

Ecosystem

1. Epiphytes are rare in Delhi because it has:

- a. Large number of automobiles
- b. Large amount of factories
- c. Semi-arid climate
- d. Moist climate

Ans. (c) Semi-arid climate

2. Which part of the world has high density of organisms?

- a. Grasslands
- b. Savannahs
- c. Deciduous forests
- d. Tropical rain forest

Ans. (d) Tropical rain forest

3. Zooplanktonic forms are:

- a. Primary producers
- b. Carnivores
- c. Primary consumers
- d. Secondary consumers

Ans. (c) Primary consumers

4. Which of the following occurs in abiotic component of ecosystem?

- a. Flow of energy
- b. Cycling of materials
- c. Consumers
- d. Flow of energy and cycling of material

Ans. (a) Flow of energy

5. In an ecosystem, tropic level of man is:

- a. Producer
- b. Herbivore
- c. Ominivores
- d. All of the above

Ans. (c) Ominivores

6. The branch of biology deals with environment:

- a. Geology
- b. Ecology
- c. Limnology
- d. Bacteriology

Ans. (b) Ecology

7. India accounts of the land area of the total land.

- a. 4%
- b. 1.0%
- c. 2.4%
- d. 8.5 %

Ans. (c) 2.4%

8. Ernest Haeckel belongs to:

- a. Newzeland
- b. Russia
- c. Germany
- d. Australia

Ans. (c) Germany

9. Uniform inter-breeding population spread over time and space:

- a. Genus
- b. Species
- c. Vegetation
- d. None of the above

Ans. (b) Species

10. Organism with other individual of the same species:

- a. Population
- b. Species
- c. Vegetation
- d. All of the above

Ans. (a) Population

11. Secondary producers are:

- a. Herbivores
- b. Heterotrophs
- c. Carnivores
- d. Green plants

Ans. (b) Heterotrophs

12. Lentic ecosystem occurs in:

- a. Rain water
- b. Running water
- c. Standing water
- d. Gravitational water

Ans. (c) Standing water

13. Climatology is science of:

- a. Edaphic factors
- b. Topographic factors
- c. Climatic factor
- d. Biotic factors

Ans. (a) Edaphic factors

14. Transition zone between two vegetational types is:

- a. Ecotone
- b. Ecotype
- c. Ecocline
- d. Ecosystem

Ans. (a) Ecotone

15. Organisms living at the bottom of the lake are:

- a. Nekton
- b. Benthos
- c. Plankton
- d. Pelagic

Ans. (b) Benthos

16. Organism with other individual of the different species:

- a. Community
- b. Unity
- c. Population
- d. Locality

Ans. (a) Community

17. Rapid nutrient cycling occurs in:

- a. Ocean
- b. Forest
- c. Coral
- d. Desert

Ans. (c) Coral

18. Populations of individual of a species having same genetic stock:

- a. Ecotype
- b. Ecad
- c. Ecotone
- d. Ipotype

Ans. (b) Ecad

19. Population of individual of a species having different genetic stock:

- a. Ecad
- b. Ecotone
- c. Ecotype
- d. Both a and b

Ans. (c) Ecotype

20. A sharp line of distinction between the two biological communities:

- a. Ecodart
- b. Ecad
- c. Ecotone
- d. None of these

Ans. (c) Ecotone

21. A recently discovered ecosystem is:

- a. Crater
- b. Tundra
- c. Floating iceberg
- d. Vent

Ans. (a) Crater

22. Controlling factor in ecosystem is:

- a. Soil moisture
- b. Food
- c. Predation
- d. Temperature

Ans. (c) Predation

23. Savannah is found commonly in:

- a. USA
- b. USSR
- c. Australia
- d. India

Ans. (c) Australia

24. Which one has evergreen vegetation and drought adapted animals?

- a. Chaparral
- b. Savanna
- c. Tundra
- d. Deciduous forest

Ans. (c) Tundra

25. Interaction between individual species to its environment:

- a. Synecology
- b. Ecosystem
- c. Autecology
- d. Biology

Ans. (c) Autecology

26. Interaction between different population in an area is:

- a. Synecology
- b. Autecology
- c. Ecosystem
- d. Population

Ans. (a) Synecology

27. Interaction between living organisms and their environment:

- a. Ecosystem
- b. Synecology
- c. Biome
- d. Biosphere

Ans. (c) Biome

28. A biological community is sustained to:

- a. Rotation of cycling
- b. Flow of energy
- c. Water
- d. Both a and b

Ans. (d) Both a and b

29. Which of the following could be considered as an ecosystem service:

- a. Fruits from tree
- b. Fodder from grasslands
- c. Fuel wood from tree
- d. None of the above

