

BIOLOGY

BOOKS - TRUEMAN BIOLOGY

ORGANISMS AND POPULASTIONS

Multiple Choice Questions

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

is

- A. Allen's law.
- B. Malthus theory
- C. Weismann's theory
- D. Competition -exclusion principle.

Answer: D



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2. In order for the human population to achieve zero population growth which of the following must occur?

- A. There must be more postreproductive individuals than reproductive individuals.
- B. There must be more prepreproductive than reproductive individuals
- C. There must be the same number prereproductive individuals as there are reproductive individuals.
- D. all of these

Answer: C

3. When population reaches carrying capacity:

A. Mortality rate =birth rate

B. Mortality rate > birth rate

C. Mortality < birth rate

D. None of the above

Answer: A



4. Pedology is a study of

A. rocks

B. soils

C. crop diseases

D. locomotion of aniamals

Answer: B



5. Which of the following factors affect a plant not an animal?

A. Temperature

B. Competition

C. Altitude

D. Soil air

Answer: D



6.	Development	of	soil	from	parental	rock	is
te	rmed as:						

- A. humification
- B. pedogenesis
- C. myrmecophily
- D. edaphic climax

Answer: B



7. The relationship between two species in which one is inhibited or harmed by the presence of the other is :

A. commensalism

B. amensalism

C. mutualism

D. symbiosis

Answer: B



8. A compound which is produced by an organism and inhibits the growth of other organism is called

A. antiseptic

B. anitbiotic

C. antiallergic

D. anticogulant

Answer: B



9. Killing and consuming one's own kind or intraspecific predation is called:

A. cannibalism

B. parasitism

C. autophagy

D. none of these

Answer: A



- **10.** Study the following statements about Adamsia and select your answer from the answer codes:
- 1. It is a parasite
- 2. It is an example of commensalims
- 3. It is called sea anemone
- 4. It is called hermit crab

Answer codes:

- A. A and B are correct
- B. B and C are correct
- C. C and D are correct

D. A and D are correct

Answer: B



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11. Individuals of the same species inhabiting a particular locality constitute:

A. community

B. flora

C. fauna

D. population

Answer: D



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12. 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 habits

D. absence of natural competition.

Answer: D



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13. Law of limiting factors in photosynthesis was given by:

A. Calvin

B. R.Hip

C. Blackmann

D. Arnon

Answer: C



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14. Interaction between biotic and abiotic components leads to formation of a:

A. society

B. population

C. species

D. community

Answer: D



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15. Obligate parasities are those organisms which:

A. live only on living host

B. live only on dead and decaying organic matter

C. are essentially saprophytes but also can

D. are essentially parasites but also can

Answer: A



become parasites

become saprophytes.

16. A bird enters the mouth of a crocodile and feeds on parasitic leeches. The bird gets food and the crocodile gets rid of blood sucking

leeches. Both the partners can also live independently. Such an association is :

- A. Amensalism
- B. mutualism
- C. commensalism
- D. protocooperation

Answer: D



17. Nekton are

- A. algae
- B. floating plants
- C. suspended lower plants
- D. organisms that swim in water

Answer: D



18. Two species compete to each other even in presence of large quantity of food. The relationship is :

A. mutualism

B. antagonism

C. isolation

D. Commensalism

Answer: B



19. Transition	zone betwe	een vegetat	ional types
is			

- A. ecotone
- B. ecotype
- C. ecocline
- D. ecosystem

Answer: A



20. An orchid resembles female of an insect so as to get pollinated. The phenomenon is

- A. mimicry
- B. pseudocopulation
- C. pseudopollination
- D. pseudoparthenocarpy

Answer: A



21. Natality is the characteristic of population which means :

A. the total number of individuals present per unit area at a given time.

- B. the increase in number of individuals in a population under given environmental conditions.
- C. loss of individuals due to death in a population under given environmental

conditions

D. the movement of individuals into and out of population.

Answer: B



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22. Functional aspect of species with reference to the place of occurrence is called

A. ecology

B. ecological niche

C. species

D. environment

Answer: B



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23. Extremities, tail and ear are relatively shorter in animlas living in cooler regions as compared to those inhabiting warmer zones. This is .

