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BIOLOGY

BOOKS - CENGAGE BIOLOGY (HINGLISH)

ORGANISMS AND POPULATIONS

Exercises Choose The Correct Options

1. The term "ecology" was given by

A. Odum

B. Haeckel

C. Tansley

D. R.Misra

Answer: B

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2. A large regional unit characterised by vegetation type and associated fauna found in a specific climatic zone is called:

A. Biome

B. Biosphere

C. Ecosystem

D. Landscape

Answer: A

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3. A group of individuals living in a particular geographical area at a particular time is called

A. Local population

B. Deme

C. Community

D. Both (1) and (2)

Answer: D

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4. The functional role and status of a species in a community is called

A. Performance

B. Ecological niche

C. Tolerance

D. Organization

Answer: B

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5. Organisms living in arctic and antarctic climatic zones are called

A. Megatherms

B. Mesotherms

C. Microtherms

D. Hekistotherms

Answer: D

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6. The two climatic factors which largely determine the vegetion and soil types are

A. Temperature and precipitation

B. Temperature and light

C. Light and precipitation

D. Light and weather

Answer: A

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7. Chylorhizy is found in

A. Opuntia

B. Euphorbia

C. Asparagus

D. Aloe

Answer: C

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8. Lapse rate in troposphere is

A. $1.6^{\circ} C$ per 100 m elevation

B. $6.5^{\circ} C$ per 100 m elevation

C. 6.5° C per 1000 m elevation

D. 6.5° C per 10 m elevation

Answer: C

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9. Solar cnstant is _____ cal cm^2/mm.

A. 2

B. 4

C. 6

D. 8

Answer: A

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10. The most harmful of ultraviolet radiations are

A. UV-A

B. UV-B

C. UU-C

D. All are equally harmful

Answer: B

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11. The timing of seasonal activity of plants in relation to change in environmental conditions is termed as

A. Physiognomy

B. Phenology

C. Stratification

D. Agrostology

Answer: B

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12. The bottom zone in a lake is called

A. Limnetic

B. Profundal

C. Benthic

D. Littoral

Answer: C

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13. The number of temperature zones in a summer lake is

A. 2

B. 3

C. 4

D. 5

Answer: B

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14. In meromictic lakes, the number of turnovers of water per year is

A. 1

B. 2

C. Many

D. Zero

Answer: D

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15. The turnover in a lake in spring and autumn results in

A. Free mixing of O_2 and nutrients

B. Algal bloom

C. Temperature inversion

D. Both (1) and (2)

Answer: D

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16. Shorter body extremities in animals living in colder climate is explained by

A. Allen's rule

B. Bergman's rule

C. Gloger's rule

D. Jordan's rule

Answer: A

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17. Permanent wilting percentage (PWP) is the highest in

A. Silt

B. Sandy soil

C. Loam

D. Clay soil

Answer: B

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18. In soil profile, the zone of eluviation is

A. O-zone

B. A-zone

C. B-zone

D. C-zone

Answer: B

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19. A good soil is that which

A. Allows little water to enter in it

B. Allows extra water to percolate slowly

C. Holds water entering it

D. Allows water to pass through it quickly

Answer: B

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20. The size of the colloid particles is :

A. Between 0.00002 and 0.02 mm

B. Less than 0.002 mm

C. 0.5-1.0 mm

D. 0.02-0.2 mm

Answer: B

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21. Alluvial soils are mostly found in

A. Northern India

B. Eastern India

C. Southern India

D. Ganges and Yamuna plains

Answer: D

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22. Which of the following soils shows cracks and shrinks most when it dries?

A. Porous soil

B. Clay soil

C. Loam soil

D. Sandy soil

Answer: B

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23. Soil porosity is the maximum in

A. Sandy soil

B. Clay soil

C. Loam soil

D. Loam

Answer: B

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24. Mull humus is characterized by

A. Nutrient deficiency

B. Layered composition

C. Ca^{+2} deficiency

D. Rich bacterial growth

Answer: D

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25. What is the percentage of air in the soil?