Ans. (b) Fodder from grasslands

30. Raunkiaer's life form method of classification of plants is based on:

- a. Lowers of plants
- b. Presence of underground buds
- c. Position of aboveground buds
- d. Position of parennating buds

Ans. (d) Position of parennating buds

31. Chamaephytes are plants whose parennating buds are located:

- a. Top on the plant b. Close to ground surface
- c. In the root d. Above the root

Ans. (b) Close to ground surface

32. Importance value index (IVI) of a species is based on its:

- a. Relative dominance and relative frequency
- b. Relative frequency and relative density
- c. Relative dominance, relative density and abundance
- d. Relative dominance, relative frequency and relative density

Ans. (d) Relative dominance, relative frequency and relative density

33. Which one among the following is not a synthetic character of a community:

- a. Dominance b. Recessive
- c. Fidelity d. Both a and b

Ans. (c) Fidelity

34. Which of the following could be considered as biological invader?

- a. *Lantana* b. *Dalbergia sisso*
- c. *Gossypium* spp. d. *Tectona grandis*

Ans. (a) Lantana

35. In limnology, meaning of nekton is:

- a. Swimming organisms b. Standing organisms
- c. Floating organisms d. Rotating organisms

Ans. (a) Swimming organisms

36. Neritic zone is found:

- a. Between two different forest ecosystems
- b. Between two different grassland ecosystems
- c. In shallow water zone of sea on the continental shelf region
- d. In deep sea where light is not available

Ans. (c) In shallow water zone of sea on the continental shelf region

37. Example of carnivorous plant is:

- a. *Utricularia* b. *Drosera*
- c. *Lemna* d. All of the above

Ans. (c) Lemna

38. Carnivorous plants fulfill the requirement of which element by carnivoroy:

- a. C b. N
- c. Mg d. Zn

Ans. (b) N

39. Lianas is:

- a. Woody climbers found in tropical rain forest
- b. Soft epiphytes found deciduous forest
- c. Arial root of the tree in tropical rain forest
- d. All of the above

Ans. (a) Woody climbers found in tropical rain forest

40. Father of ecosystem ecology:

- a. EP odum b. OT odum
- c. OP odum d. KK odum

Ans. (a) EP odum

41. Annual rainfall in the area of a tropical decides forest is:

- a. Over 300 cm b. 200–250 cm
- c. Over 500 cm d. 100–150 cm

Ans. (d) 100–150 cm

42. Vegetation of Delhi is predominantly:

- a. Xerophytic b. Halophytic
- c. Mesophytic d. All of the above

Ans. (a) Xerophytic

43. Grassland with scattered trees is:

- a. Savannah b. Deciduous forest
- c. Evergreen forest d. Tropical rain forest

Ans. (a) Savannah

44. Alpine plants show:

- a. Xerophytism b. Halophytism
- c. Mesophytism d. Lxurian growth

Ans. (a) Xerophytism

45. A habitat with long server winter and growing season of a few months of summer forms:

- a. Taiga b. Grasslands
- c. Tundra ecosystem d. None of these

Ans. (c) Tundra ecosystem

46. Alpine forest of Himalayas have:

- a. Tall evergreen—coniferous trees
- b. Tall broad—leaved evergreen trees
- c. Tall broad—leaved deciduous trees
- d. Dwarf—shrubby plant