- A. Gloger's rule
- B. Jordan's rule
- C. Allen's rule
- D. Bergman's rule

Answer: C



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24. Soil carried by gravity is

A. eluvial

- B. alluvial
- C. glacial
- D. colluvial

Answer: D



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25. Submerged hydrophytes exchange gases through

A. hydathodes

- B. stomata
- C. lenticels
- D. general suface

Answer: D



- **26.** Rhizophora is a
 - A. hydrophyte
 - B. halophyte

- C. mesophyte
- D. xerophyte

Answer: B



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27. $10\,\%$ law of energy transfer in food chain was given by:

- A. Stanley
- B. Tranley

- C. Lindeman
- D. Weismann

Answer: C



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28. Root cap is deficient in

- A. Hydrophytes
- B. Halophytes
- C. Xerophytes

D. heliophytes

Answer: A



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29. The association between ants and members of family rubiaceae is

A. ornithophily

B. entomophily

C. myrmecophily

D. epiphyte

Answer: C



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30. Eichhornia crassipes is

A. mesophyte

B. xerophyte

C. myrmecophily

D. hydrophyte

Answer: C



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31. Which of the following is wrong?

- A. Lichen, an association of fungus and alga, is an example of mutualsim.
- B. Epiphytes , using other plants for support only and not for water or food, show commensalism.

C. Sea Anemone and Hermit crab

association is an example of

Protocooperation

D. Mutualism, protocooperation and commensalism are not included under symbiosis.

Answer: C



- **32.** Competition for nutrients, food, light and space is more severe between two
 - A. closely related organisms growing in different niches
 - B. closely related organisms growing in ths same area/niche
 - C. distantly related organisms growing in the same habitat

D. distantly related organisms growing in different niches.

Answer: B



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33. A successful parasite is the one which

- A. grows rapidly
- B. causes severe damage
- C. sticks to host for long

D. makes minimum demands from its host

Answer: D



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34. In commensalism:

- A. both partners are benefitted
- B. both partners are harmed
- C. weaker is benefitted while stronger is

unharmed

D. None of the above

Answer: C



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35. Allelopathy is due to secretion of

A. pheromone

B. toxin

C. nectar

D. vitamins

Answer: B



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36. A soil transported by water is

A. clay

B. red soil

C. colluvial

D. alluvial

Answer: D

37. The instrument used to measure wind velocity is

A. Hydrometer

B. Anemometer

C. Photometer

D. Potometer

Answer: B



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38. Effect of increase in both altitude and latitude is similar on vegetation due to that

A. both are higher up in biosphere

B. angle of sunlight is charged

C. temperature shows decrease with both

latitude and altitude.

D. both (1) and (2)

Answer: C

39. Which one is a transported soil

A. Alluvial

B. Colluvial

C. Black soil

D. both (1) and (2)

Answer: D



40. Which of the following is true for horizon

A. soil ligh in colour than C horizon

B. microbial activity is lesser

C. presence of different stages of decompostion of organic matter

D. weathered matter has not become true soil

Answer: C

41. Which organisms would be affected immediately after the withdrawal of CO_2 from the bioshospere ?

A. Producers

B. Tertiray consumers

C. Primary consumers

D. Secondary consumers

Answer: A



42. Phostosynthetic function of the Cactus plant is done by

A. leaf

B. phyllode

C. bracts

D. phylloclade

Answer: D



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43. The best way to check the soil erosion is

A. shifting cultivation

B. overgrazing

C. afforestation

D. deforestation

Answer: C



44. Which of the following does not possess stomata?

A. Hydrophytes

B. Submerged hydrophytes

C. Xerophytes

D. Mesophytes

Answer: B



45. Animals having a built-in thermostat to maintain constant body temperature are known as

- A. biothermic
- B. poikilothermic
- C. oligothermic
- D. homeothermic

Answer: D



46. Plants growing in extreme cold soil are	:
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A. oxylophytes

B. sciophytes

C. psammophytes

D. psychrophytes

Answer: D



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47. The mesophytes are characterised by

- A. sunken stomata
- B. absence of cuticle
- C. well developed root-shoot systems
- D. all of these

Answer: C



- **48.** Plants growing on rocks are called as
 - A. psychromphytes

- B. lithophytes
- C. halophytes
- D. sciophytes

Answer: B



- **49.** Competition of species leads to:
 - A. extinction
 - B. parasitism

C. greater number of niches formation

D. symbiosis

Answer: C



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50. The measure of maximum rate of reproduction under optimal condition is known as :