A. 50

B. 10

C. 45

D. 25

Answer: D

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26. The law of tolerance was given by

A. Shelford

B. Haeckel

C. J. Grinnel

D. Gause

Answer: A

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27. The critical minimum and maximum value of an evironmental factor is called

A. Limiting factor

B. Law of minimum

C. Limits of tolerance

D. Carrying capacity

Answer: C

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28. Weeds are usually

A. Eurytopic

B. Stenotopic

C. Amensal

D. Smoother crops

Answer: A

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29. Genetically adapted population to a particular habitat is called:

A. Ecad

B. Ecotype

C. Ecocline

D. Ecotone

Answer: B

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30. Phreatophytes are/have

A. True xerophytes

B. Deep roots

C. Indicator plants

D. All of these

Answer: D

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31. Chemicals which provide physiological adaptations to plants against high temperature and saline conditions are

A. Chaperonins

B. Proline, glycerol

C. Betaine, sorbital

D. All of these

Answer: D

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32. Vivipary and prop roots are the characteristics of

A. Coastal plants

B. Hot desert plants

C. Mangrove plants

D. Cold desert plants

Answer: C

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

A. A bundant air space and air chambers

B. A bundant xylem and sclerenchyma

C. Leaves having stomata only on upper side or none

D. Poor development of roots

Answer: B

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34. Plants are killed in the winter by frost

A. Because of desiccation and mechanical damages to the tissues

B. Because no photosynthesis takes place at such low temperature

C. Because respiration ceases at such low temperature

D. Because there is no transpiration

Answer: A

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35. Ephemerals are xeropytes that are

A. Drought enduring

B. Drought escaping

C. Drought resisting

D. None of these

Answer: B

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36. The factors which include the form, surface, and behaviour of the earth with special reference to slopes,

mountains, and valleys are called

A. Edaphic factors

B. Biotic factors

C. Climatic factors

D. Topographic factors

Answer: D

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37. The capacity to blend with surroundings is called

A. Hibernation

B. Mimicry

C. Camouflage

D. Aestivation

Answer: C

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38. A behavioural strategy of adaptation called echolocation is found in

A. Bats

B. Monarch butterfly

C. Praying mantis

D. Arctic tern

Answer: A

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39. Natality under actual conditions is called

A. Biotic potential

B. Maximum natality

C. Ecological natality

D. Reporductive potential

Answer: C

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40. Vital index of population is

A. $(B/D) \times 100$

B. $B - D$

C. (D//B)xx100`

D. $B + D$

Answer: A

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41. An urn shaped population age pyramid represents

A. Growing population

B. Static population

C. Declining population

D. Threatened population

Answer: C

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42. The ability on an environment to support a population called its

A. Biotic potential

B. Purifying capacity

C. Carrying capacity

D. Environmental resistance

Answer: C

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43. In the equation for S-shaped population growth, represents

A. Carrying capacity

B. Environmental resistance

C. Biotic potential

D. Population size

Answer: C

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44. Which of the following statements is not true for J-shaped growth curve?

A. Exponential phase is prolonged.

B. Population never grows beyond carrying capacity.

C. Population crash occurs.

D. Population seldom reaches equilibrium.

Answer: B

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45. The formula for exponential population growth is

A. Environmental resistance

B. Reproductive potential

C. Growth rate

D. Carrying capacity

Answer: A

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46. Which statement is not related to S-shaped population curve?

A. Environmental resistance suddenly becomes effective.

B. Exponential phase is followed by decline phase.

C. Mass mortality and population crash occurs.

D. Both (1) and (3).

Answer: D

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47. The periodic departure and return is known as

A. Migration

B. Immigration

C. Emigration

D. Mutation

Answer: A

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48. When an animal group is centered arounda dominant fimale, it is called

A. Patriarchy

B. Matriarchy

C. Swarm

D. Flock

Answer: B

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49. Altruistic behavior is not found in

A. White ants

B. Spotted deer

C. Honey bees

D. Bitch

Answer: D

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50. Territory is defended against

A. Predator

B. Any intruder

C. Intruder of another species

D. Intruder of the same species

Answer: D

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51. The inability of different organisms to interbreed is called

A. Sterility

B. Parasitism

C. Reproductive isolation

D. Monogamy

Answer: C

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52. The increased number and density of species in the region of ecotone is called

A. Edge effect

B. Sympatric speciation

C. Dominance

D. Abundance

Answer: A

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53. Which of the following associations is not an example of symbiosis?

A. Lichen

B. Mycorhiza

C. Root nodules

D. Epiphytes

Answer: D

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54. Which is not an effect of competition?

A. Regulation of population size

B. Generalization of niche

C. Establishment of social hierarchy

D. Help in speciation

Answer: B

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55. Competitive exclusion principle was given by

A. J. Grinnel

B. Gause

C. Lindeman

D. Bates

Answer: B

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56. Which of the following shows biological antagonism or allelopathy?