Ans. (d) Dwarf—shrubby plant

47. Basic unit of ecological hierarchy:

- a. Ecotone b. Genome
- c. Organism d. Ecology

Ans. (c) Organism

48. A unit of land with a natural boundary having a mosaic of patches:

- a. Landscape
- b. Ecad
- c. Biosphere
- d. Ecosystem

Ans. (a) Landscape

49. Simplest level of organization in ecology:

- a. Population
- b. Ecosystem
- c. Organism
- d. Community

Ans. (c) Organism

50. Functional role of an organism in ecological system:

- a. Biome
- b. Niche
- c. Population
- d. None of these

Ans. (b) Niche

51. Tropical rain forest is example of:

- a. Landscape
- b. Ecad
- c. Biome
- d. Ecosystem

Ans. (c) Biome

52. Freshwater, salt concentration is:

- a. > 0
- b. 10
- c. < 1
- d. < 6

Ans. (c) < 1

53. Rhododendron is characteristic component of vegetation:

- a. Tropical forest
- b. Alpine zone
- c. Gangetic plain
- d. Mangroves

Ans. (b) Alpine zone

54. Temperate forests occur in India in:

- a. Indo-gangetic plains
- b. Himalayas
- c. Eastern India
- d. Southern peninsula

Ans. (b) Himalayas

55. In India, tropical evergreen forest occur in:

- a. Himachal Pradesh
- b. Madhya Pradesh
- c. Assam
- d. Tamil Nadu

Ans. (c) Assam

56. In India, rain forests are found in:

- a. Uttar Pradesh and Bihar
- b. Madhya Pradesh and Orissa
- c. Tamil Nadu and Andhra Pradesh
- d. Western Ghats and Eastern Himalayas

Ans. (d) Western Ghats and Eastern Himalayas

57. In India, temperate evergreen vegetation occur mostly is:

- a. Rajasthan and south Punjab
- b. Eastern and Western Himalayas less than 3500 m
- c. Western Himalayas above 3500 m
- d. Western Ghats and Assam

Ans. (b) Eastern and Western Himalayas less than 3500 m

58. Difference between tropical rain forest and temperate forest is:

- a. Tropical forest is homogeneous while temperate one is heterogeneous
- b. Tropical forest has more of angiosperms while temperate forests have more of gymnosperms
- c. Plants of temperate forests are more mesophytes
- d. Trees of temperate forests are taller than those of tropical forest

Ans. (b) Tropical forest has more of angiosperms while temperate forests have more of gymnosperms

59. In succession on bare rock surfaces the first colonizers are:

- a. Mosses
- b. Ferns
- c. Blue green algae
- d. Crustose lichens

Ans. (d) Crustose lichens

60. Frankia is associated with:

- a. Ammonification
- b. Denitrification
- c. Nitrogen fixation
- d. Assimilation

Ans. (c) Nitrogen fixation

61. The place where an organism lives is known as:

- a. Niche
- b. Food chain
- c. Trophic level
- d. Food web

Ans. (b) Food chain

62. Food chain refers to:

- a. A sequence of organisms each of which is a source of food for the next in order
- b. The role of an organism plays within its natural community
- c. The level at which an organism obtains its nourishment
- d. All of the above

Ans. (a) A sequence of organisms each of which is a source of food for the next in order

63. Plant-eating organisms are:

- a. Carnivore
- b. Omnivore
- c. Herbivore
- d. Scavenger

Ans. (c) Herbivore

64. Tapeworms live inside organisms and feed on the nutrients of the food they eat. A tapeworm is an example of:

- a. Mutualism
- b. Parasitism
- c. Commensalisms
- d. Anabolism

Ans. (b) Parasitism

65. An organism that consume both producers and other consumers is called:

- a. Omnivore
- b. Decomposer
- c. Herbivore
- d. Prey

Ans. (a) Omnivore

66. The kind of relationship that exist between a remora fish and a shark:

- a. Parasitic
- b. Commensalisms
- c. Mutualism
- d. None of the above

Ans. (b) Commensalisms

67. A self sustaining community of plants and animal taken together with its inorganic environment is:

- a. Biodiversity
- b. Niche
- c. Ecosystem
- d. Ecology

Ans. (c) Ecosystem

68. Pathways of circulation of elements within ecosystem is:

- a. Nutrient cycles
- b. Food chain
- c. Biogeochemical cycles
- d. Food web

Ans. (d) Food web

69. Transfer of contaminants through food chain is referred as:

- a. Bionutrition
- b. Biomagnification
- c. Nutrient cycle
- d. Biological cycle

Ans. (c) Nutrient cycle

70. A major ecological community of organisms under a particular climatic zone:

- a. Biotic community
- b. Niche
- c. Biome
- d. Biodiversity

Ans. (c) Biome

71. Energy flow in Silver spring at florida was stated by:

- a. EP Haeckel
- b. HT Odum
- c. E Komolafe
- d. None of the above

Ans. (b) HT Odum

72. Synthetic characters of a community are computed from:

- a. Analytical characters
- b. Physiological characters
- c. Qualitative characters
- d. Phenological characters

