

BIOLOGY

BOOKS - ARIHANT NEET BIOLOGY (HINGLISH)

ORGANISMS AND POPULATIONS

Check Point 23 1

1. The term 'Ecology' was first coined in 1869 by

A. Odum

- B. Malthus
- C. Haeckal
- D. Hilaire

Answer: C



- 2. The term 'Autecology' was coined by
 - A. Reiter
 - B. Schroeter

- C. Kirchner
- D. Both (b) and (c)

Answer: D



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3. The term used for genetically similar but vegetatively different population is

- A. ecads
- B. ecotype

- C. species
- D. community

Answer: A



- **4.** An internal mechanism in organisms that controls the periodicity of biological phenomenons is known as
 - A. biological clock
 - B. biological spectrum

- C. biological succession
- D. None of the above

Answer: A



- 5. The term 'Bioecology' was coined by
 - A. Karl Mobius
 - B. St. Hilaire
 - C. Shelford and Clements

D. Both (a) and (b)

Answer: C



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6. Which of the following element of environment is represented by lithosphere?

A. Land

B. Sea

C. Air

D. Soil

Answer: A



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7. Lapse rate in troposphere is

A. $6.4^{\circ}\,C\,/\,100$ metre

B. $5.5\,^{\circ}\,C\,/\,100$ metre

C. $10^{\circ}\,C\,/\,100$ metre

D. $6.4^{\circ}\,C\,/\,1000$ metre

Answer: D



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8. Only gas present is stratophere is

A. He

B. Be

 $\mathsf{C}.\,O_3$

D. N_2

Answer: C

9. In which of the following zone, deciduous forests are found?

A. Tropical

B. Subtropical

C. Temperate

D. Antarctic

Answer: B



10. Steppes, Pampas and Dawns are

- A. temperate grasslands
- B. deciduous forest
- C. savanna
- D. deserts

Answer: A



11. Forest floors, tree canopies and edges of a pond are the examples of

A. microclimate

B. niche

C. microecology

D. microhabitat

Answer: D



12. The word 'niche' was first coined by J Grinnell in the year

- A. 1999
- B. 1968
- C. 1917
- D. 1902

Answer: C



13. The modern niche theory was given by

- A. Pitel ka
- B. Mac Fadyen
- C. Hutchinson
- D. All of these

Answer: C



14. Which of the following is known as the address of an organism?

- A. Habitat
- B. Microhabitat
- C. Niche
- D. Both (a) and (c)

Answer: A



15. Profession of an organism is

- A. climate
- B. habitat
- C. ecology
- D. niche

Answer: D



| 1. Which one of these is an edaphic factor? |
|---|
| A. Water |
| B. Air |
| C. Soil |

D. Wind

Answer: C



2. Organisms living in subtropical zone is known as

A. megatherms

B. microtherms

C. hekistotherms

D. mesotherms

Answer: D



- 3. Fish, amphibians and reptiles are
 - A. cold-blooded
 - B. poikilothermic
 - C. ectothermic
 - D. All of these

Answer: D



4. Fish of colder waters tend to have more vertebrae. It represents the

A. Bergmann's rule

B. Gloger's rule

C. Allen's rule

D. Jordan's rule

Answer: D



5. Hypolimnion is

- A. lower stratum of water
- B. upper stratum of water
- C. mid stratum of water
- D. None of the above

Answer: A



6. Animals that can tolerate a narrow range of salinity are

A. Euryhaline

B. Stenohaline

C. Xeroceole

D. Hydroceole

Answer: B



7. A point at which plant can balance between food production and use is known as

- A. epilimnion
- B. abyssal zone
- C. compensation depth
- D. profundal zone

Answer: C



8. The zone of the ocean that does not receive sunlight is

A. abyssal zone

B. photic zone

C. limnetic zone

D. littoral zone

Answer: A



9. Composition of organic matter in soil is about

A. 20~%

 $\mathsf{B.}\:5\:\%$

 $\mathsf{C.}\ 10\ \%$

D. 15~%

Answer: B



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10. Soil water that is available to the plant is

- A. gravitational water
- B. hygroscopic water
- C. capillary water
- D. None of these

Answer: A



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11. Best soil for healthy and vigorous growth of a plant is

- A. sandy soil
- B. loamy soil
- C. clay soil
- D. None of these

Answer: B



- 12. Eluviation zone is also known as
 - A. A_1 region

- B. A_0 region
- C. A_{∞} region
- D. A_2 region

Answer: D



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13. Organisms that cannot maintain a constant internal environment are known as

A. regulators

- B. conformers
- C. partial regulators
- D. partial conformers

Answer: B



- **14.** In stressful conditions some fungi can
 - A. produce lots of spores
 - B. produce thin spores

- C. produce thick-walled spores
- D. undergo reproduction

Answer: C



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15. The stage of suspended development shown by zooplanktons is called:

- A. diapause
- B. hibernation

- C. aestivation
- D. None of these

Answer: A



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Check Point 23 3

- 1. Hydnilla, Potamogeton and Vallisneria are
 - A. submerged hydrophytes

- B. floating hydrophytes
- C. emergent hydrophytes
- D. mesophytes

Answer: A



- 2. Root caps are present in
 - A. Echhornia
 - B. Ranunculus

- C. Hydrilla
- D. Vallisneria

Answer: B



- **3.** Root pockets are present in
 - A. Eichhornia
 - B. Ranunculus
 - C. monocots

D. dicots

Answer: A



- 4. Plants growing in moist habitat are known as
 - A. mesophytes
 - B. xerophytes
 - C. hydrophytes
 - D. heliophytes

Answer: A



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5. Sunken stomata are found in

A. Lotus

B. Pistia

C. Opuntia

D. Eicchornia

Answer: C

6. Plants that suffer dryness both in their internal as well as external environment are known as

A. succulent

B. non-succulent

C. ephemerals

D. None of these

Answer: B

- 7. Chaperonins and prolines are present in
 - A. Ceratophyllum
 - B. Opuntia
 - C. Calotropis
 - D. Solanum

Answer: C



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| _ | D I 1 | • | • | 1. | • • • | | | |
|----|--------------|---------|----|---|-------|-----|-----|-----|
| 8. | Plants | growing | ın | saline | SOIL | are | cal | led |
| | | 0 | | • | | • • | | |

A. halophytes

B. xerophytes

C. mesophytes

D. hydrophytes

Answer: A



9. When seedling-grows sufficiently before it falls from parent plants the mechanism is known as

A. pollination

B. oviposition

C. vivipary

D. ovipary

Answer: C



10. Dunaliella osmoregulate their body due to the presence of

- A. glycol
- B. glycerol
- C. alcohol
- D. sucrose

Answer: B



11. Oligotropic soils are found in

- A. tropical rainforest
- B. temperate rainforest
- C. grassland
- D. savanna

Answer: A



12. Trematomus is able to tolerate cold environment due to presence of

- A. glycerol
- B. antifreeze proteins
- C. sucrose
- D. Both (a) and (b)

Answer: D



13. Planktons move towards surface of water during night and descend to depth during day. This is klnown as

- A. diurnal migration
- B. periodic migraion
- C. annual migration
- D. None of the above

Answer: A



| 14. Praying mantis is a good example of : |
|--|
|--|

A. camouflage

B. mimicry

C. colouration

D. Warning colouration

Answer: A



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15. Viceroy butterfly mimics

- A. queen butterfly
- B. Monarch butterfly
- C. queen bee
- D. Leaves

Answer: B



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Check Point 23 4

1. Invertebrates show which type of dispersion?

| A. | Random |
|----|--------|
| | |

B. Uniform

C. Clumped

D. Regular

Answer: B



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2. Population density is represented by