A. Amensalism

B. Proto-cooperation

C. Competition

D. Parasitism

Answer: A

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57. 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. Proto-cooperation

B. Mutualism or symbiosis

C. Commensalism

D. Amensalism

Answer: A

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58. Find the odd one out:

A. Lianas in tropical rain forest

B. E. coli in large intestine of man

C. Pilot fish remora and shark

D. Rafflesia on the roots of a forest tree

Answer: D

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59. Find the odd one out:

A. Mating

B. Competition

C. Aggregation

D. Altruism

Answer: B

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60. A toxic chemical against nematode is secreted by

A. Tagetes

B. Black walnut

C. Penicillum

D. Gravillea robusta

Answer: A

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61. Which one of the following is a hemiparasite?

A. Viscum

B. Cuscuta

C. Rafflesia

D. None of these

Answer: A

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62. Competition for food, light, and space is most severe between two

A. Distantly related species growing in different habitats

B. Distantly related species growing in the same habitat

C. Closely related species growing in different habitats

D. Closely related species growing in the same area

Answer: D

63. The species which are present in large numbers and have large size are called

A. Ecological equivalent

B. Ecological dominants

C. Link species

D. Keystone species

Answer: B

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64. The transition zone between two communities is called

A. Ecocline

B. Ecotone

C. Buffer zone

D. Thermocline

Answer: B

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65. Which of the following is a keystone species?

A. Fig

B. Deer

C. Mycorrhiza

D. Pollinator

Answer: A

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66. Find the odd one out:

A. Viceroy butterfly resembling monarch butterfly

B. Stick insect resembling thin, dry branches

C. Caterpillars of geometrid moth resembling small branches

D. Leaf insect resect resembling green leaf

Answer: A

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67. Mimicry is a device for

A. Concealing from predator

B. Concealing from prey

C. Both (1) and (2)

D. Becoming conspicuous

Answer: C

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68. Match the following columns:

	Column I		Column II
$a.$	Oxylophytes	(i)	Calcium-rich soils
$b.$	Eremophytes	(ii)	Waste land
$c.$	Chrysophytes	(iii)	Deserts, steppes
$d.$	Calciphytes	(iv)	Acidic soils

A. a (i), b (ii), c (iii), d (iv)

B. a (i), b (iii), c (iv), d (ii)

C. a (iv), b (iii), c (ii), d (i)

D. a (iv), b (iii), c (i), d (ii)

Answer: C

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69. Which of the following statements is correct?

A. Two species within a given community can have exactly the same niche.

B. Two species within a given community cannot have exactly the same niche.

C. Two species can live permanently together

D. Both (2) and (3).

Answer: D

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70. Biotic potential refers to

A. Increase of population under optimum conditions

B. Increase of population under given conditions

C. Increase of population under natural conditions

D. Increase of population under stress conditions

Answer: A

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71. Edge effect refers to

A. Occurrence of ecophenes and ecotypes in a community

B. Low diversity of organisms in ecotone

C. High diversity of organisms in ecotone

D. Defense of territories by organisms

Answer: C

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72. In India, tropical rain forests are generally found in

A. Western Ghats

B. North-eastern Himalayas

C. Gangetic Plains in India

D. Both (1) and (2)

Answer: D

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73. The forests which show contrasting seasonal aspects are

A. Tropical rain forests

B. Temperate broad-leaf forests

C. Tropical deciduous forests

D. Temperate needle-leaf forests

Answer: C

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74. Which is not a characteristic feature of grassland?

A. Extensive root system

B. High productivity

C. Periodic fire

D. Developed stratification

Answer: D

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75. Most of the deserts are distributed between

A. 15-35 latitude

B. 40-60 latitude

C. 60-80 latitude

D. Only in Southern Hemisphere

Answer: A

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76. A biome having a well-developed grass cover interspersed with scattered trees is a

A. Grassland

B. Savannah

C. Desert

D. Temperate forest

Answer: B

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77. The taiga region is also known as

A. Deciduous forest

B. Tropical rain forest

C. Northern conifer forest

D. Tropical savannah

Answer: C

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78. The grassland vegetation of Africa is known as

A. Prairies

B. Pampas

C. Steppes

D. Veldts

Answer: D

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79. Arctic tundra is

A. Highest latitudinal biome

B. Located in rain shadow

C. Characterized by Capparis and Prosopis species

D. Highest altitudinal biome

Answer: A

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80. Ethology deals with the study of

A. Behaviour of animals

B. Past life of organism

C. Disease causing pathogens

D. None of these

Answer: A

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81. Humus is

A. Dead and decayed organic matter

B. Living matter

C. Fertilizers

D. Living animal/plants/microbes

Answer: A

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82. Which one is the famous plant ecologist of India?

