

**NEET : CHAPTER WISE TEST- 11****SUBJECT :- BIOLOGY****CLASS :- 12<sup>th</sup>****CHAPTER :- ORGANISMS AND POPULATIONS**

DATE.....

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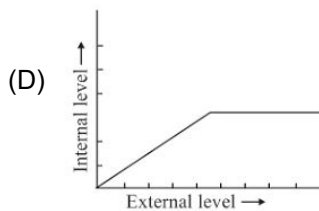
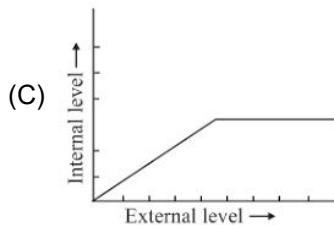
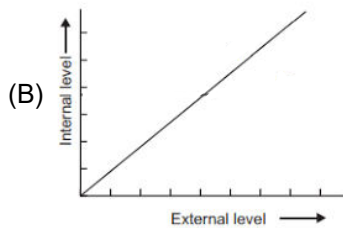
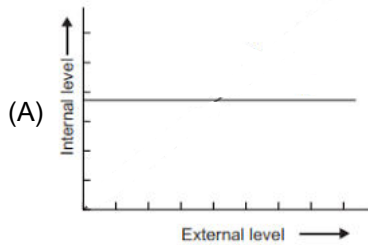
SECTION.....

**(SECTION-A)**

1. Ecology is basically concerned with the following four levels of biological organization.  
(a) Communities (b) Organisms  
(c) Populations (d) Ecosystem  
(A) b → c → d → a (B) b → c → a → d  
(C) a → d → b → c (D) d → a → c → b
2. The word ecology, as given by a German biologist Ernst Haeckel in 1869, has its origin from the Greek word oikos meaning \_\_\_\_\_ and logos meaning to study.  
(A) Home (B) Habitat  
(C) Niche (D) Environment
3. On a global scale, all the Earth terrestrial biomes and aquatic ecosystems constitute the  
(A) Ecosystems (B) Biome  
(C) Landscape (D) Biosphere
4. Organisms that can tolerate and thrive in a wide range of temperature are called  
(A) Stenothermal (B) Eurythermal  
(C) Homeothermal (D) Poikilothermal
5. More than 70% of the world's freshwater is contained in  
(A) Polar ice  
(B) Glaciers and mountains  
(C) Antarctica  
(D) Greenland
6. All of the following are characteristic features of tropical rainforest, except  
(A) Stratification  
(B) Presence of lianas and epiphytes  
(C) Soil is nutrient-rich  
(D) Rich in biodiversity
7. Geographical distribution of different species to a large extent is determined by  
(A) Their body temperature  
(B) Their food habits  
(C) Their level of thermal tolerance  
(D) The color of their body
8. Find the correct match with respect to salinity (ppt).  
(A) > 6 ppt in inland water  
(B) 40-45 ppt in sea water  
(C) <5 ppt in inland water  
(D) <100 ppt in hypersaline lagoon
9. Which one of the following statements cannot be connected to Predation?  
(A) It might lead to extinction of a species  
(B) Both the interacting species are negatively impacted  
(C) It is necessitated by nature to maintain the ecological balance  
(D) It helps in maintaining species diversity in a community
10. Evolutionary biologists believe that the success of mammals is largely due to their ability of  
(A) Migration  
(B) Thermoregulation and osmoregulation  
(C) Hibernation  
(D) Confirmation
11. All birds and mammals are able to  
(A) Keep their body temperature constant  
(B) Decrease their body temperature when the surrounding temperature becomes low  
(C) Increase their body temperature when the surrounding temperature becomes high  
(D) Increase their body temperature when the surrounding temperature is low
12. Mammals of colder areas generally have shorter extremities in comparison to the tropical mammals. This statement comes under the  
(A) Jordan's rule (B) Bergman's rule  
(C) Darwin's rule (D) Allen's rule
13. The migratory birds that are seen in Keoladeo National Park during winter come from  
(A) Extremely hot southern regions  
(B) Extremely cold northern regions  
(C) Gulf regions  
(D) Extremely hot northern regions
14. In bacteria, fungi, and algae, thick walled spores are formed to overcome unfavorable conditions. Such response to abiotic factors is categorized into  
(A) Regulation (B) Suspension  
(C) Conformation (D) Migration
15. A physiological adaptation of people living at higher altitudes is/are  
(a) High respiratory rate  
(b) Increase in binding capacity of hemoglobin with oxygen  
(c) Increase in RBC production  
(A) Only (a)  
(B) Only (a) and (c)  
(C) Only (a) and (b)  
(D) All (a), (b), and (c)