A. N/A

B. N/t

C. t/s

D. $\Delta N_n/\Delta t$

Answer: A



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3. Natality increases the

A. population density

B. population size

- C. number of organisms in the population
- D. All of the above

Answer: D



- **4.** Permanent outward movement of individuals is known as
 - A. natality
 - B. mortality

- C. emigration
- D. migration

Answer: C



- **5.** Bell-shaped age pyramid represents
 - A. expanding population
 - B. stable population
 - C. declining population

D. None of these

Answer: B



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6. If (B + 1) is more than (D + E) than population will

A. increase

B. decrease

C. remain same

D. None of these

Answer: A



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7. When resoureces are limited which type of growth is seen

A. S-shaped

B. J-shaped

C. Exponential

D. Linear

Answer: A



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8. During competition

- A. Both species are benefitted
- B. Both species are harmed
- C. One species is benefitted and other is

harmed

D. Neither of the species are harmed or benefitted

Answer: B



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9. Natural herbivore of Opuntia that was introduced in Australia, is

A. rabbit

B. cow

- C. Cactobastis
- D. bull

Answer: C



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10. A parasite which receivers a part of nourishment from host is

- A. ecotoparasite
- B. endoparasite

- C. hotoparasite
- D. hemiparasite

Answer: D



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11. Roots of black walnut produce a chemical named

- A. juglone
- B. carbonic acid

- C. carbonal
- D. None of these

Answer: A



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12. An interaction between two individuals where one is benefitted while the other is neither benefitted nor harmed is called as

A. amensalism

B. protocooperation

- C. commensalism
- D. None of these

Answer: C



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13. In lichen, fungus provides

- A. shelter to the algae
- B. nitrogen
- C. food

D. sunlight

Answer: A



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14. Arbuscules are formed in

A. ectomycorrhiza

B. endomycorrhiza

C. fungi

D. algae

Answer: B



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15. Animal-plant mutalism is seen in

A. orchid and bee

B. fig and wasp

C. fig and bird

D. Both (a) and (b)

Answer: D

Chapter Exercises Taking It Together

1. Which of the following is a partial root parasite?

A. Sandal wood

B. Mistletoe

C. Orobanche

D. Ganoderma

Answer: C



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2. Mean annual temperature of tropical zone is

A. less $10^{\circ} C$

B. $16^{\circ}\,C$

C. more than $24^{\circ}\,C$

D. $30^{\circ}\,C$

Answer: C

3. Climatic zone between $20^{\circ}-40^{\circ}$ is

A. sub-tropical

B. temperate

C. temperate and sub-arctic

D. Both (a) and (b)

Answer: A



| 4. Winters are absent in climatic zone |
|---|
| |
| A. sub-tropical |

B. tropical

C. alpine

D. arctic

Answer: B



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5. A local variation of climate is called

| B. microclimate | | | | |
|--|--|--|--|--|
| C. hubitat | | | | |
| D. microhabitat | | | | |
| Answer: B Watch Video Solution | | | | |
| | | | | |
| 6. A lake rich in nutrients is known as | | | | |
| A. euphotic | | | | |

A. niche

- B. eutrophic
- C. aphotic
- D. oligotrophic

Answer: B



- **7.** Succulents occur in
 - A. deserts
 - B. tundra

- C. temperate deciduous forests
- D. tropical rainforests

Answer: A



- 8. sunken stomata occur in
 - A. mesophytes
 - B. xerophytes
 - C. hygrophytes

D. hydrophytes

Answer: B



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9. A plant devoid of roots is

A. Wolffia/Ceratophyllum

B. Vallisneria

C. Hydrilla

D. Azolla

Answer: A



10. Upper part of sea/aquatic ecosystem contains

- A. plankton
- B. nekton
- C. benthos
- D. Both (a) and (b)

Answer: A



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11. Mechanical tissue is undeveloped in

A. xerophytes

B. hydrophytes

C. halophytes

D. mesophytes

Answer: B

12. Animals that can tolerate a narrow range of salinity are

A. stenohaline

B. euryhaline

C. anadromous

D. catadromous

Answer: A



13. The factor related to structure of earth surface is

A. edaphic

B. biotic

C. temperature

D. topographic

Answer: A



| 4 4 | | • | • | | |
|-----|-------|-----|--------|----|------|
| 14. | Renth | IC | anima | İς | live |
| | | . ~ | aiiiia | | |

- A. deep in sea
- B. floating
- C. submerged
- D. active swimmers

Answer: A



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15. Eichhornia crassipes is

- A. xerophyte
- B. hydrophyte
- C. mesophyte
- D. paraslte

Answer: B



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16. Submerged hydrophytes exchange gases through

| A. stomata | |
|---------------|--|
| B. hydathodes | |
| C. lenticels | |
| D. aeranchyma | |
| Answer: D | |



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17. Sun loving plants are

A. halophytes

- B. sciophytes
- C. heliophytes
- D. autotrops

Answer: C



- **18.** Vivipary occurs in
 - A. Betula
 - B. Rhizophora

- C. Mango
- D. Psidium

Answer: B



- **19.** Which is amphibious plants?
 - A. Hydrilla
 - B. Potamogeton
 - C. Sagittaria

D. Wolffia

Answer: C



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20. Hydrophyte with both hydrophytic and xerophytic traits is

- A. Agave
- B. Nerium
- C. Vallisneria

D. None of these

Answer: D



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21. River water deposits

A. loamy soil

B. alluvial soil

C. laterite soil

D. sandy soil

Answer: B



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22. Soil particles arranged in a series of increasing size is

A. silt ightarrow sand ightarrow clay

B. sand $\, \rightarrow \, \mathsf{silt} \, \rightarrow \, \mathsf{clay}$

C. clay \rightarrow sand \rightarrow silt

D. clay $\, o\,$ silt $\, o\,$ sand

Answer: D



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23. Least porous soil is

A. clayey soil

B. sandy soil

C. loamy soil

D. gravelly soil

Answer: A

24. Soil water available to rootsis

A. surface water

B. hygroscopic water

C. gravitational water

D. capillary water

Answer: D



25. What is the best pH of soil for cultivation?

- A. 3.4-5.4
- B. 4.5-5.5
- C. 5.5-6.5
- D. 6.5-7.5

Answer: C



26. Which gas of atmosphere holds up ultraviolet rays?

- A. O_2
- B. O_3
- $\mathsf{C}.\,N_2$
- D. CO_2

Answer: B



- A. troposphere
- B. stratosphere
- C. mesosphere
- D. homosphere

Answer: A



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28. Plants growing in extreme cold soil are:

- A. oxylophytes
- B. halophytes
- C. psychrophyte
- D. psammophytes

Answer: C



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29. Dormancy in animals through a hot season is called

- A. hibernation
- B. aestivation
- C. diapause
- D. None of these

Answer: B



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30. Warm, oxygen-rich, upper layer of water in a lake or water body is called

- A. thermocline
- B. epilimnion
- C. hypolimnion
- D. All of these

Answer: B



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31. The most important factor for living organisms is

- A. water
- B. temperature
- C. light
- D. All of these

Answer: D



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32. Which of the following plants is not a predator plant?

- A. Hydrilla
- B. Drosera
- C. Utricularia
- D. Dionaea

Answer: A



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33. The animal which captures and feeds on other animals is called a

- A. predator
- B. prey
- C. parasite
- D. host

Answer: A



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34. Which biome has the highest species diversity?