A. ultimate level

- B. carrying capacity
- C. natality
- D. biotic potential

Answer: D



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51. Study of human population growth comes under

A. demography

- B. biography
- C. dermatology
- D. psychology

Answer: A



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52. What is the most important factor for the success of animal population

A. natality

- B. Adaptability
- C. Unlimited food
- D. Interspecific activity

Answer: B



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53. The concept that 'population tends to increase geometrically while food supply increases arithmetically 'was put forward by :

- A. Stuart hill
- B. Adam smith
- C. Thomas Malthus
- D. Charles Darwin

Answer: C



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54. Adaptation to low temperature and freezing in animals occurs due to the production of:-

- A. gycerol
- B. Antifreeze proteins
- C. proline
- D. alanine

Answer: A



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55. 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. biotic potential

B. migration

C. vital index

D. environmental resistance

Answer: D



56. Least pore size seen in

- A. clayey soil
- B. sandy soil
- C. loamy soil
- D. gravelly soil

Answer: A



57. Ability to produce maximum offspring is

- A. biotic potential
- B. carrying capacity
- C. environmental resistance
- D. none of these

Answer: A



58. Ratio between mortality and natality is:

- A. vital index
- B. population density
- C. total count
- D. none of these

Answer: A



59. In a population curve, the rate of growth be comes steady towards the end of exponential phase due to

A. reproductive power is reduced

B. environmental stress

C. migration

D. all of these

Answer: B



60. Submerged hydrophytes have dissected leaves for

- A. decreasing surface area
- B. increasing surface area
- C. reducing effect of water currents
- D. increasing number of stomata

Answer: C



61. July 11 is observed as

A. world population day

B. not tobacco day

C. world environmental day

D. world health day

Answer: A



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62. Plants adapted to grow in shade are called

- A. psammophytes
- B. sciophytes
- C. mesophytes
- D. xerophytes

Answer: B



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63. Certain characteristic demographic features of developing coutries are:-

- A. high infant mortality, low fertility, uneven population growth and a very young age distribution.
- B. high mortality, high density, uneven population growth and a very old age distribution.
- C. high fertility, low or rapidly falling mortality rate, rapid population growth and yound age distribution

D. high fertility density, rapidly rising mortality rate and a very young age distribution.

Answer: C



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64. Which one is a xerophyte?

A. Euphorbia

B. Lotus

- C. China rose
- D. Wolfia

Answer: A



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65. Habitat together with functions of a species constitute is

- A. topography
- B. trophic level

- C. boundry
- D. ecological niche

Answer: D



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66. Which mammal excretes solid urine to avoid water loss?

- A. Crow
- B. Kangaroo rat

- C. Camel
- D. Squirrel

Answer: B



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67. In India, human population has higher number of younger age group due to

- A. long life span and low birth rate
- B. short life span and high birth rate

C. short life span and low birth rate

D. birth rate is equaol to death rate

Answer: B



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68. Which one of the following is a matching pair of certain organism(s) and the kind of association?

A. Shark and sucker fish - Commensalism

- B. Algae and fungi in lichens Mutualism
- C. Orchids growing on trees -Parasitism
- D. Cuscuta (dodder) growing on other flowering plants Epiphytism

Answer: A



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69. Bell-shaped polygonal pyramid indicates

A. High percentage of young individuals

- B. Moderate percentage of young individuals
- C. Low percentage of young individuals
- D. Low percentage of old individuals.

Answer: B



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70. In a lake , phytoplankton grow in abundance in

- A. Littoral zone
- B. Limnetic zone
- C. Profundal zone
- D. Benthic region.

Answer: B

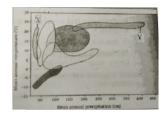


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71. The given figure shows biome distribution with respect to temperature and precipitation.

The option which correctly identifies the

biomes marked X and Y respectively is.



- A. Coniferous forest, Temperature forest
- B. Tundra, Temperature forest
- C. Desert, Tropical forest
- D. Grassland, Coniferous forest

Answer: C



72. Four major abiotic factors are listed. Choose the option which arranges them correctly in increasing order of their ecological relevance.

