Paper Code – 5206

M.Sc. Semester-III (Microbiology)

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MBEC - MICROBIAL ECOLOGY

કુલ સમય :– : ૩૦ મીનીટ **કુલ પ્રશ્નો : ૩૫** **વિદ્યાર્થીએ ટીક કરવાના પ્રશ્નો : ૧૮**

નોંધ : વિદ્યાર્થીએ માત્ર ૧૮ પ્રશ્નો જ ટીક કરવાના રહેશે. જો વધારે ટીક કરેલ હશે તો પ્રથમ ૧૮ પ્રશ્નો જ ગણતરીમાં લેવામાં આવશે.

1. The natural place where the organism or communities live is known as:
   a) Niche b) Habit c) Habitat d) Biome
2. Any features of an organism or its part which enable it to exist under conditions of its habitat is known as:
   a) Adaptive variation b) Adjustment c) Acclimatization d) Adaptation
3. Which of the following is an example of microbial symbiosis?
   a) Microbes living in the digestive tract of another organism
   b) Microbes recycling carbon
   c) Microbes converting inorganic matter into organic compounds
   d) Microbes living on the surface of a cell phone
4. The phenomenon of commensalism refers to a relationship between organisms in which
   a) one species of a pair benefits b) both the species of a pair benefit
   c) one species of a pair is more benefited d) none of the above
5. The microbial ecosystem of soil includes
   a) biotic components of soil b) abiotic components of soil
   c) biotic and abiotic components of soil d) none of the above
6. What is true of the ecosystem?
   a) primary consumers are least dependent upon producers
   b) primary consumers out-number producers
   c) producers are more than primary consumers
   d) secondary consumers are the largest and most powerful.
7. The relation between algae and fungi in lichen is
   a) symbiosis b) parasitism c) commenalism d) protocooperation.
8. How many types of ecological succession are there?
   a) One b) Two c) Three d) Four
9. What is called for the succession driven by the biotic components of an ecosystem?
   a) Allogenic succession b) Autogenic succession
   c) Computational succession d) Migration succession
10. Which is the first process in ecological succession?
    a) Nudation b) Migration c) Ecesis d) Aggregation
11. What is called for the succession occurring within a microhabitat?
    a) Primary succession b) Nudation c) Serule d) Climax succession
12. Ruminant organisms include: I. - obligate aerobes. II. - anaerobic fungi
    a) I only is true. b) II only is true. c) Both I and II are true. d) Neither I nor II are true.
13. Microorganisms play a significant role in cycling nutrients in the
    a) Sulphur cycle iron cycle b) Both a) and b) are true. c) Neither a) nor b) are true.
14. Which of the following statements is true?
    a) Symbiosis refers to different organisms living together.
    b) Members of a symbiotic relationship cannot live without each other.
    c) Symbiosis refers to different organisms living together and benefiting from each other.
    d) A parasite is not in a symbiosis with its host.
15. Higher plants most often absorb nitrogen from the soil in the form of
    a) N2. b) nitrites. c) ammonia. d) nitrates.
16. All of the following are examples of negative symbiosis except
    a) Amensalism. b) Competition. c) Predation. d) Commensalism.

17. In its broadest sense _____ is the association of two or more different species of organisms.
    a) symbiosis b) populations c) mutualism d) parasitism
18. An obligatory association between two different species that is beneficial to both populations of organisms is
    a) parasitic. b) mutualistic c) predatory. d) symbiotic
19. Understanding ruminant ecology is important because ruminant organisms like _____ obtain much of their energetic needs by digesting cellulose into organic acids.
    a) dogs b) cats c) bears d) heep
20. Autotropic components are
    a) Producers b) Consumers c) Decomposers d) None of the above
21. The following are dependent on others for food
    a) Autotrops b) Heterotrops c) Both (A) and (B) d) None of the above
22. Every Ecosystem has ___ major component(s).
    a) One b) Two c) Three d) Four
23. Energy flow in ecosystem is ____.
    a) Bidirectional b) Multidirectional c) Unidirectional d) All around
24. Autoecology deals with
    a) Ecology of species b) Ecology of many species c) Ecology of community d) All the above
25. The term 'Biocoenosis' was proposed by
    a) Transley b) Carl Mobius c) Warming d) None of the above
26. Biotic potential is counteracted by
    a) Competition with other organisms b) Producer is the largest
    c) Limitation of food supply d) None of the above
27. The final stable community in ecological succession is
    a) Climax b) Sere c) Pioneers d) Carnivores
28. Which factor of ecosystem includes plants, animals and microorganisms?
    a) Biotic factors b) Direct factors c) Indirect factors d) Abiotic factors
29. An association of individuals of different species living in the same habitat and having functional interactions is
    a) Population b) Ecologic niche c) Biotic community d) Ecosystem
30. "Complete competitors cannot coexist" is true for
    a) Primary succession b) Secondary succession
    c) Competitive exclusion d) Character displacement
31. The age of pyramid with broad base indicates
    a) High percentage of old individuals b) Low percentage of young individuals
    c) Low percentage of old individuals d) High percentage of young individuals
32. Which of the following associations is characterized by one organism attaching or engulfing the other?
    a) predation. b) protocooperation. c) commensalism. d) syntrophism.
33. _____ is the process in which organic matter is decomposed to release simpler, inorganic compounds.
    a) Ammonification b) Nitrogen fixation c) Mineralization d) Immobilization
34. Predatory bacteria
    a) do not exist because bacteria are too small. b) have to be larger than their prey.
    c) Both a) and b) are true d) None of above
35. Competition for light, nutrients and space is most severe between
    a) closely related organism growing in different niches
    b) closely related organisms growing in the same area/niche
    c) distantly related organisms growing in the same habitat
    d) distantly related organisms growing in different niches.