- A. Chaparral
 B. Tundra
 - C. Tropical rainforest
 - D. Desert

Answer: C



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35. Animals which are parasites on plant are

A. nematodes

- B. mosquito
- C. aphids
- D. All of these

Answer: D



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36. The periodic departure and return is known as

A. migration

- B. immigration
- C. emigration
- D. mutation

Answer: A



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37. A boundary between two plant communities of major rank, is called

A. ecotone

B. niche

C. ecotypes

D. ecade

Answer: A



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38. Competition among the plants in a community is for

A. water

- B. nutrients
- C. sunlight
- D. All of these

Answer: D



- 39. Protective device in animals is
 - A. competition
 - B. commensalism

- C. mimicry
- D. symbiosis

Answer: C



- **40.** Population connected by despersing individuals is called
 - A. deme
 - B. community

- C. metapopulation
- D. None of these

Answer: C



- **41.** In ecology, N/S represents
 - A. population density
 - B. rate of growth
 - C. death rate

D. birth rate

Answer: A



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42. dN/dt represents

A. birth rate

B. death rate

C. change in population size

D. carrying capacity

Answer: C



- **43.** The sphere of living matter found on the surface of earth comprises
 - A. lithosphere
 - B. hydrosphere
 - C. atmosphere
 - D. biosphere

Answer: D



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44. Specialised pollinaters are

A. critical link species

B. keystone species

C. network species

D. biospecies

Answer: A

45. Which biome is characterised by a layer of permanently frozen forest?

A. Tundra

B. Taiga

C. Boreal forest

D. Cold deserts

Answer: A



46. The typical biome of an area having 25-75 cm of rainfall is

- A. desert
- B. grassland
- C. deciduous forest
- D. coniferous forest

Answer: B



- A. stabilised
- B. increasing
- C. decreasing
- D. changing

Answer: A



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48. Which one of the following biomes is dominated by gymnosperm or conifer trees (pines, firs, spruces)?

- A. Taiga
- B. Tundra
- C. Desert
- D. Broad-leaved forest

Answer: A



49. Insectivorous plants usually grow in soils which are deficient in

A. rich in water

B. deficient in water

C. deficient in nitrogenous compounds

D. deficient in trace elements

Answer: C



50. Mimicry is useful for

- A. concealment
- B. protection
- C. predation
- D. Both (b) and (c)

Answer: D



51. Two different species cannot live for long duration in the same niche or habitat. This law is

- A. Allen's law
- B. Gause's hypothesis
- C. Dollo's rule
- D. Weismann's theory

Answer: B



52. Desert can be converted into green land by planting

A. tropical trees

B. psammophytes

C. halophytes

D. xylophytes

Answer: B



53. Which one of the following is a qualitative character?

- A. Dispersion
- B. Life forms
- C. Growth forms
- D. Diversity

Answer: D



54. Mutualism and protocooperation are

- A. positive interactions
- B. negative interactions
- C. Neutral
- D. Both (a) and (b)

Answer: A



55. In which zone of the lake ecosystem, the production is greater than respiration?

- A. Littoral zone
- B. Profundal zone
- C. Linnetic zone
- D. Both (a) and (b)

Answer: C



56. Exponential growth in human population is done in

- A. lag phase
- B. log phase
- C. plateau stage
- D. first stage

Answer: B



57. When birth rate equals death rate, it is called

- A. plateau stage
- B. exponential growth stage
- C. early growth stage
- D. acceleration stage

Answer: A



58. Development of soil from parental rock is termed as:

- A. pedogenesis
- B. pedology
- C. edaphic factors
- D. edaphic climax

Answer: A



59. The association of mycorrhiza with angiospermic root is referred as

- A. amensalism
- B. mutualism
- C. parasitism
- D. commensalism

Answer: B



60. Species found exclusively in ecotone are called

- A. morphospecies
- B. edges species
- C. allopatric species
- D. sympatric species

Answer: B



61. The phenomenon of having higher number of species in ecotone is called

- A. edge effect
- B. abundance
- C. frequency
- D. dominance effect

Answer: A



62. The external appearance of a biological community is called

A. physiognomy

B. startification

C. pattern

D. phenology

Answer: A



63. The equation, $\frac{(K-N)}{K}$ represents

- A. carrying capacity
- B. environmental resistance
- C. vital index
- D. crash phase

Answer: B



64. Species interaction with negative influence on both is called

A. predation

B. parasitism

C. ammensalism

D. competition

Answer: D



65. The non-obligatory mutually beneficial relationship is represented by

- A. symbiosis
- B. protocooperation
- C. commensalism
- D. mimicry

Answer: B



66. The relationship between epiphytes and tree is

A. parasitism

B. protocooperation

C. commensalism

D. amensalism

Answer: C



67. Population natality is

A. realised natality

B. biotic potential

C. vital index

D. carrying capacity

Answer: B



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68. The formula, dN/dt = g represents

- A. environmental resistance
- B. vital index
- C. carrying capacity
- D. exponential growth

Answer: D



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69. When an animal group is centered around a dominant female, it is called

- A. patriarchy
- B. matriarchy
- C. monarchy
- D. polyarchy



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70. Territory is defended against

A. predator

- B. any intruder
- C. intruder of another species
- D. intruder of same species

Answer: D



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71. At the equilibrium stage of sigmoid curve, population size

A. shows minor fluctuation

- B. shows slow growth
- C. remains static
- D. declines very slowly

Answer: A



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72. Term 'biosphere' is used for the zone of earth where life exists

A. lithosphere, hydrosphere and atmosphere

B. lithosphere and hydrosphere

C. hydrosphere

D. lithosphere

Answer: A



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73. Non-living components of the environment including soil, water, air, light, nutrients, etc., are called:

A. biotic factors

- B. abiotic factors
- C. limiting factor
- D. ecological factor



?

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74. Which one is exclusive xerophytic adaptation

A. Absence of stomata

- B. Long tap root system
- C. Stipular leaves
- D. Presence of spines

Answer: D



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75. Physical and chemical conditions of soil are studied under

A. topographic factors

- B. edaphic factors
- C. biotic factors
- D. climatic factors



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76. The layer of atmosphere that extends between 10 and 60 kilometres is called

A. exosphere

- B. stratosphere
- C. mesosphere
- D. thermosphere



- 77. Xeric environment is characterised by
 - A. precipitation
 - B. low atmospheric humidity

- C. extremes of temperature
- D. high rate of vapourisation



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78. Shallow lakes with abundant organic matter are

- A. saprotrophic
- B. oligotrophic

- C. eutrophic
- D. heterotrphic



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79. In aquatic environment, microscopic animals and plants are collectively known as

- A. plankton
- B. herbivore

- C. commensals
- D. flora and fauna

Answer: A



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80. Plants of salty seashore wetlands are called:

- A. heliophytes
- B. hydrophytes
- C. halophytes

D. saprophytes

Answer: C



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81. The type of plants having adaptations to check transpiration is

A. xerophytes

B. lithophytes

C. halophytes

D. epiphytes

Answer: A



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82. Viviparity and pneumatophores are features of

A. hydrophytes

B. halophytes

C. mesophytes

D. xerophytes

Answer: B



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83. Climatology is science of

A. edaphic factors

B. topographic factors

C. climatic factors

D. biotic factors

Answer: C



84. Mangrove of marshy sunderbans is characterised by

A. pneumatophores

B. prop roots

C. vivipary

D. All of these

Answer: D



85. Which law of evolution states that "Warmblooded" mammals of hot and humid areas have abundant melanin pigment

- A. Dollo's law
- B. Cope's law
- C. Gloger's law
- D. Gause's law

Answer: C



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86. The role of an organism in ecological system is known as