- A. Temperature, water, ligh, soil
- B. Water, Temperature, Soil, Light
- C. Light, Soil, Temperautre, Water
- D. Soil, Light, Water, Temperature

Answer: D



- 73. Read the following given examples
- (i) Plant pollinator mutualism
- (ii) African catfish in our rivers for aquaculture
- (iii) Fish species with its parasites.
- (iv). Nile perch and cichilid fish. Which out of these options correctly gives the examples of
- "Co-extinctions" as a cause of biodiversity loss?
 - A. (i),(ii)
 - B. (ii),(iii)
 - C. (ii), (iv)

D. (i), (iii)

Answer: D



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74. Consider the following statements

- A. Stomata are completely absent in hydrophytes.
- B. In hydrophytes, vasuclar bundles always have bundle sheaths.
- C. Proline helps in maintaing osmotic and

water potentila in xerophytes.

Which of the statements given above is/are correct?

- A. A only
- B. B only
- C. Both A and C
- D. C only

Answer: D



- **75.** If a non poisonous snake of species A, mimics the warning colouration of a poisonous snake of species B, which of the following will hold true?
 - A. B will survive better when there is abundance of A
 - B. B will not affect the survival of A
 - C. A will survive better in absence of B
 - D. A will survive better when there is abundance of B

Answer: D



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76. Plants growing in nutrient poor soils that are not very condusive to microflora often become

A. insectivorous

B. saprotrophic

C. chemotrophic

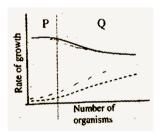
D. xerophytes

Answer: A



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77. The relationship between the two organsims when grown individually (Secton P) and grown together (Section Q) is shown in the graph. The relationship is most likely to be



A. commensalism

- B. parasitism
- C. mutualism
- D. protocooperation

Answer: B



- **78.** Which of the following adaptations is likely
- to be observed in arid condition?
- (i) vertically hanging leaves
- (ii) presence of salt glands

(iii) green fleshy stem (iv) absence of vascular tissue, scarcely developed vascular tissue. A. (i) and (ii) B. (ii) and (iv) C. (i) and (iii) D. (ii) and (iii) **Answer: C**



79. In a population showing sigmoid growth form, the population has reached its carrying capacity. What will be the value of d N/dt in this population.

- A. infinity
- B. Equal to carring capacity
- C. Zero
- D. None of the above

Answer: C



80. If in a population showing sigmoid growth curve the value of K-N/K is 0.95 then what is true for this population.

- A. 1)The carrying capacity has been nearly realized
- B. 2)The carrying capacity has not been substantially realized and it can accmmodate many more organisms

C. 3)The carrying capacity is only $50\,\%$

realized

D. 4)Data is insufficient to comment anything

Answer: B



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81. Carrying capacity of a population is determined by:

- A. 1)Population growth rate
- B. 2)Birth rate
- C. 3)Death rate
- D. 4)Limiting resources

Answer: D



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82. What is true regarding epiphytes

A. They are the plants growing on other plants

B. They use other plants only as support and not for water or food supply

C. They are commensals & differ form the lianas in that they are not rooted in the soil

D. All of the above

Answer: D



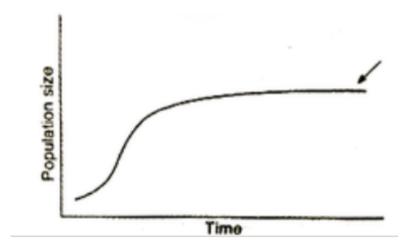
83. Species which occupy similar niches in different geographical regions are called which one fo the following?

- A. Ecotypes
- B. Ecological guilds
- C. Ecological equivalents
- D. Ecological determinants

Answer: C



84. In the given graph, thge arrow indiciates speciffically the



- A. biotic potential
- B. Density -dependent effect
- C. Density -independent effect

D. Carrying capacity

Answer: D



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85. In respect of many grasses, the presence of bulliform or motor cells in the upper epidermis of leaves is to :-

A. increase the surface area of the leaf

B. store large amounts of water

C. check transpiration by reducing the surface area of the leaf

D. bear unicellular trichomes

Answer: C



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86. With reference to community ecology, which one of the following describes a cluster of different species of vines climbing into the canopy of a tropical forest?

- A. Ecological eqivalents
- B. Guilds
- C. Edge species
- D. Ecotypes

Answer: B



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87. Which one of the following compositions of soil best describes the loam soils?