Ans. (a) Analytical characters

73. Ecotone is:

- a. Zone of least density in a community
- b. Zone of highest density in a community
- c. Zone of minimum diversity in a community
- d. Zone of transition between two communities

Ans. (d) Zone of transition between two communities

74. Ecesis is a step in succession which means:

- a. Migration of propagules to a bare area
- b. Establishment of a species in a new area
- c. Development of a new area without any form of life
- d. None of the above

Ans. (b) Establishment of a species in a new area

75. Seral stage in succession denotes:

- a. The initial stage in succession
- b. The middle stage in succession
- c. The final stage in succession
- d. All the developmental stages in succession

Ans. (d) All the developmental stages in succession

76. Phenology is the study of:

- a. Seasonal change in vegetation
- b. Change in any time in vegetation
- c. Distribution of vegetation in relation to climate
- d. Flowering in plants

Ans. (a) Seasonal change in vegetation

77. Physiognomy is the study of:

- a. Effect of light on flowering of plants
- b. Effect of temperature on flowering of plants
- c. General appearance of vegetation
- d. Effect of moisture on vegetation

Ans. (c) General appearance of vegetation

78. Phenograms are used to study:

- a. Events in life history of plants
- b. Vegetation growth in plants
- c. Effects of light on vegetative growth in plants
- d. Effects of temperature on vegetative growth in plants

Ans. (a) Events in life history of plants

79. Ecology is the science of community was stated by:

- a. Anderson
- b. Eugene Galo
- c. Fredrick Clements
- d. C Ealton

Ans. (b) Eugene Galo

80. Food chains can be divided into how many basic types:

- a. 5
- b. 4
- c. 3
- d. 2

Ans. (d) 2

81. A forest community will develop only if the climax is:

- a. Frost
- b. Hot
- c. Moist
- d. Dry

Ans. (c) Moist

82. Individuals of a species affect each other's life in various ways is called:

- a. Action
- b. Reaction
- c. Co-action
- d. None of the above

Ans. (b) Reaction

83. Dipterocarpus can be seen in

- a. Coniferous forest
- b. Tropical rain forest
- c. Deciduous forest
- d. Desert

Ans. (b) Tropical rain forest

84. In a grass-sign –tiger food chain, the biomass of grass is 1 ton. The tiger biomass will be:

- a. 120 kg
- b. 10 kg
- c. 50 kg
- d. 20

Ans. (b) 10 kg

85. The food chain in which microorganisms Breakdown dead producers is called:

- a. Consumer food chain
- b. Detritus food chain
- c. Decomposer food chain
- d. Predator food chain

Ans. (a) Consumer food chain

86. Place occupied by an organism in relation to environment is:

- a. Habitat
- b. Niche
- c. Biome
- d. Ecad

Ans. (a) Habitat

87. Capacity of an organism to survive and reproduce in a particular environment is known as:

- a. Adaptation
- b. Tolerant
- c. Adjustment
- d. All of the above

Ans. (a) Adaptation

88. The ability of some animals to blend with the surrounding is:

- a. Disguise
- b. Camouflage
- c. Conceal
- d. None of the above

Ans. (b) Camouflage

89. Differentiation of habitat and ecological niche given by:

- a. Hackle
- b. Odum
- c. Gauss
- d. Fleming

Ans. (b) Odum

90. Groups of species exploiting a common resource are called:

- a. Genus
- b. Guilds
- c. Niche
- d. All of the above

Ans. (b) Guilds

91. Pyramids of energy are always upright because:

- a. Sun is the ultimate source of energy so plants get maximum energy
- b. There is loss of energy while passing from one trophic level another
- c. Photosynthesis converts only a part of radiation received
- d. Mass balance equation doesn't apply on energy movement studies