- A. habitat
- B. herbivory
- C. niche
- D. interaction

Answer: C



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87. Niche of an organism denotes

A. habitat

B. micorhabitat

C. habitat as well as inter-relations

D. habitat as well as climate

Answer: C

88. Weather represents

A. short term properties of atmosphere

B. seasonal changes in atmosphere

C. average variations of atmospheric

conditions

D. All of the above

Answer: B



89. Study of inter-relationship between a species/individuals and its environment in all stages of its life cycle is

A. synecology

B. forest ecology

C. autecology

D. ecology

Answer: C



90. Study of inter-relationship between an entire community and its environment is

- A. autecology
- B. resource ecology
- C. species ecology
- D. synecology

Answer: D



91. Individuals of a species which occur in a particular area constitute

- A. fauna
- B. flora
- C. population
- D. Both (a) and (b)

Answer: C



92. The study of interaction between living organisms and environment is called

- A. Phytogeography
- B. Ecology
- C. Ecosystem
- D. Phytosociology

Answer: B



93. A terrestrial mammal, who seldom drinks water

A. hippopotamus

B. rhinoceros

C. kangaroo rat

D. camel

Answer: C



94. Ephemerals are a type of xerophytes, which are

A. drought-escaping

B. drought-resisting

C. drought-enduring

D. None of the above

Answer: A



95. Which of the following forest plants controls the light conditions at the ground?

- A. Lianas and climbers
- B. Shrubs
- C. Tall trees
- D. Herbs

Answer: C



96. Thick cuticle occurs on the leaves of plants belonging to

A. cool habitats

B. warm habitats

C. dry habitats

D. wet habitats

Answer: C



97. Submerged hydrophytes have a well developed

- A. vascular system
- B. aerenchyma
- C. root system
- D. stomatal system

Answer: B



98. in submerged hydrophytes, the stems are extremely weak due to

- A. absence of phloem
- B. absence of stomata
- C. absence of xylem
- D. feebly developed supporting tissue and xylem

Answer: D



99. Typha is a

A. submerged hydrophyte

B. floating hydrophyte

C. emergent hydrophyte

D. attached hydrophyte with floating leaves

Answer: C



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100. Which of the following shows mimicry?

- A. Carausius morosus
- B. Kalima parolecta
- C. Mantis religiosa
- D. All of these

Answer: D



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101. An area of soil thoroughly wetted and allowed to drain till percolation stops will have a water content called

- A. capillary water
- B. storage water
- C. field capacity
- D. gravitational water

Answer: C



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102. Amount of water a soil can hold against pull of gravity is called

- A. field capacity
- B. gravitational water
- C. storage water
- D. hygroscopic water

Answer: A



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103. Cold-blooded animals are those

A. cold to touch

B. which have cold blood

C. which live in cold environment

D. which cannot regulate their body temperature

Answer: D



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104. Soil is composed of

A. mineral, water and air

- B. mineral, organic matter and water
- C. mineral, organic matter, air and water
- D. organic matter and water

Answer: C



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105. The number of species per unit number of individuals of a biotic community is called

A. abundance

- B. frequency
- C. diversity
- D. density

Answer: B



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- 106. Boundary of territory is marked by
 - A. urination
 - B. presence of excreta

- C. pheromones present in excreta
- D. All of the above

Answer: D



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107. Species of a biological cummunity that has higher abundance, cover and biomass is

- A. keystone species
- B. link species

- C. dominant species
- D. network species

Answer: C



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108. Abyssal zone in ocean has

- A. no sunlight but contains consumers and decomposers
- B. no sunlight but contains producers

- C. no sunlight but contains living beings
- D. sunlight as well as producers

Answer: A



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109. Ecotone is

- A. a polluted area
- B. the bottom of a lake

C. a zone of transition between two

communities

D. a zone of developing community

Answer: C



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110. The relationship between the two organisms or species in which both the partners derive benefit from each other is known as

A. parasitism

- B. symbiosis
- C. commensalism
- D. None of thsese

Answer: B



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111. If a population of 50 Paramecium present in a pool increases to 150 after an hour, what would be the growth rate of population?

A. 50 per hour

- B. 200 per hour
- C. 5 per hour
- D. 100 per hour

Answer: D



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112. What would be the percent growth or birth rate per individual per hour for the same population mentioned in the previous question (Question 10)?

- A. 100
- B. 200
- C. 50
- D. 150

Answer: A



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113. Which of the following would necessarily decrease the density of a population in a given habitat ?

- A. Natality gt mortality
- B. Immigration gt emigration
- C. Mortality and emigration
- D. Natality and immigration

Answer: C



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114. Formation of tropical forests needs mean annual temperature and mean annual precipitation as:

A. $18 - 25^{\circ} C$ and 150 - 400 cm

B. $5-15^{\circ}C$ and 50-100 cm

C. $30 - 50^{\circ} C$ and 100 - 150 cm

D. $5-15^{\circ}C$ and 100-200 cm

Answer: A



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115. Two opposite forces operating in growth and development of every population. One of

them has ability to reproduce at a given rate. The opposing force is A. morbidity B. fecundity C. biotic potential D. environmental resistance **Answer: D Watch Video Solution** 116. Cryptic appearance /camouflage is found in

- A. praying mantis
- B. leaf insect
- C. stick insect/dead leaf butterfly
- D. All of the above

Answer: D



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117. Relation between viceroy butterfly and monarch butterfly is that of

- A. camouflage
- B. Mullerian mimicry
- C. Batesian mimicry
- D. warning colouration

Answer: C



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118. Which character is not present in the xerophytes?

- A. Thick cuticle
- B. Well-developed mechanical tissue
- C. Well-developed conducting tissues
- D. Spongy parenchyma

Answer: D



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119. Edaphology is connected with

A. plant and biosphere

- B. soil and living microorganisms
- C. animals and ecosystem
- D. soil and biosphere

Answer: B



- 120. Top soil is darker and
 - A. contains more sodium and magnesium
 - B. is drier than subsoil

- C. contains more organic matter
- D. is wetter than subsoil

Answer: C



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121. A_0 layer of the soil is made of

- A. decaying litter
- B. rocky matter
- C. soil mixed with organic matter

D. soil rich in inorganic matter

Answer: A



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122. Dominant species represents most abundant :

A. species having major effect on physical environment

B. shrubs that appears for the first time

C. trees

D. herbs that binds the soil

Answer: A



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123. When the carrying capacity is equal to the population size, the net rate of increase in the population equals

A. the carrying capacity

B. less than zero

C. the intrinsic rate of growth

D. zero

Answer: D



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124. Under which of the following circumstances, would interspecific competition be most obvious?

A. In the presence of a keystone species

- B. When organisms have quite different ecological niches
- C. Among species, whose trophic levels are different
- D. When a non-native organism is introduced to a community.

Answer: D



125. Which of the following is not a characteristic of the tropical rainforest biome?

- A. About 200 cm of precipitation
- B. Canopy of fall evergreen trees
- C. Climbing lianas
- D. Permafrost

Answer: D



126. The flower fly resembles a honeybee, but the flower fly has no stings. This is an example of

- A. Batesian mimicry
- B. Mullerian mimicry
- C. Cryptic colouration
- D. Interspecific competition

Answer: C



127. To determine the density of a population you would need ot know the number of individual and

A. the factors tha limit population growth

B. their birth rate

C. the size of the area, in which they live

D. their population growth rate

Answer: C



128. Communities that exist in the aphotic zone ultimately depend on food manufactured by the chemoautotrophic bacteria or

A. algae and cyanobacteria that also live in the aphotic zone

B. algae and cyanobacteria that live in the aphotic zone

C. decomposers

D. minerals found on the ocean bottom

Answer: B

129. Aquatic plants generally have a

- A. well-developed vascular system
- B. reduced vascular system
- C. well-developed root system
- D. well-developed stomatal system

Answer: B



130. The floating leaves of an aquatic plant has

- A. stomata on the upper surface
- B. stomata on the lower surface
- C. stomata on both the surfaces
- D. no stomata

Answer: A



131. What will happen to a well growing herbaceous plant in the forest if it is transplanted outside the forest in a park?

