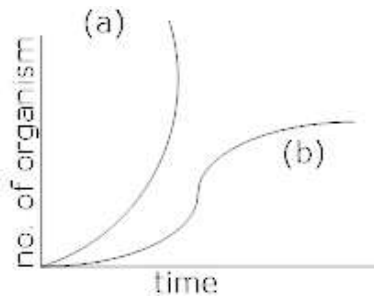
Topic – Organisms and Population

1. Which are the factor responsible for the wide variety of habitat formed within each biome?
2. Fresh water animals are unable to survive for long in sea water. Give reason.
3. With which population growth model is the Verhulst Pearl equation associated?
4. Define diapause. Which organisms exhibit it?
5. Calculate the death rate if 6 individuals in a laboratory population of 60 fruit flies died during a particular week.
6. In biological control method, one living organism is used against another to check its uncontrolled growth. Which kind of population interaction is involved in this?
7. An organism has to overcome stressful condition for a limited period of time. Which strategies can it adopt to do so?
8. Write what do phytophagous insects feed on?
9. Why do leaves contains Sunken stomata?
10. Name the type of interaction that is detrimental to both the interaction.
11. What type of interaction is shown by sparrows eating the seeds?
12. Define homeostasis?
13. Give an example of suspension?
15. How does the shape of age pyramid reflect the growth status of a population?
16. How will you measure population density in following cases?
  - (i) fish in a lake
  - (ii) tiger census in a national park
  - (iii) single huge banyan tree with large canopy .
17. Species facing competition might evolve mechanism that promotes coexistence rather than exclusion. Justify this statement in light of Gause's competitive exclusion principle, citing suitable examples.
18. Describe the specific adaptation of xerophytes with respect to root system, stem & leaves.
19. List the important characteristics of a population & Explain?
20. Describe the specific adaptations of hydrophytes with respect to roots, stem & leaves?
21. Name & explain the bind of interaction in the following.
  - (i) Algae & fungi in
  - (ii) Head louse & humans
  - (iii) Hermit crab & sea anemone.

22. Mention the different defence mechanism to reduce the impact of predation?
23. Mutualism often involves co-evolution of mutualists. Describe taking the example of animal plant (wasp-fig) relationship.
24. How do kangaroo rats live in the absence of water in North American deserts?
25. How is diapause different from Hibernation?
26. Study the three representative figures of age of pyramid relating to human population & answer the following question.



- (i) Mention the given to the three binds of age profile (a), (b) and (c)
  - (ii) Which one of them is ideal for a population & why.
  - (iii) How do such age – profile helps policy making concerned about our growing population & prepare for future generation.
27. In the adjacent population growth curve:-



- (i) What is the name given to curve (a) & (b).
  - (ii) What is the status of food & space in the curve (a) & (b).
  - (iii) In absence of predators, which curve “a” or “b” would appropriately depict the prey population?
  - (iv) When does curve ‘b’ changes into curve ‘a’.
28. What is altitude sickness? What its causes and symptoms? How does human body try to overcome altitude sickness?
  29. Orchid flower, Ophrys co-evolves to maintain resemblance of its petal to female bee. Explain how and why does it do so?
  30. Describe the exponential growth model of a diagram along with a curve?