- A. 85% sand + 15% clay or silt
- B. 70% sand + 30% clay or silt
- C. 40% sand +40% silt +20% clay
- D. 10% sand +90% silt

Answer: C



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88. Which of the following characters does not characterize a hydrophyte?

- A. Abundant air space and air chambers
- B. Plentiful xylem and scelerenchyma
- C. Leaves having stomata only on upper side or none
- D. Poor developement of roots

Answer: B



89. 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



- **90.** The leaves of a tundra plant resmemble the leaves of a plant in a
 - A. Tropical rainforest
 - B. Temperate deciduous forest
 - C. Northern coniferous forest
 - D. Desert

Answer: D



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91. Laterite soil is rich in

A. Calcium

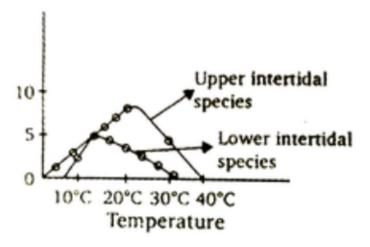
B. Magnesium

C. Iron

D. Nitrogen

Answer: C

92. Cirral activity of two barnacles in relation to temperature are given above, which one of the following is the most appropriate explanation of the figure ?



- A. Both the barnacles maintain their activity under narrow range of temperatures.
- B. Both the species are more active above $20\,{}^{\circ}\,C.$
- C. There is a rapid depression of activity $\text{when temperature increases above } 6^{\circ} \textit{C}.$
- D. Upper intertidal species show greater thermal tolerance than lower intertidal species.

Answer: D



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93. 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



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94. 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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95. A population has more young individuals compared to the older individuals. What

would be the status of the population after some years ?

A. it will decline

B. it will stabilise

C. it will increase

D. it will first decline and then stablize

Answer: C



96. What parameters are used for tiger census in our country's national parks and santuaries?

- A. Pug marks only
- B. Pug marks and faecal pellets
- C. Faecal pellets only
- D. Actual head counts

Answer: B



97. A protozoan reproduces by binary fission.

What will be the number of protozoans in its population after six generations?

- A. 128
- B. 24
- C. 64
- D. 32

Answer: C



98. In 2005, for each of the 14 million people present in a country, 0.028 were born and 0.008 died during the year. Using exponential equation, the number of people present in 2015 is predicted as

- A. 25 millions
- B. 17 millions
- C. 20 millions
- D. 18 millions

Answer: B

99. The type of age pyramid in India is

A. steep cylinderical

B. broad based triangular

C. inverted triangular

D. narrow based pyramid

Answer: B



100. Littoral form of animals are found:

- A. in fresh water
- B. in sea water near the shore
- C. in deep sea
- D. at the bottom of the sea

Answer: B



101. During extreme aridity, desert rat:

A. stores water

B. saves water

C. uses metabolic water

D. does not use water

Answer: C



102. Mangrove vegetations is found in

- A. Kullu valley
- B. Western Ghats
- C. Sunderbans
- D. Dehradun valley

Answer: C



103. Animals with ant-eating habits are called

A. sanguivorous

B. myrmecophagous

C. carnivorous

D. insectivorous

Answer: B



104. The interdependent evolution of flowering plants and pollinating insects together is known as

- A. mutualism
- B. coevolution
- C. commensalism
- D. cooperation

Answer: C



105. The plants growing in deserts to tolerate water stress, have

- A. 1) fewer or no leaves
- B. 2)long roots reaching water table
- C. 3)stem modified into leaf-like form
- D. 4)all the above

Answer: D



- 106. The environmental resistance means
 - A. the environmental factors which tend to maintain homoeostasis by regulating emigration.
 - B. the factors imposing check on population size
 - C. the physiological capacity of a species to resist changes in the environment
 - D. the resistance of a species to the envrironmental factors which impose a

check on population size

Answer: B



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107. The growth of human population shows

- A. sigmoid growth curve
- B. J-shaped growth curve
- C. fluctuating growth curve
- D. None of the above

Answer: A



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108. The J-shaped growth curve lacks

A. lag phase

B. exponential phase

C. stationary phase

D. none of these

Answer: C

109. Which of the following is not true?

A. population tends to grow in geometrical progression

B. J-shaped growth curve has only two phases

C. There are more females than males in India

D. Father is biologically responsible for the sex of the child.

Answer: C



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110. Individuals of one kind (species) occupying a particular geographic area at a given time form