A. It will grow normally

B. It will grow well because it is planted in the same locality?

C. It may not survive because of change in its micro climate

D. It grows very well because the plant gets more sunlight

Answer: C



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132. Which character is not present in the hydrophytes?

- A. Poor roots
- B. Plentiful xylem and sclerenchyma
- C. Leaves with stomata on the upper surface

or absent

D. Abundant aerenchyma

Answer: B



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133. The leaves of desert plants are not torn away by high wind velocity because of

A. spines

- B. bending of leaves towards opposite side
- C. sclerenchymatous tissue that provides extra mechanical support

D. tearing of corners, while the middle remains saved

Answer: C



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134. Amongst hydrophytes finely dissected leaves occur in

A. rooted floating leaved plants

B. submerged plants

- C. emerged plants
- D. free-floating plants

Answer: B



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135. Humus is good for plant growth because

- A. improves physical condition of soil.
- B. makes the soil porous

C. increases water holding and aeration of

soil

D. All of the above

Answer: D



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136. A fertile agricultural soil appears deep coloured at the surface as compared to soil one metre down. The reason for colour of top soil is

A. more moisture

- B. rich in organic matter
- C. rich in iron, calcium and magnesium
- D. recent formation

Answer: B



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137. Water held tightly by soil particles as a thin film over their surface is

A. hygroscopic water

- B. capillary water
- C. chemical water
- D. gravitational water

Answer: A



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138. Animals that can tolerate a narrow range of salinity are

A. euryhaline

B. stenohaline

C. poikilotherms

D. catadromus

Answer: B



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139. The maximum amount of water retained paer unit dry weight of soil afer the stoppage of gravitational flow is called

A. gravitational water

B. field capacity

C. water logging

D. Permanent Wilting Percentage (PWP)

Answer: B



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140. Plants growing near sea shore will usually have xerophyic characters, like thick leaves because

A. there is plenty of water in the soil

B. the concentration of salts is too high for the plants to absorb sufficient water from the soil

C. light available to the plants is not sufficient

D. the soil is muddy

Answer: B



141. A leaf showing a greately thickened plisade layer, thickened cuticle and sotmata located in pits came from a plant that probably lived in

- A. tropical forest
- B. lake
- C. desert
- D. mountain top

Answer: C



142. Scavenging is

- A. an interaction between two liying individuals of different species, in which one organism does not allow other organism to grow or live near it
- B. a relationship between two living individuals of different species, in which one is benefitted, while the other is neither harmed not benefitted except to a negligible extent

- C. a rivalry between two or more organisms for obtaining the same resoures
- D. feeding on flesh of an animal, which had died naturally or has been killed by another animal

Answer: D



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143. The relationship between species and another within a community that has evolved

through interaction is based upon

A. requirement and mode of obtaining food only

B. requirement and mode of obtaining shelter only

C. on the habits of the species only

D. All of the above

Answer: D



144. Symbiosis may be defined as relationship, in which

A. both the partners derive benefit from each other

B. both the partners are harmed

C. only one partner derives the benefit

D. none of the partner derives the benefit

Answer: A



145. The organisms, which spend their life on the body of a living host are called

- A. ectoparasites
- B. endosparasites
- C. semi-parasites
- D. hyper-parasites

Answer: A



- **146.** Competition for food, light, and space is most severe between two
 - A. distantly related species growing in different habitat
 - B. distantly related species growing in the same habitat
 - C. closely related species growing in different habitat
 - D. closely related species growing in the same area

Answer: D

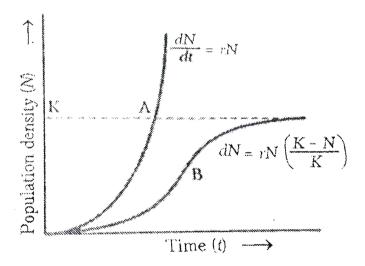


- 147. The age structure of a population is its
 - A. relative number of individuals at each age
 - B. number of newborns each year
 - C. number of young reaching puberty each year
 - D. relative number of deaths at each age

Answer: A



148. The graph shows two types of population growth curve A is exponential and B is logistic.



Which one of the following growth model considered as more realistic one?

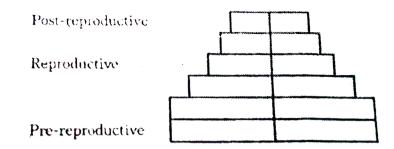
- A. Exponential growth curve
- B. Logistic growth curve
- C. Z-shaped growth curve
- D. All of the above

Answer: B



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149. The respresentation of age pyramid for human population given here, shows

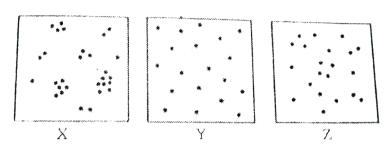


- A. declining population
- B. stable population
- C. increasing population
- D. fluctuating population

Answer: B



150. The following diagrams show possible ways of population dispersion .



Which one of the following is the most common pattern of dispersion of individuals in a population?

A. X

B. Y

C.Z

D. X and Y

Answer: A



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151. A bird introduced form one country to another became a serious pest due to

A. better adaptation to new area

B. more sexual reproduction

C. better nesting habitats

D. absence of natural competition

Answer: D



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152. One biome is characterised by precipitation of less than 25 cm per year, temperatures fluctuate wildly during the day and plants living here have adaptations such as poisons and thorns. This is a

A. temperate grassland

- B. taiga
- C. tropical rainforest
- D. desert

Answer: D



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Chapter Exercises Medical Entrances Special Format Questions Statement Based Questions

- 1. Which of the following are correct?
- I. Population is group of individual organisms of the same species in a given area.
- II. An ecotype is a population of inidividuals of a species, which are genetically different.
- III. Environment is influnced by many biotic and abiotic factors.
- IV. Ecade is a place, where and organism lives.
 - A. Only III
 - B. I and III
 - C. I and II

D. I, II and III

Answer: D



- **2.** Consider the following statements regarding stratosphere .
- I. It begins at the top of the tropopause.
- II. It includes much of ozone layer.
- III. It is nearest to the earth.
- IV. This zone is above 80 km atitude.
- Choose the incorrect statement

- A. II and III
- B. I and II
- C. I and III
- D. III and IV

Answer: D



- **3.** Consider the following anatomical adaptions.
- I. stomata sunken and covered by hair.
- II. stomata absent or functionless.

III. conducting and mechanical tissues welldeveloped. IV. aerenchyma well-developed. Choose the correct statement regarding xerophytes. A. II and III B. I and II C. Land III D. III and IV

Answer: C



4. In lake ecosystems, in

I. littoral zone, the rate of photosynthesis equals the rate of repiration.

II. rofundal zone, only respiration occurs.

III. limnetic zone, production is lower than respiration.

IV. profundal zone, production is greater than respiration.

Choose the correct statement..

A. Only I

- B. III and IV
- C. I and III
- D. I and II

Answer: D



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- **5.** Which of the following statements are correct?
- I. Mortality is the rate of loss of individuals per unit time due to death.