A. Jagdish Chandra Bose

B. Birbal Shani

C. Ramdeva Misra

D. Charles Darwin

Answer: C

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83. The correct percentage of CO_2 in atmosphere is

A. $0.03\ \%$

B. 0.3%

C. 1%

D. 1.1%

Answer: A

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

A. Commensals

B. Herbivores

C. Fauna and Flora

D. Planktons

Answer: D

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85. 5th June is

A. World Environment Day

B. World AIDS Day

C. World Womens Day

D. World Polio Day

Answer: A

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86. Plants developing in dry condition are

A. Xerophytes

B. Mesophytes

C. Lithophytes

D. Hydrophytes

Answer: A

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87. Soil carried by gravity is

A. Alluvial

B. Colluvial

C. Elluvial

D. Glacial

Answer: B

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88. Velamen tissue in orchids is found in

A. Mesophytes

B. Epiphytes

C. Hydrophytes

D. Xerophytes

Answer: B

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89. Pneumatophores are characteristic features of

A. Hydrilla

B. Rhizophora

C. Typha

D. None of these

Answer: B

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90. The factor related to structure of Earth's surface is called:

A. Edaphic

B. Topographic

C. Climatic

D. Biotic

Answer: B

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91. Aerenchyma is helpful to plants by -

A. Providing buoyancy in hydrophytes

B. Absorption in stilt roots

C. Giving mechanical strength to plants

D. Giving flexibility to plants

Answer: A

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92. Plants growing in saline soil are called

A. Xerophyte

B. Hydrophyte

C. Halophyte

D. Heliophyte

Answer: C

Watch Video Solution

93. Which one of the following is a well-developed tissue present in hydrophytes?

A. Aerenchyma

B. Collenchyma

C. Stomata

D. Root system

Answer: A

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94. Penumetophores are found in

A. Orchid

B. Piper

C. Ficus

D. Rhizophora

Answer: D

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95. The term "autecology" refers to the study of

A. Plant community

B. Individual organism

C. Evironment

D. Soil form

Answer: B

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96. Autoecology refers to

A. Plant ecology

B. Animal ecology

C. Ecological study of individual species

D. Ecological study of group of species, which is grown together

Answer: C

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97. Which part of pond ecosystem does not get affected by temperature?

A. Epilimnion

B. Metalimnion

C. Hypolimnion

D. All

Answer: C

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98. Root cap is absent in

A. Mesophytes

B. Hydrophytes

C. Epiphytes

D. Xerophytes

Answer: B

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99. Which of the following have sunken stomata

A. Nerium

B. Mangifera

C. Hydrilla

D. Zea mays

Answer: A

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100. Velamen is tissue found in

A. Breathing roots

B. Parasitic roots

C. Tuberous roots

D. Epiphytic roots

Answer: D

Watch Video Solution

101. Root cap is absent in

A. Lithophytes

B. Xerophytes

C. Hydrophytes

D. Mesophytes

Answer: C

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102. Which one is not a trait of xerophytes:

A. Brassica

B. Cuscuta

C. Capparis

D. Hydrilla

Answer: C

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103. Two organisms are presents in the same class but not in the same family. They may belong to same

A. Species

B. Genus

C. Population

D. Community

Answer: D

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

A. Water rich soil

B. N_2 deficient soil

C. N_2 rich soil

D. Sugar deficient medium

Answer: B

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105. A group of two or more than two plants species is called

A. Plant community

B. Animal ecosystem

C. Plant ecosystem

D. Ecological niche

Answer: A

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106. Two vegetations of ecosystem are separated by

A. Ecotone

B. Ecoline

C. Ecosystem

D. Ecesis

Answer: A

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107. In plant succession, the last community is called

A. Ecotone

B. Climax community

C. Seral community

D. Ecocystem

Answer: B

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

A. Ecosystem

B. Phytology

C. Phytogeography

D. Ecology

Answer: D

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109. Who is considered as father of ecology in India ?