Ans. (b) There is loss of energy while passing from one trophic level another

92. The association of sea anemone and hermit crab is called:

- a. Symbiosis
- b. Parasitism
- c. Commensalism
- d. All of the above

Ans. (c) Commensalism

93. The root nodules of pulses harbor which microbe:

- a. Ulothrix
- b. Volvox
- c. Spirogyra
- d. Rhizobium

Ans. (d) Rhizobium

94. Which one is the highest?

- a. Net primary productivity
- b. Net secondary productivity

- c. Net productivity
- d. Gross primary productivity

Ans. (d) Gross primary productivity

95. In hill area what percentage of the total area should be forest area:

- a. 30%
- b. 40%
- c. 50%
- d. 60%

Ans. (d) 60%

96. Biotic factors of an ecosystem include:

- a. The light can affect the plant growth
- b. The living parts of an ecosystem
- c. The nonliving part of an ecosystem
- d. All parts of the food chain exceed decomposers

Ans. (b) The living parts of an ecosystem

97. In which ecosystem would you find the most dissolved oxygen:

- a. Running fresh water
- b. Standing fresh water
- c. Sea water
- d. All of the above

Ans. (a) Running fresh water

98. What is lost when one organism consume other:

- a. Energy
- b. Water
- c. Light
- d. Chemical

Ans. (a) Energy

99. Who coined the term symbiosis:

- a. Odum
- b. De Bary
- c. Haeckel
- d. McDougall

Ans. (b) De Bary

100. The topmost zone near the shore of a lake is:

- a. Benthic zone
- b. Littoral
- c. Limnetic zone
- d. Pelagic zone

Ans. (b) Littoral

101. Zone which is cooler and denser is:

- a. Benthic zone
- b. Littoral
- c. Abyssal zone
- d. Profundal zone

Ans. (d) Profundal zone

102. The zone which one is ocean meets the land is:

- a. Abyssal zone
- b. Intertidal
- c. Limnetic
- d. Pelagic zone

Ans. (b) Intertidal

103. The zone where the temperature decreases as depth increases:

- a. Benthic zone
- b. Littoral
- c. Abyssal zone
- d. Pelagic zone

Ans. (a) Benthic zone

104. The zone where high in oxygen and low in nutrient content:

- a. Benthic zone
- b. Littoral
- c. Abyssal zone
- d. Pelagic zone

Ans. (c) Abyssal zone

105. Fresh water streams merge with the ocean is:

- a. Estuaries
- b. Littoral
- c. Limnetic zone
- d. Pelagic zone

Ans. (a) Estuaries

106. In desert ecosystem an annual rainfall is less than:

- a. 12
- b. 17
- c. 25
- d. 30

Ans. (c) 25

107. The forest that colours in autumn is:

- a. Temperate deciduous forest
- b. Temperate evergreen forest
- c. Tropical evergreen forest
- d. Tropical deciduous forest

Ans. (a) Temperate deciduous forest

108. Ephemerals are a type of xerophytes:

- a. Drought resisting
- b. Drought enduring
- c. Drought escaping
- d. None of the above

Ans. (c) Drought escaping

109. Succulents occur in:

- a. Deserts
- b. Tundra
- c. Temperate deciduous forest
- d. Tropical rain forests

Ans. (a) Deserts

110. Mechanical tissue is undeveloped in:

- a. Halophytes
- b. Hydrophytes
- c. Mesophytes
- d. Xerophytes

Ans. (b) Hydrophytes

111. Tropical forests occur in India:

- a. Rajasthan
- b. Madhya Pradesh
- c. Kerala and Assam
- d. Jammu and Kashmir

Ans. (c) Kerala and Assam

112. Which can be trophic level of a lion in forest ecosystem?

- a. T₃
- b. T₄
- c. T₂
- d. T₁

Ans. (b) T₄

113. Bulk CO₂ fixation occurs in:

- a. Crop plants
- b. Oceans
- c. Tropical rain forests
- d. Temperature forests

Ans. (b) Oceans

114. Desert biome does not support much vegetation as it back:

- a. Sufficient light
- b. Favourable temperature
- c. Sufficient water
- d. Sufficient nutrient

Ans. (c) Sufficient water

115. Hygrometer is employed to measure:

- a. Relative humidity
- b. Wind velocity
- c. Temperature
- d. Turbidity

Ans. (a) Relative humidity

116. Number of primary producers per unit area would be maximum in:

- a. Forest ecosystem
- b. Desert
- c. Grassland ecosystem
- d. Pond ecosystem

Ans. (d) Pond ecosystem

117. A food chain begins with:

- a. Photosynthetic organisms
- b. Nitrogen fixing organisms
- c. Decomposers
- d. Consumers