II. Population dispersion affects the size of population.

III. Age distribution influences both natality and mortality of the population.

IV. Realised natality is the actual death rate found under existing conditions.

A. I and IV

B. II and IV

C. I and II

D. I, II and III

Answer: D

Chapter Exercises Medical Entrances Special Format Questions Match The Columns

1. Match the following Columns.

| | Column I | | Column II | |
|----|-------------------------------|----|-------------|--|
| Λ. | Plants growing in water | 1. | Mesophytes | |
| В. | Plants growing in arid region | 2. | Xerophytes | |
| | Plants growing in wet region | 3. | Hydrophytes | |
| D. | Plants growing on land | 4. | Halophytes | |

 $\text{c.} \ \, \begin{matrix} A & B & C & D \\ 4 & 3 & 1 & 2 \\ \\ \text{D.} \ \, \begin{matrix} A & B & C & D \\ 1 & 2 & 3 & 4 \end{matrix}$

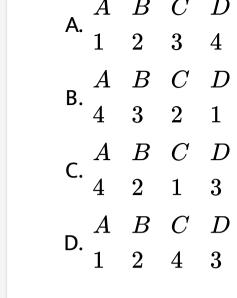
Answer: A



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2. Match the following Columns.

| Column I | | | Column II | |
|----------|------------------|----|---|--|
| Δ | , Competition | L. | Favourable relationship between two species, but not obligatory | |
| В. | Antagonism | 2. | | |
| C. | Mutualism | 3. | Harmful coaction between two species | |
| D. | Protocooperation | | Rivalry between two or more organisms for same resource | |



Answer: B



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Chapter Exercises Medical Entrances Special Format Questions Assertion And Reason

- 1. Assertion: Geneecology is the study of genetic composition and changes in relation to the origin of ecades, ecotypes, new sps., etc.

 Reason: Autecology deals with the study of a group of organisms.
 - A. If both Assertion and Reason are true and the Reason is the correct explanation of Assertion
 - B. If both the Assertion and Reason are true, but the Reason is not the correct

explanation of Assertion

C. If Assertion is true, but the Reason is false

D. If Assertion is false, but the Reason is true

Answer: C



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2. Assertion: Leaf butterfly and sick insect show mimicry to dodge their enemies.

Reason: Mimicry is a method to acquire body colour blending with the surroundings.

A. If both Assertion and Reason are true and the Reason is the correct explanation of Assertion

B. If both the Assertion and Reason are true,
but the Reason is not the correct
explanation of Assertion

C. If Assertion is true, but the Reason is false

D. Both Assertion and Reason are false

Answer: D



3. Assertion (A): Animals adopt different strategies to survive in hostile environment.

Reason (R): Praying mantis is green in colour which merges with plant foliage.

A. If both Assertion and Reason are true and the Reason is the correct explanation of Assertion

B. If both the Assertion and Reason are true,
but the Reason is not the correct
explanation of Assertion

C. If Assertion is true, but the Reason is false

D. If Assertion is false, but the Reason is true

Answer: B



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4. Assertion Xeromorophic characters are inherited.

Reason Plants obtain xeromorphic characters from xeric conditions.

A. If both Assertion and Reason are true and the Reason is the correct explanation of Assertion

B. If both the Assertion and Reason are true,
but the Reason is not the correct
explanation of Assertion

C. If Assertion is true, but the Reason is false

D. If Assertion is false, but the Reason is true

Answer: C



5. Assertion Drought escaping plants survive in the form of seeds and fruits.

Reason Drought evader plants do not have the capacity to endure or tolerate drought.

A. If both Assertion and Reason are true and the Reason is the correct explanation of Assertion

B. If both the Assertion and Reason are true,
but the Reason is not the correct
explanation of Assertion

- C. If Assertion is true, but the Reason is false
- D. If Assertion is false, but the Reason is true

Answer: A



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6. Assertion Removal of keystone species does not cause any serious disruption in the functioning of the community.

Reason Keystone species are low in abundance than the dominant species.

A. If both Assertion and Reason are true and the Reason is the correct explanation of Assertion

B. If both the Assertion and Reason are true, but the Reason is not the correct explanation of Assertion

C. If Assertion is true, but the Reason is false

D. If Assertion is false, but the Reason is true

Answer: D



7. Assertion Inhibition or death of one organism by another through the production of some byproducts is known as antibiosis.

Reason Antibiosis is a type of negative interaction.

A. If both Assertion and Reason are true and the Reason is the correct explanation of Assertion

B. If both the Assertion and Reason are true, but the Reason is not the correct

explanation of Assertion

C. If Assertion is true, but the Reason is false

D. If Assertion is false, but the Reason is true

Answer: A



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8. Assertion Commensalism is a type of positive interaction.

Reason In commensalism, one organism is benefitted, while other is harmed.

A. If both Assertion and Reason are true and the Reason is the correct explanation of Assertion

B. If both the Assertion and Reason are true,
but the Reason is not the correct
explanation of Assertion

C. If Assertion is true, but the Reason is false

D. If Assertion is false, but the Reason is true

Answer: C



9. Assertion Mycorrhiza is an mutulistic interrelationship.

Reason Mycorrhiza is an association between fungi and roots of higher plants.

A. If both Assertion and Reason are true and the Reason is the correct explanation of Assertion

B. If both the Assertion and Reason are true,
but the Reason is not the correct
explanation of Assertion

C. If Assertion is true, but the Reason is false

D. If Assertion is false, but the Reason is true

Answer: B



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10. Assertion Individual of a species makes a community.

Reason Groups of different species of individuals make a population.

A. If both Assertion and Reason are true and the Reason is the correct explanation of Assertion

B. If both the Assertion and Reason are true,
but the Reason is not the correct
explanation of Assertion

- C. If Assertion is true, but the Reason is false
- D. Both Assertion and Reason are false

Answer: D



11. Assertion Epiphytes are attached on the other plants.

Reason They obtain their nutrition from host plants.

A. If both Assertion and Reason are true and the Reason is the correct explanation of Assertion

B. If both the Assertion and Reason are true,
but the Reason is not the correct
explanation of Assertion

- C. If Assertion is true, but the Reason is false
- D. If Assertion is false, but the Reason is true

Answer: C



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12. Assertion Symbiosis is a kind of positive interaction.

Reason Symbiosis is one-sided relationship.

A. If both Assertion and Reason are true and

the Reason is the correct explanation of

Assertion

B. If both the Assertion and Reason are true,
but the Reason is not the correct
explanation of Assertion

C. If Assertion is true, but the Reason is false

D. If Assertion is false, but the Reason is true

Answer: C



1. Which of the following is correct for r-selected species?

A. Large number of progeny with small size

B. Large number of progeny with large size

C. Small number of progeny with small size

D. Small number of progeny with large size

Answer: A



2. If '+' sign is assigned to beneficial interaction, '-' sign to deterimental and '0' sign to neutral represented by '+ '-' refers to

A. mutualism

B. amensalism

C. commensalism

D. parasitism

Answer: D



- 3. Which of the following is corrrectly matched
 - A. Aerenchyma Opuntia
 - B. Age pyramid Biome
 - C. Parthenium hysterophorus Threat to biodiversity
 - D. Stratification Population

Answer: C



4. The principle of competitive exclusion was stated by

A. C Darwin

B. GF Gause

C. MacArthur

D. Verhulst and Pearl

Answer: B



5. Gause's principle of competitive exclusion states that:

A. competition for the same resources excludes species having different food preferences

B. no two species can occupy the same niche indefinitely for the same limiting resources

C. larger organisms exclude smaller ones through competition

D. more abundant species will exclude the less abundant species through competition

Answer: B



6. When does the growth rate of a population following the logistic model equal zero ? The logistic model is given as dN/dt = rN(1-N/K):

A. when N nears the carrying capacity of the habitat

B. when N/K equals zero

C. when death rate is greater than birth rate

D. when N/K is exactly one

Answer: D



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7. Which one refers to Allen's rule?