A. community

- B. population
- C. species
- D. biome

Answer: B



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111. Halophytes can grow on physiologically dry soil due to presence of

A. exccess salts in water

- B. excess salts in plants
- C. excess humidity outside
- D. thin leaves

Answer: B



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112. Field capacity is

A. 1) higher for sandy soils than clay soils

- B. 2)amount of water in soil available to plants
- C. 3) same as permanent wilting point
- D. 4)amount of water left in soil after drainage

Answer: D



113. Mangrove of marshy sunderbans is characterised by

- A. 1)Pneumatophores and viviparity.
- B. 2)Floating roots
- C. 3)Oviparity
- D. 4)all of these

Answer: A



114. In submerged plants, the stomata lie on

A. upper surface

B. lower surface

C. not on any surface

D. equally on both surfaces

Answer: C



115. Which one of the following is not used for construction of ecological pyramids?

- A. Dry weight
- B. Number of individuals
- C. Rate of energy flow
- D. Fresh weight

Answer: D



116. Niche overlap indicates

- A. active cooperation between two species
- B. two different parasites on the same host
- C. sharing of one or more resources between the two species
- D. mutualism between two species

Answer: C



117. Praying mantis is a good example of:

- A. camouflage
- B. mullerian mimicry
- C. warning colouration
- D. social insect

Answer: A



118. Excessive aerenchyma is characteristic feature of

- A. Heliophytes
- B. Xerophytes
- C. Mesophytes
- D. Hydrophytes

Answer: D



119. Which	one is a	mangrove	plant
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- A. Rhizophora
- B. Acacia
- C. Pinus
- D. Tectona grandis

Answer: A



120. Near sea store many plants show reduced gorwth due to

- A. excessive grazing
- B. high speed wind
- C. desiccation
- D. salt spray

Answer: D



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

- A. 1) stenohaline
- B. 2)euryhaline
- C. 3)anadromous
- D. 4)catadromous

Answer: A



122. A triangular age pyramid has

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

Answer: B



123. After exponential increase, population becomes stagnant. The growth curve is

- A. circular
- B. fluctuating
- C. J-shaped
- D. S-shaped

Answer: D



124. Geometric representation of age structure is a characteristic of :

A. population

B. landscape

C. J-shaped

D. S-shaped

Answer: A



125. The population of an insect species shows and explosive increase in numbers during rainy season followed by its disappearance at the end of the season. What does this show?

- A. 1)the food plants mature and die at the end of the rainy season
- B. 2)its population growth curve is of J-type
- C. 3)the population of its predators

increases enormously

D. 4)S-shaped or sigmoid growth of this insect.

Answer: B



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126. Which one of the following pairs of organisms are exotic species introduced in India

A. 1)Lantana camara, water hyacinth

- B. 2) water hyacinth, prosopis cinereria
- C. 3) nile perch, Ficus religiosa
- D. 4) Ficus religiosa, Lantana Camara

Answer: A



- **127.** Mycorrhiza is found in
 - A. oligotrophic soil
 - B. eutrophic soil

C. Saline soils

D. none of these

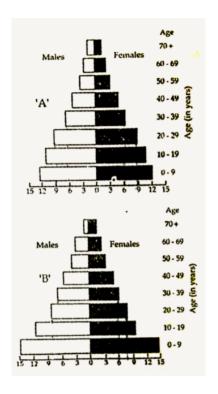
Answer: A



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128. A country with a high rate of population growth took measures to reduce it. The figure below shows age-sex pyramids of populations A and B twenty years apart. Select the correct

interpretation about them



- A. "B" is more recent showing that population is very young
- B. "A" is the earlier pyramid and no change has occurred in the growth rate

- C. "A" is more recent and shows slight reduction in the growth rate
- D. "B" is earlier pyramid and shows stabilized growth rate

Answer: C



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129. Reduction in vascular tissue mechanical tissue and cuticle is characteristic of

- A. Epiphytes
- B. Hydrophytes
- C. Xerophytes
- D. Mesophytes

Answer: B



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130. Study the four statement (i-iv) given below and select the two correct ones out of them

- (i) A lion eating a deer and a sparrow feeding or grains are ecologically similar in being consumers.
- (ii) Predator star fish Pisaster helps in maintaining species diversity of some invertebrates
- (iii) Predators ultimately lead to the extinction of prey species
- (iv) Production of chemicals such as nicotine, strychnine by the plants are metabolic disorders
- The two correct statements are