A. Prof. R. Misra

B. S. C. Pandeya

C. Prof. N. Dudgeon

D.

Answer: B

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110. Species ecology is synonym with

A. Autecology

B. Synecology

C. Palaeo ecology

D. Forest ecology

Answer: A

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111. The term "autecology" refers to the study of

A. Plant community

B. Individual organism

C. Environment

D. Soil form

Answer: B

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

A. Allen's law

B. Gause's law

C. Jorden's principal

D. Weisman's theory

Answer: B

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113. What is true for individuals of same species?

A. Live in same niche

B. Live in same habitat

C. Interbreeding

D. Live in different habitat

Answer: C

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114. Species diversity in an ecosystem mainly depends on

A. Light intensity

B. Temperature

C. Rainfall

D. Soil type

Answer: C

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115. Area where two ecosystem overlap each other:

A. Ecotone

B. Niche

C. Edge effect

D. Ecotypes

Answer: A

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116. The community which starts succession at a place is termed

A. Climax community

B. Seral community

C. Pioneer community

D. Primary community

Answer: C

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117. Succession in a water body leads to formation of

A. Mesophytic vegetation

B. Xerophytic vegetation

C. Halophytic vegetation

D. Epiphytic vegetation

Answer: A

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118. Competition for food, light, and space is most severe between two

A. Closely related species growing in the same area (in the same niche)

B. Closely related species growing in different habitat

C. Distantly related species growing in the same habitat

D. Distantly related species growing in different habitat

Answer: A

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119. Most successful parasites are those which do not

A. Grow free

B. Kill their host

C. Reproduce sexually

D. Survive in soil

Answer: B

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120. Earliest settlers on barren lands or the farmers of nature are

A. Diatoms

B. Lichens

C. Moss and grasses

D. Ferns

Answer: B

Watch Video Solution

121. In plant succession last community is called

A. Ecotone

B. Climax community

C. Seral community

D. Ecosystem

Answer: B

Watch Video Solution

122. A group of two or more than two plants species is called

A. Plant community

B. Animal ecosystem

C. Plant ecosystem

D. Ecological niche

Answer: A

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123. Plants and animals living in a particular area consititute

A. Flora and fauna

B. Community

C. Ecosystem

D. Ecology

Answer: B

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124. Stable plant community formed during succession is called:-

A. Sere community

B. Climax community

C. Dominant community

D. Ecotone

Answer: B

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125. The smallest angiosphermic/dicot parasite is

A. Lemna

B. Arceuthobium

C. Spirodella

D. Wolffia

Answer: B

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126. Life forms are used in the preparation of

A. Food chain

B. Ecological pyramids

C. Biological spectrum

D. Quardats & transects

Answer: C

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127. In which one of the following habitats does the diurnal temperature of soil surface vary most?

A. Forest

B. Desert

C. Grassland

D. Shrub land

Answer: B

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128. A: Holistic approach explains the environmental interactions.

R: All environmental factors are integrated with no limits of time and space

A. If both Assertion and Reason are true and the reason is correct explanation of the assertion, then mark (1).

B. If both Assertion and Reason are true but the reason are true the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true but Reason is false, then mark (3).

D. If both Assertion and Reason are false, then mark (4).

Answer: C

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129. Assertion: Some orgainsms can maintain internal homeostasis by means of physiological processes and are called "regulates."

Reason: Regulates can maintain internal homeostasis only up to a lilmit under stressful conditions.

A. If both Assertion and Reason are true and the reason is correct explanation of the assertion, then mark (1).

B. If both Assertion and Reason are true but the reason are true the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true but Reason is false, then mark (3).

D. If both Assertion and Reason are false, then mark (4).

Answer: C

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130. Assertion: Population ecology is a link of ecology to population genetics and evolution.

Reason: Natural selection operates at population level to evolve the desired traits.

A. If both Assertion and Reason are true and the reason is correct explanation of the assertion, then mark (1).

B. If both Assertion and Reason are true but the reason are true the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true but Reason is false, then mark (3).

D. If both Assertion and Reason are false, then mark (4).

Answer: A

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131. Assertion: Under unlimited resource conditions, popultion can show an exponential growth curve.

Reason: The maximum possible number of individuals can aloways be supported when enough resources are available.

A. If both Assertion and Reason are true and the reason is correct explanation of the assertion, then mark (1).

B. If both Assertion and Reason are true but the reason are true the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true but Reason is false, then mark (3).