16. Fishes of the Antarctic water prevent their body fluids from freezing by  
 (A) A thick blubber layer  
 (B) The presence of oil in extracellular space  
 (C) The presence of antifreeze protein  
 (D) Migration to deeper water

17. In aquatic animals, the osmotic concentration of the body fluids changes with that of the ambient water. Such organismic response is shown by which of the following graphs?



18. A behavioral strategy of adaption echolocation is found in  
 (A) Bats  
 (B) Monarch butterfly  
 (C) Praying mantis  
 (D) Arctic tern

19. Read the following statements:  
 A. Desert lizards lack physiological ability that mammals have to deal with high temperature of their habitat.  
 B. Kangaroo rat has the ability to concentrate its urine.  
 (A) Only (A) is correct.  
 (B) Only (B) is correct.  
 (C) Both (A) and (B) are correct.  
 (D) Both (A) and (B) are incorrect.

20. The gradual physiological adjustment to slowly changing new environmental conditions is known as  
 (A) Acclimatization (B) Insularization  
 (C) Adaptation (D) Habituation

21. Many xerophytes may accumulate \_\_\_\_\_ an amino acid in response to stress.  
 (A) Glycine (B) Proline  
 (C) Glutamic acid (D) Alanine

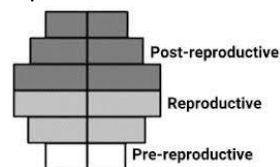
22. Allen's rule is related to  
 (A) Hibernation (B) Aestivation  
 (C) Evolution (D) Emigration

23. A group of individuals of the same species inhabiting a given area is called  
 (A) Ecosystem (B) Biome  
 (C) Biosphere (D) Population

24. Which of the following statements is incorrect with respect to population?  
 (A) A population at any given time is composed of individuals of same age  
 (B) A population has birth rates and death rates  
 (C) One of the attributes or characteristics of a population is sex ratio  
 (D) The size of the population tells us a lot about its status in the habitat

25. Which of the following processes contributes maximally to population growth in newly colonized habitat?  
 (A) Natality (B) Emigration  
 (C) Immigration (D) Mortality

26. An age pyramid for human population is depicted.



- Which of the following growth patterns is shown by the depicted age pyramid?  
 (A) Expanding (B) Stable  
 (C) Declining (D) Unstable

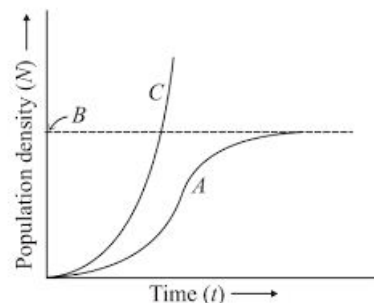
27. The increased number and density of species in the transition zone of two different habitats is called.  
 (A) Ecotone  
 (B) Crowding effect  
 (C) Edge effect  
 (D) Abundance

28. Which statement stands true for an "urn"-shaped pyramid?  
 (A) A low percentage of pre-reproductive individuals  
 (B) Negative growth in population  
 (C) Low birth rate  
 (D) All of the above
29. In the equation  $\frac{dN}{dT} = rN$ , find the correct match with respect to the magnitude of  $r$ -value.  
 (A) Flour beetle: 0.12  
 (B) Human population (1981): 0.205  
 (C) Norway rat: 0.15  
 (D) Human population (2001): 0.0170
30. In a population with almost equal number of pre-reproductive and post-reproductive individuals and comparatively fewer reproductive individuals, the age pyramid will be  
 (A) Triangular  
 (B) Bell-shaped  
 (C) Urn-shaped  
 (D) Of no definite shape
31. Response of an organism to a range of a single environmental factor shows a \_\_\_\_\_ curve.  
 (A) Bell-shaped (B) J-shaped  
 (C) S-shaped (D) Hyperbola
32. The influence of environmental resistance over the biotic potential is denoted by  
 (A)  $(b-d)$  (B)  $\left[\frac{K-N}{K}\right]$   
 (C)  $N - K$  (D)  $K-N$
33. Populations evolve to maximize their reproductive fitness, also called Darwinian fitness. Choose the incorrect option for this.  
 (A) Breed once- Salmon fish  
 (B) Breed many times – Birds  
 (C) Large progeny – Pelagic fishes  
 (D) Small progeny – Oysters
34. Identify the following statements as true (T) or false (F).  
 A. Tiger census in our national parks is often based on pug marks and fecal pellets.  
 B. Size of population for any species is not a static parameter.  
 C. Percent cover or biomass cannot be a meaningful measure to known population density.  
 D. Population density is necessarily measured in numbers.  
 (A) A-T; B-T; C-F; D-F  
 (B) A-F; B-F; C-T; D-T  
 (C) A-T; B-F; C-T; D-F  
 (D) A-F; B-T; C-T; D-T