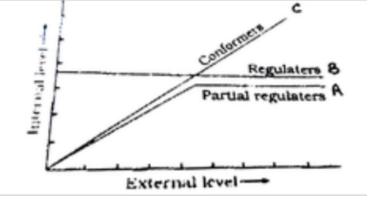
- A. (i) and (ii)
- B. (ii) and (iii)
- C. (iii) and (iv)
- D. (i) and (iv)

Answer: A



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131. Given is a graph showing organismic response of 3 types , A,B,C



For an aquatic organism whose osmotic concentration of the body fluid changes with that of the ambient water osmotic concentration, which graph best depicts this response.

A. A'

B. B'

C. C'

D. D'

Answer: C



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132. Which one of the following is most appropriately defined?

A. Host is an organism which provides food to another organism

B. Amensalism is a relationship in which one species is benefited whereas the other is unaffected.

C. Predator is an organism that catches and kills other organism for food

D. Parasite is an organism which always
lives inside the body of other organism
and may kill it

Answer: C



133. Rhizosphere microflora exhibits:

- A. Parasitism
- **B.** Symbiosis
- C. commensalism
- D. Space parasitism

Answer: B



134. Large Woody vines are more commonly found in:

- A. Temperature forests
- **B.** Mangroves
- C. Tropical rainforests
- D. Alpine forests

Answer: C



135. Considered the following four conditions

(A-D) and select the correct pair of them as adaptation to environment in desert lizards.

The conditions

(a) Burrowing in soil to escape high temperature

(b)Losing heat rapidly from the body during high temperature

(c)Bask in sun when temperature is low(d)Insulating body due to thick fatty dermisoptions

- A. (iii),(iv)
- B. (i),(iii)
- C. (ii),(iv)
- D. (i),(ii)

Answer: B



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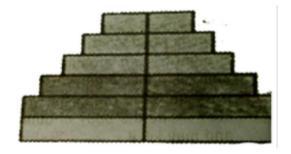
136. Which one of the following is categorised as a parasite in true sense

- A. The female Anopheles bites and sucks blood from humans.
- B. Human foetus developing inside the uterus draws nourishment form the mother
- C. Head louse living on the human scalp as well as laying eggs on human hair
- D. The cuckoo (koel) lay its eggs in crow's nest

Answer: C

137. Given is the age pyramid of a population

Decide which kind of growth status it reflects



A. Declining

B. Rapidly expanding

C. Expanding

D. Stable

Answer: D



- **138.** Consider the following statements (a-d) each with one or two blanks:
- (a) Bears go into (1) during winter to (2) cold weather.
- (b) A conical age pyramid with a broad base represent (3) human population.
- (c) A wasp pollinating a fig flower is an example of (4).

(d) An area with high levels of species richness is known as (5).

Find the correct fill up words.

A. (3) -stable (4) -commensalism, ble, (5) marsh

B. (1) - aestivation, (2) -escape ,(3) -stable,

C. (3)-expanding , (4)-commensalism, (5),

(4) -mutualism

(4) -mutuansm

biodiversity park

D. (1)-hibernation, (2) -escape ,(3)-expanding

, (5) hot spot.

Answer: D



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139. Tenebrinoid beetles are famous for

A. Conscious mimicry

B. Aggressive mimicry

C. Mullerian mimicry

D. Batenson mimicry

Answer: A



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140. A few organisms which can tolerate are called

- A. Steno thermal
- B. Eurythermal
- C. Homoio thermal

D. Poikilo thermal

Answer: B



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141. Under unfavourable conditions many zooplankton species in lakes and ponds enter

- A. Dormancy
- B. Hibernation
- C. Diapause

D. Menopause

Answer: C



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142. The number of individuals of the population who left the habitat and gone elsewhere during the time period under consideration is known as:

A. Immigration

- B. Emigration
- C. migration
- D. natality

Answer: B



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

- A. Amensalism
- B. Commensalism
- C. Predation
- D. Mutualism

Answer: B



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144. The logistic population growth is expressed by the equation

D.
$$dN/dt = rN\Big(rac{N-K}{N}\Big)$$

 $\mathsf{C}.\,dN/dt=Rn$

Answer: B

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A. $dt/dN = Nr\Big(rac{K-N}{K}\Big)$