D. If both Assertion and Reason are false, then mark (4).

Answer: B

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132. Assertion: Insects contribute the maximum to the total diversity of animals.

Reason: Angiosperms and insects are coevolved to perform as plant-pollinator.

A. If both Assertion and Reason are true and the reason is correct explanation of the assertion, then mark (1).

B. If both Assertion and Reason are true but the reason are true the reason is not the correct explanation of the assertion, then mark (2).

C. If Assertion is true but Reason is false, then mark (3).

D. If both Assertion and Reason are false, then mark (4).

Answer: A

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Archives Choose The Correct Options

1. A high density of elephant population in an area can result in

A. Predation on one another

B. Mutualism

C. Intra specific competition

D. Inter specific competition

Answer: C

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2. Two plants can be conclusively said to belong to the same species if they

A. Have same number of chromosomes

B. Can reproduce freely with each other and form seeds

C. Have more than 90 percent similar genes

D. Look similar and possess identical secondary metabolites

Answer: B

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3. 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. The population of its predators increases enormously

B. S-shaped or sigmoid grwth of this insect

C. The food plants mature and die at the end of the rainy season

D. Its population growth curve is of J-type

Answer: D

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

A. Ecosystem

B. Biotic community

C. Population

D. Landscape

Answer: C

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5. What is true about the isolated small tribal populations ?

A. Wrestlers who develop strong body muscles in their life time pass their character on to their progeny

B. There is no change in population size as they have a large gene pool

C. There is a decline in population as boys marry girls only from their own tribe

D. Hereditary disease like colour-blindness do not spread in the isolated population

Answer: C

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6. In the case of peppered moth (Biston betularia) the black-coloured from became dominant over the light-coloured form in England during industrial revolution. This is an example of

A. Inheritance of darker colour character acquired due to the darker environment

B. Natural selection whereby the darker forms were selected.

C. Appearance of the darker coloured individuals due to very poor sunlight

D. Protective mimicry

Answer: B

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7. Which one of the following is one of the characteristics of a biological community?

A. Stratification

B. Natality

C. Mortality

D. Sex-ratio

Answer: A

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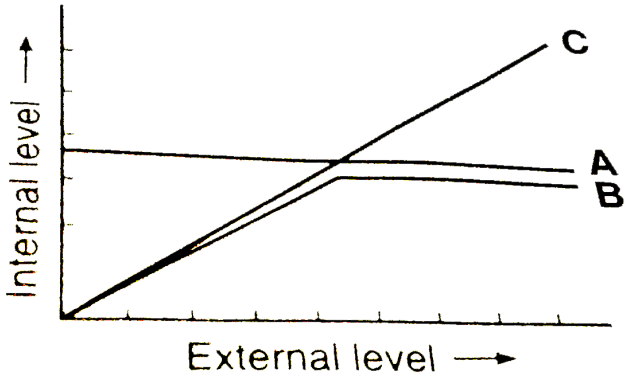
8. The figure given below is a diagrammatic representation of response of organisms to abiotic factors. What do A, B and C represent respectively?



A. (a) conformer (b) regulator (c) partial regulator

B. (a) regulator (b) partial regulator (c) conformer

C. (a) partial regulator (b) regulator (c) conformer

D. (a) regulator (b) conformer (c) partial regulator

Answer: D

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9. Which one of the following statements is correct for secondary succession?

A. It is similar to primary succession except that it has a relatively fast pace.

B. It begins on a bare rock .

C. It occurs on deforested site

D. It follows primary succession

Answer: A

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10. 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 dermis options

A. (a), (b)

B. (c) , (d)

C. (a), (c)

D. (b), (d)

Answer: C

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11. Large Woody vines are more commonly found in:

A. Alpine forests

B. Temperate forests

C. Mangroves

D. Tropical rainforests

Answer: D

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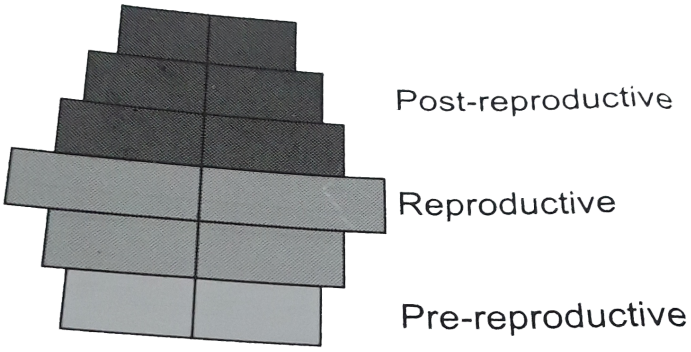
12. What type of human population is represented by the following age pyramid?