- A. If stressful conditions are localised or remain only for a short duration an organism either migrates or suspends itself
- B. Mammals from colder climates have shorter ears and limbs to minimise heat loss
- C. An organism can move form a stressful habitat to a more hospitable area and return when the stressful period is over

D. Low atmospheric pressure in higher altitudes results in altitude sickness

Answer: B



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8. The resting state of reptiles in winter is

A. Hibernation

B. Aestivation

C. Diapause

D. Moulting

Answer: A



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9. The characters such as pointed elongated snout and strong and stout forelimbs, well developed claws are observed in ____ adaptation:

A. Arboreal

B. Aerial

- C. Cursorial
- D. Fossorial

Answer: D



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10. Plant species having a wide range of genetical distribution evolve into a local population known as:

- A. Ecotype
- B. Population

- C. Ecosystem
- D. Biome

Answer: A



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11. Water holding capacity of sandy soil as compared to clayey soil is

A. More

B. Less

- C. Equal
- D. None of these

Answer: B



- **12.** Plants growing on sandy soils are
 - A. Lithoprytes
 - B. Psammophyte
 - C. Hydrophytes

D. Xerophytes

Answer: B



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- 13. Identify the correct pair of combinations
- (i) Vallisneria- Long stalked female flowers-

Hydrophily

- (ii) Tribulus- Annual-Root succulent
- (iii) Hydrilla-Submerged rooted hydrophyte-

Aerenchyma

(iv) Casuarina-Perennial-Phylloclades.

- A. III and IV
- B. II and III
- C. I and IV
- D. I and III

Answer: B



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14. Statement(S). Marine fishes have aglomerular kidneys

Reason(R). Aglomerular kidneys increase the loss of water through urine

A. Both S and R are correct, but R is not correct explanation to S

B. Both S and R are correct, but R is correct explaination of S

C. S is wrong, but R is correct

D. S is correct, but R is wrong.

Answer: D



15. Edaphic factor refers to

- A. humidity
- B. soil texture
- C. rainfall
- D. wind velocity

Answer: B



16. The adaptations in an organisms are meant for

A. optimun primary production

B. optimum life span

C. optimum mobility

D. optimum survival and reproduction

Answer: B



17. Allen's rule applies to:

A. tribes living in high altitudes

B. mammals from coder climates

C. fish living in Antarctic water

D. desert lizards

Answer: B



18. Roots play insignificant role in absorption of water in

A. sunflower

B. Pistia

C. pea

D. wheat

Answer: B



19. Most animals that live in deep oceanic waters are:

A. primary consumers

B. secondary consumers

C. tertiary consumers

D. detrivores

Answer: D



20. Hibernating animals have tissue containing mitochondria with a membrane protein that accelerates elerates transport while blocking the synthesiese of ATP, what is the consequence of this

A. the energy of respiration is converted into heat.

B. pyruvate is converted to lactic by anaerobic fermentation

C. energy is saved because glycolysis and citric acid cycle are shut down

D. hibernating animals can synthesise fat instead of wasting energy on respiration.

Answer: A



21. Which of the following statements regarding responses of organisms to abiotic factors is false?

- A. All birds and mammals are capable of thermoregulation
- B. Majority of animals and nearly and nearly all plants cannot maintain a constant internal environment
- C. Shivering is a kind of exercise which produces heat and raises body temperature
- D. Diapause is a stage of suspended development seen in zooplankton

Answer: D



22. A biologist studied the population of rats in a barn. He found that the average natality was 250, average mortality 240, immigration 20 and emigration 30. The net increase in populations is:

A. 15

B.05

- C. zero
- D. 10

Answer: C



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23. A sedentary sea anemone gets attached to the shell lining of hermit crab. The association is

- A. symbiosis
- B. commensalism

C. amensalism

D. ectoparasitism

Answer: B



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24. A population growing in a habitat with limited resources shows four phases of growth in the following sequence:

A. Acceleration-Deceleration-Lag phase-

Asymptote

B. Asymptote-Acceleration-Deceleration-Lag phase

C. Lag phase-Acceleration-DecelerationAsymptote

D. Acceleration-Lag phase -Deceleration-Asymptote

Answer: C



25. Some organisms are tolerant to a narrow range of salinity and are termed as

- A. euryhaline
- B. stenohaline
- C. Narrowhaline
- D. saline

Answer: B



26. The carrying capacity of environment for a given population can be represented by the equation

A.
$$dN=rN-rac{N}{K}$$

B.
$$rac{dN}{dt} = rN - rac{N}{K}$$

C.
$$\frac{dN}{dt} = rN - \frac{1}{K}$$

D.
$$rac{dN}{dt} = rNigg(1-rac{N}{K}igg)$$

Answer: D



27. The coralloid root of Cycas has Anabaena (BGA), this type of association is called

A. commensalism

B. parasitic

C. symbiotic

D. antibiosis

Answer: C



28. The niche of a population is defined as

A. set of condition that interacts

B. place where it lives and its interaction with its environment

C. set of conditions and resources

D. geographical area that it covers

Answer: B



29. The association mycorrhiza is

A. relationship of algae and fungi

B. relationship of fungi and higher plants

C. relationship of algae and higher plants

D. None of the above

Answer: B



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30. Small fish get stuck near the bottom of a shark and derives its nutrition from it. This kind

| of association is called as : | | | | |
|---|--|--|--|--|
| A. antibiosis | | | | |
| B. commensalism | | | | |
| C. predation | | | | |
| D. parasitism | | | | |
| Answer: B | | | | |
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| | | | | |
| | | | | |
| 31. Sigmoid/logistic growth curve is represented | | | | |
| by | | | | |

A.
$$dN/dt = rN$$

$$B. dN/dt = r N(1 - N/K)$$

C.
$$Nt = No + B + I - D - E$$

D.
$$dN/dt = 1 - N/K$$

Answer: B



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32. The growth of a population without limit at its maximal rate and also that, rates of

immigration and emigration are equal, then it is called

A. carrying capacity

B. biotic potential

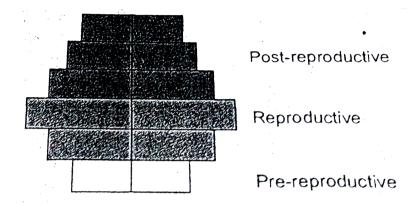
C. positive growth

D. negative growth

Answer: B



33. What type of human population represented by the following age pyramid ?



- A. Stable population
- B. Declining population
- C. Expanding population
- D. Vanishing population

Answer: B



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34. The basic unit of study in Ecology is

A. population

B. organism

C. community

D. species

Answer: B

35. The age of pyramid with broad base indicates:

A. high percentage of young individuals

B. low percentage of young individuals

C. high percentage of old individuals

D. low percentage of old individuals

Answer: A



36. Maximum survival and reproductive capacity shown by a population under optimal environmental conditions is called:

A. carrying capacity

B. natality

C. biotic potential

D. vitality

Answer: C



37. Which of the following is correct range of latitudes for temperate region?

A.
$$45^{\circ}$$
 to 66°

$$B.0^{\circ}$$
 to 20°

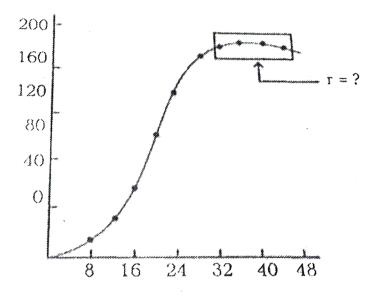
C.
$$20^{\circ}$$
 to 40°

D.
$$60^{\circ}$$
 to 80°

Answer: A



38. From the given graph of population growth select the correct option having correct value of 'r' and bar graph



B.
$$r = -ve \rightarrow$$

C.
$$r = -ve \rightarrow$$

$$D. r = 0 \rightarrow$$

Answer: D



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39. There are two ways of exploitation. One way is parasitism, the other one is