Ans. (a) Photosynthetic organisms

118. The most stable ecosystem is:

- a. Forest
- b. Mountain
- c. Desert
- d. Ocean

Ans. (d) Ocean

119. In the absence of decomposers, ecosystem functioning is adversely affected due to:

- a. Blocking of energy flow
- b. Blocking of mineral cycling
- c. Blocking of solar energy o herbivores
- d. Rate of decomposition of other components will increase

Ans. (b) Blocking of mineral cycling

120. The factor related to structure of earth surface is:

- a. Edaphic
- b. Biotic
- c. Temperature
- d. Topographic

Ans. (d) Topographic

121. Mesembryanthemum belongs to the category:

- a. Fleshy xerophytes
- b. Mesophyte
- c. Nonsucculent perennial xerophytes
- d. Epiphyte

Ans. (a) Fleshy xerophytes

122. Extreme xerophytic condition occurs in:

- a. Cactus
- b. Nerium
- c. Capparis
- d. Brassic

Ans. (c) Capparis

123. Xerophytic plants have:

- a. Extensive root system, small and tick leaves
- b. Extensive shoot system
- c. Profuse and large flowers
- d. Extensive air spaces

Ans. (a) Extensive root system, small and tick leaves

124. Desert occupy per cent the area in India.

- a. 10
- b. 15
- c. 17
- d. 25

Ans. (c) 17

125. Atacama of chile is a good example of:

- a. Hot and dry desert
- b. Semiarid desert
- c. Coastal desert
- d. Cold desert

Ans. (c) Coastal desert

126. Structural and functional unit of biosphere is:

- a. Mass
- b. Ecosystem
- c. Biome
- d. Ecology

Ans. (b) Ecosystem

127. The relationship between biotic and abiotic environment is called:

- a. Biogenesis
- b. Symbiosis
- c. Holocoenosis
- d. None

Ans. (a) Biogenesis

128. An example of a micro ecosystem is:

- a. Pond
- b. Ocean
- c. Sea
- d. River

Ans. (a) Pond

129. Example of temporary ecosystem is:

- a. Pond
- b. Ocean
- c. River
- d. Forest

Ans. (a) Pond

130. Example of stable ecosystem is:

- a. River
- b. Ocean
- c. Land
- d. Grass land

Ans. (b) Ocean

131. Thick cuticle occurs on the leaves of plants belonging to:

- a. Warm habitats
- b. Cool habitats
- c. Wet habitats
- d. Dry habitats

Ans. (d) Dry habitats

132. Air plants grow on high tree branches is:

- a. Xerophytes
- b. Climbers
- c. Stranglers
- d. Epiphytes

Ans. (d) Epiphytes

133. Woody vines grow on tree trunks:

- a. Lianas
- b. Climbers
- c. Stranglers
- d. Periphytes

Ans. (a) Lianas

134. Plants grow on high tree branches and send their root to forest floor is:

- a. Lianas
- b. Epiphytes
- c. Strangler
- d. None of these

Ans. (c) Strangler

135. Temperate deciduous forest found in:

- a. North America
- b. South Asia
- c. West Russia
- d. East Europe

Ans. (a) North America

136. Which forest is the largest terrestrial biome:

- a. Boreal forest
- b. Deciduous forest
- c. Temperate forest
- d. Tundra

Ans. (a) Boreal forest

137. Taiga word is derived from:

- a. Spanish
- b. Russia
- c. Greek
- d. None of the above

Ans. (b) Russia

138. The main soil order associated with the taiga is:

- a. Aluvisoil
- b. Inceptisol
- c. Spodosol
- d. Both a and b

Ans. (d) Both a and b

139. Which are characterized as having grasses and trees are absent:

- a. Temperate grassland
- b. Tropical forest
- c. Temperate forest
- d. Tropical grassland

Ans. (a) Temperate grassland

140. Prairie was found in:

- a. Temperate grassland
- b. Deciduous forest
- c. Temperate forest
- d. Tropical grassland

Ans. (a) Temperate grassland

141. A semi closed coastal body of water having a tree connection with sea:

- a. Ocean
- b. Estuary
- c. River
- d. None of the above

Ans. (b) Estuary

142. Biotope is:

- a. An area in which animal and plants having similar habitat
- b. An area in which animal and plants having similar group live together
- c. An area in which animal and plants having similar behavior live together
- d. An area in which animals and plants having similar habit live together