A. Expanding population

B. Vanishing population

C. Stable population

D. Declining population

Answer: D

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13. People who have migrated from the planes to an area adjoining Rohtang pass about six months back

A. Are not phsically fit to play games like football

B. Suffer from altitude sickness with symptoms like nausea, fatigue, etc.

C. Have the usual RBC count but their hemoglobin has very high binding affinity to O_2

D. Have more RBCs and their hemoglobin has a lower binding affinity to O_2

Answer: D

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14. Sacred groves are specially useful in

A. Generating environmental awareness

B. Preventing soil erosion

C. Year-round flow of water in rivers

D. Conserving rare and threatened species

Answer: D

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15. 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. 10

B. 15

C. 05

D. zero

Answer: D

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

A. Ectoparasitism

B. Symbiosis

C. Commensalism

D. Amensalism

Answer: C

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17. If 20 J of energy is trapped at producer level, then how much energy will be available to peacock as food in the following chain?

Plant $\rightarrow$ Mice $\rightarrow$ Snake $\rightarrow$ Peacock

A. 0.02 J

B. 0.002 J

C. 0.2 J

D. 0.0002 J

Answer: A

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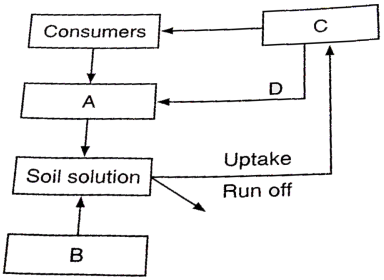
18. Given below is a simplified model of phosphorus cycling in a terrestrial ecosystem with four blanks (A-D).

Identify the blanks.



	A	B	C	D
(a)	Producers	Litter fall	Rock minerals	Detritus
(b)	Rock minerals	Detritus	Litter fall	Producers
(c)	Litter fall	Producers	Rock minerals	Detritus
(d)	Detritus	Rock minerals	Producers	Litter fall

A.

(A)	(B)	(C)	(D)
Rock-minerals	Detritus	Litter fall	Producers

B.

(A)	(B)	(C)	(D)
Litter	Producers	Rock minerals	Detritus

C.

(A)	(B)	(C)	(D)
Detritus	Rock minerals	Producer	Litter fall

D.

(A)	(B)	(C)	(D)
Producers	Litter fall	Rock minerals	Detritus

Answer: C

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19. 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. Western Ghat

B. Meghalaya

C. Carbett National Park

D. Keolado National Park

Answer: D

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20. The zone of atmosphere in which the ozone layer is

A. Ionosphere

B. Mesosphere

C. Stratosphere

D. Troposphere

Answer: C

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21. Most animals are tree dwellers in a :

A. tropical rain forest

B. coniferous forest

C. thorn woodland

D. temperate decicuous forest

Answer: A

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22. The UN Conference of Parties on climate change in the year 2012 was held at:

A. Warsaw

B. Durban

C. Doha

D. Lima

Answer: C

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

A. Mutualism

B. Competition

C. Predation

D. Parasitism

Answer: B

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

A. More abundant species will exclude the less abundant species through competition.

B. Competition for the same resources excludes species having different food preferences.

C. No two species can occupy the same niche inedefinitely for the same limiting resources.

D. Larger organisms exclude smaller ones through ones through competition.

Answer: C

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25. 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/K is exactly one.

B. when N nears the carrying capacity of the habitat.

C. when N/K equals zero.

D. when death rate is greater than birth rate.

Answer: A

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26. It is much easier for a small animal to run uphill than for a large animal, because:

A. It is easier to carry a small body weight.

B. Smaller animals have a higher metabolic rate.

C. Small animals have a lower O^2 requirement.

D. The efficiency of muscles in large animals is less than in the small animals.

Answer: B

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27. 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. Commensalism

B. Parasitism

C. Mutualism

D. Amensalism

Answer: B

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28. The principle of competitive exclusion was stated by

A. MacA Arthur

B. Verhulst and Pearl

C. C. Darwin

D. G.F Gause.

Answer: D

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