- A. Antibiosis
- **B.** Competition
- C. Predation

D. Commensalism

Answer: C



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40. The term 'Niche' was first used by

A. Clements

B. Grinnel

C. Warming

D. Odum

Answer: B



- **41.** The interaction between two living organisms of different species which is beneficial to both but is not obligatory because they can live without each other is known as
 - A. protocooperation
 - B. mutualism
 - C. commensalism

D. parasitism

Answer: A



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42. Match the following Columns.

| A. | Mutualism | 1. | Ticks on dogs |
|----|--------------|----|----------------------------|
| | Commensalism | 2. | Balanus and Chathamalus |
| C. | Parasitism | 3. | Sparrow and any seed |
| | Competition | 4. | Epiphyte on a mango branch |
| E. | Predation | 5. | Orchid, Ophrys and bee |

Answer: D



A.
$$L_t = L_v + rt$$

B.
$$L_e = L_t r t$$

$$\mathsf{C.}\,W_1=W_0e^n$$

D.
$$W_1 = W_0 ert$$

Answer: C



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44. In a population, unrestricted reproductive capacity is called as -

A. biotic popential

B. fertility rate

C. carrying capacity

D. birth rate

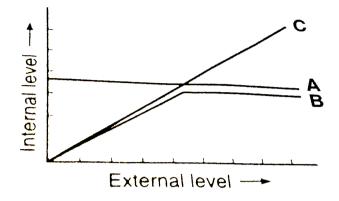
Answer: A



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45. The figure given below is a diagrammatic representation of response of organisms to abiotic factors. What do A, B and C represent

respectively?



A.

A B C
Regulator Conformer Partial regulator

В.

A B C
Conformer Regulator Partial regulator

C.

A B C Regulator Partial regulator Conformer D.

A B C

Partial regulator Regulator Conformer

Answer: A



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46. Barnacles growing on the back of whale is an example for :

A. mutualism

B. commensalism

- C. parasitism
- D. amensalism



- **47.** Ratio between mortality and natality is:
 - A. population ratio
 - B. vital index
 - C. density coefficient

D. census ratio

Answer: B



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48. The assemblage of all the population of different species that function as an integrated unit through co-evolved metabolic transformation in a specific area is called:

A. biome

B. biotic community

- C. population
- D. ecosystem



- **49.** Phenomenal and rapid increase of population in a short period is called:
 - A. natural increase
 - B. population growth

- C. population explosion
- D. None of these

Answer: C



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50. Halophytes are organism which are

- A. fire-resistant
- B. cold-resistant
- C. salt-resistant

D. sand-loving

Answer: C



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51. Assertion (A) Predation is an interspecific interaction with a feeding strategy.

Reason (R) Predation and their prey maintain fairly stable population through time and rarely one population become abundant or scarce.

A. Both A and R are true and R is a correct explanation of A

B. Both A and R are true, but R is not a correct explanation of A

C. A is true, but R is false

D. Both A and R are false

Answer: A



52. About 70% of total global carbon is found in

- A. grasslands
- B. agroecosystems
- C. oceans
- D. forests

Answer: C



53. The table below gives the population (in thousands) of ten species (A-J) in four areas (a-d) consisting of the number of habitats given within brackets against each. Study the table and answer the questions which follow.

| Area and No. of habitats | Species and their populations (in thousands) in the areas | | | | | | | | | |
|--------------------------|---|------|------|-----|-----|-----|-----|-----|------|------|
| | A | В | С | D | Е | F | G | Н | I | J |
| p (11) | 2.3 | 1.2 | 0.52 | 6.0 | _ | 3.1 | 1.1 | 9.0 | _ | 10.3 |
| q (11) | 10.2 | _ | 0.62 | _ | 1.5 | 3.0 | _ | 8.2 | 1.1 | 11.2 |
| r (13) | 11-3 | 0.9 | 0.48 | 2.4 | 1.4 | 4.2 | 0.8 | 8-4 | 2.2 | 4.1 |
| s (12) | 3.2 | 10.2 | 11.1 | 4.8 | 0.4 | 3.3 | 0.8 | 7.3 | 11.3 | 2.1 |

Which area out of a-d shows maximum species diversity?

A. II

B. III

C. IV

D. I

Answer: C



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54. Maximum growth rate occur in

A. stationary phase

B. senescent phase

C. lag phase

D. exponential phase

Answer: D



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55. Lichen is an association between

A. Protista and algae

B. fungi and bacteria

C. Protista and fungi

D. algae and fungi

Answer: D



56. Which of the following supports a dense population of plankton and littoral vegetation

- A. Oligotropic
- B. Eutrophic
- C. Lithotrophic
- D. Agroecotrophic



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57. The soil, which is transported by wind is known as

- A. colluvial soil
- B. eolian soil
- C. alluvial soil
- D. glacial soil



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58. What is a keystone species?

A. A species which adds upto only a small proportion of the total biomass of a community, yet has a huge impact on the community's organisations and survival

- B. A common species that has plenty of biomass, yet has a fairly low impact on the community's organisation
- C. A rare species that has minimal impact on the biomass and on other species in the community
- D. A dominant species that constitutes a large proportion of the biomass and which affects many other species

Answer: A

59. Study of ecology of population is called

- A. autecology
- B. synecology
- C. ecotype
- D. demecology

Answer: D



60. If we uncover half of the forest covering of the Earth what crisis will be produced at most and at first?

A. many species would become oxtinct

B. population, pollution and ecological unbalance will rise

C. energy crisis will commence

D. the remaining forest will correct the unabalance

Answer: D

61. Stabilised population means

A. birth rate = death rate

B. birth rate gt death rate

C. death rate gt birth rate

D. None of the above

Answer: A



62. Who stated that human population grows geometrically?

- A. Malthus
- B. Darwin
- C. Cannon
- D. Lamarck

Answer: A



63. Benthic organisms are found in

A. surface of marine water

B. middle of water in sea

C. bottom of sea

D. on ground

Answer: C



- **64.** The most well studied bacterial- plant relationship is that of
 - A. cyanobacterial symbiosis with some aquatic ferns
 - B. gall formation on certain angiosperms by
 - Agrobacterium
 - C. nodulation of Sesbania stems by nitrogen
 - fixing bacteria
 - D. plant growth stimulation by phosphate solublising bacteria



- **65.** Lichens are well known combination of an alga and a fungus where fungus has
 - A. saprophytic relationship with the alga
 - B. cpiphytic relationship with the alga
 - C. parasitic relationship with the alga
 - D. symbiotic relationship with the alga.

Answer: D



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- 66. Intraspecific competition of species leads to
 - A. extinction
 - B. mutation
 - C. greater number of niches are formed
 - D. symbiosis

Answer: A

67. Phytoplanktons are dominant in which of the following zones?

A. Limnetic zone

B. Profundal zone

C. Littoral zone

D. Aphotic zone

Answer: C



68. Zoochlorellae in Hydra produces an association called

A. mutualism

B. protocooperation

C. parasitism

D. predation

Answer: A