35. Attributes that individual but not population possess are  
 (A) Age distribution  
 (B) Sex ratio  
 (C) Birth rate and death rate  
 (D) Life span

**(SECTION-B)**

36. The size of the population is represented by its  
 (A) Biotic potential (B) Mortality  
 (C) Natality (D) Density
37. Go through the population growth formula:  
 $\frac{dN}{dT} = rN$   
 Select the correct option.  
 (A) As population gets larger, its rate of growth increases  
 (B) It represents growth as a continuous process  
 (C)  $r$  is constant, and  $N$  is variable  
 (D) All of the above
38. At asymptote stage, the population is  
 (A) Stabilized (B) Increasing  
 (C) Decreasing (D) Extinct
39. Biotic potential is counteracted by  
 (A) Competition  
 (B) Predation  
 (C) Limited food supply  
 (D) All of the above
40. Choose incorrect match from given population growth.



- (A) A:  $\frac{dN}{dT} = rN \left(\frac{K-N}{K}\right)$   
 (B) B: Carrying capacity  
 (C) C: More realistic curve  
 (D) C:  $\frac{dN}{dT} = rN$

41. Identify the correct combination.

Species A	Species B	Interaction
(A) Clownfish	Sea anemone	Protocooperation
(B) Sea anemone	Hermit crab	Ammensalism
(C) Balanus	Chthamalu	Competition
(D) Black walnut	Alpha alpha	Commensalism

42. Interaction between which of the following pairs of organisms is referred to as commensalism?

- (A) Algae and fungi
- (B) Lice and human
- (C) Snake and frog
- (D) Sea anemone and clownfish

43. Select the incorrectly matched pair.

- (A) Fig and fig wasp — Mutualism
- (B) Cuscuta and hedge plant — Commensalism
- (C) Cuckoo and crow — Brood parasitism
- (D) Goats and Abingdon tortoise on Galapagos Islands — Competition

44. Competitive exclusion principle was put forward by G. F. Gause on the basis of experiments on

- (A) Chlorella
- (B) Paramecium
- (C) Microcystis
- (D) Cuckoo birds

45. Which among the following is best exemplified for competitive coexistence?

- (A) Goats and Abingdon tortoise
- (B) Balanus and Chthamalus
- (C) Fourteen species of finches in Galapagos island
- (D) Orchids and bees

46. Read the following statements, and select the correct option.

A. According to Gause's competitive exclusion principle, two closely related species competing for the same resources can coexist indefinitely.

B. Majority of parasites reduce the survival growth and reproduction of the host and reduce its population density.

- (A) Only (A) is correct.
- (B) Only (B) is correct.
- (C) Both (A) and (B) are correct.
- (D) Both (A) and (B) are incorrect.

47. The close association of cattle egret and grazing cattle is an example of

- (A) Amensalism
- (B) Commensalism
- (C) Parasitism
- (D) Predation

48. Select the one which is different from others while showing mutualism.

- (A) Lichen
- (B) Mycorrhizae
- (C) Cyanobacteria and coralloid root
- (D) Crocodile and crocodile bird

49. Resource partitioning includes

- (A) Temporal partitioning (different times for feeding)
- (B) Avoidance of competition
- (C) Morphological differentiation (using a resource in different ways)
- (D) All of the above

50. An example of species-specific coevolution is

- (A) Yucca plant and the single species of moth that pollinates them
- (B) Fig species and its pollinating species of wasps
- (C) Both (A) and (B)
- (D) Hydrilla and its pollinating agent