B. $dN/dt = rN\Big(rac{K-N}{K}\Big)$

145. The feature of the xerophytic plant leaves are

(I) Leathery surface

(II) Large surface area (III) Waxy cuticle (IV)Sunken stomata on upper epidermis A. I,II & IV B. I, & III C. I,III & IV D. I & IV

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Answer: C

146. Major ecological community of plants and animals extending over large natural area is known as:

- A. bioregion
- B. biosphere
- C. biota
- D. biome

Answer: D



147. Organisms restricted to narrow range of temperature are

- A. 1)Steno thermal
- B. 2)Biothermal
- C. 3) Eurythermal
- D. 4)Geothermal

Answer: A



148. Adapative measure to protect against extreme heat by poikilotherms is

- A. 1)Hibernation
- B. 2)Sweating
- C. 3)Aestivation
- D. 4)Chilling

Answer: C



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

- A. commensalism
- B. Amensalism
- C. Ectoparasitism
- D. symbiosis

Answer: A



150. 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. 05

B. zero

C. 10

D. 15

Answer: B

151. Just as a person moving from Delhi to Shimla to escape the heat for the duration of hot summer, thousands of migratory birds from Siberia and other extremely cold northern regions move to:

A. 1)Keolado National Park

B. 2)Western Ghat

C. 3)Meghalaya

D. 4)Corbett National Park

Answer: A



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152. A location with luxuriant growth of lichens on the trees indicates that the

- A. Location is not polluted
- B. Trees are very healthy
- C. Trees are heavily infested

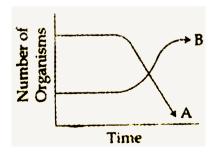
D. Location is highly polluted

Answer: A



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153. The following graph depicts changes in two populations (A and B) of herbivores in a grassy field. A possible reason for these changes is that



A. Population B competed more

successfully for food than population A

B. Population A produced more offspring than population B

C. Population A consumed the members of population B

D. Both plant populations in this habitat decreased.

Answer: A



154. An association of individuals of different species living in the same habitat and having functional interactions is :

- A. Ecological niche
- B. Biotic community
- C. Ecosystem
- D. Popluation

Answer: B



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

A. primary consumers

B. secondary consumers

C. tertiary consumers

D. detritivores

Answer: D



156. In which of the following interaction both partners are adversely affected ?

- A. Competition
- B. Predation
- C. Parasitism
- D. Mutualism

Answer: A



157. 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 exclde smaller ones through competition
- D. More abundant species will exclude the less abundant species through competition.

Answer: B



158. 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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159. 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



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160. If '+' sign is assigned to benefited interaction '-' sign to detrimental and '0' sign to neutral interaction, then the population interaction represented by '+' '-' refers to:

- A. mutualism
- B. Amensalism
- C. commensalism

D. parasitism

Answer: D



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161. The principle of competitive exclusion was stated by

A. C.Darwin

B. G.F. Gause

C. Mac Arthur

D. Verhulst and Pearl

Answer: B



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162. Asymptote in a logistic growth curve is obtained, when

A. The value of 'r' approaches zero

 $\mathtt{B.}\,K=N$

 $\mathsf{C}.\,K>N$

D. K < N

Answer: B



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163. Plants, which produce characteristic pneumatophores and show vivpary belong to

- A. Mesophytes
- B. Halophytes
- C. Psammophytes

D. Hydrophtyes

Answer: B



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164. Which one fo the following population interactions is widely used in medical science for the production of antibiotics?

A. Amensalism

B. parasitism

C. mutualism

D. Commensalism

Answer: A



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165. In a growing population of a country,

A. pre-reproductive individuals are less

then the reproductive individuals.

- B. reproductive and pre- reproductive individuals are equal in number.
- C. reproductive individuals are less than the post-reproductive individuals.
- D. pre-reproductive individuals are more than the reproductive individuals.

Answer: D



166. Which one of the following plants shows a very close relationship with a species of moth, where none of the two can complete its life cycle without the other

- A. Viola
- B. Banana
- C. Yucca
- D. Hydrilla

Answer: C



Water Video Solution

167. Natality refers to

A. number of individuals entering a habitat

B. number of individuals leaving the

habitat

C. birth rate

D. Death rate

Answer: C