Ans. (a) An area in which animal and plants having similar habitat

143. Potamon is a group of organisms living in:

- a. Oceans
- b. River
- c. Deserts
- d. Ponds

Ans. (b) River

144. The plant that absorbs nitrogen in the form of ammonia:

- a. Radish
- b. Pumpkin
- c. Rice
- d. Potato

Ans. (c) Rice

145. Evergreen tree found in Himalayas:

- a. Teak
- b. Eucalyptus
- c. Pine
- d. Cedar trees

Ans. (d) Cedar trees

146. Standing state is used to show:

- a. The amount of inorganic substances present in an ecosystem
- b. The amount of organic substances present in an ecosystem
- c. The biomass present in an ecosystem
- d. None of the above

Ans. (a) The amount of inorganic substances present in an ecosystem

147. Which one is highest?

- a. Net secondary productivity
- b. Net primary productivity
- c. Gross secondary productivity
- d. Gross primary productivity

Ans. (d) Gross primary productivity

148. Sciophytes grow best in:

- a. Submerge condition
- b. Mild saline soil
- c. Shady areas
- d. Full dark condition

Ans. (c) Shady areas

149. Nodules obtained from seabed contain highest concentration of which metal:

- a. Pb
- b. Mn
- c. Hg
- d. Mg

Ans. (d) Mg

150. The first organism to colonise a rock formation is:

- a. Moss
- b. Ulothrix
- c. Fungi
- d. Lichens

Ans. (d) Lichens

151. Completely submerged plant roots receive oxygen from/by:

- a. Phloem tissues bringing dissolved oxygen
- b. Observing dissolved oxygen present in water
- c. Atmosphere conveyed through intracellular spaces
- d. Xylem tissues bringing dissolved oxygen

Ans. (c) Atmosphere conveyed through intracellular spaces

152. Stomata are sunken in:

- a. Hygrophytes
- b. Mesophytes
- c. Xerophytes
- d. Hydrophytes

Ans. (c) Xerophytes

153. Relative to roots, the shoots are massive in plants of:

- a. Moist temperate
- b. Moist tropical forest
- c. Tundra
- d. Deserts

Ans. (b) Moist tropical forest

154. Tropical rain forests are found in:

- a. Himachal Pradesh
- b. Jammu and Kashmir
- c. Bihar
- d. Andaman

Ans. (d) Andaman

155. Which one has maximum biomass?

- a. Lake ecosystem
- b. Pond ecosystem
- c. Forest ecosystem
- d. Grassland ecosystem

Ans. (c) Forest ecosystem

156. Biotic community along with its interacting physical environment comprises:

- a. Phytosociology
- b. Ecology
- c. Ecosystem
- d. Phytogeography

Ans. (c) Ecosystem

157. Total amount of living material at various levels of a food chain is depicted by:

- a. Pyramid of energy
- b. Pyramid and numbers
- c. Pyramid of biomass
- d. All of the above

Ans. (c) Pyramid of biomass

158. Relatively more abundant animals of desert grassland are:

- a. Diurnal
- b. Aquatic
- c. Arboreal
- d. Fossorial

Ans. (d) Fossorial

159. The amount of abiotic material present in an ecosystem is:

- a. Standing state
- b. Sitting state
- c. Walking state
- d. Standing crop

Ans. (a) Standing state

160. Biomass of organisms for unit area is known as:

- a. Standing state
- b. Running state
- c. Walking state
- d. Standing

Ans. (d) Standing

161. Example of lentic ecosystem is:

- a. Running state
- b. Sitting state
- c. Walking state
- d. Standing crop

Ans. (c) Walking state

162. Study of freshwater is termed as:

- a. Mycology
- b. Ecology
- c. Limnology
- d. Environmental science

Ans. (c) Limnology

163. Example of lentic water:

- a. River
- b. Spring
- c. Streams
- d. Pond

Ans. (d) Pond

164. Lotic means:

- a. Running water
- b. Standing water
- c. Flowing water
- d. Both a and b

Ans. (d) Both a and b

165. Phagotrophs are:

- a. Decomposers
- b. Consumers
- c. Producers
- d. All of the above

Ans. (b) Consumers

166. Consumers are usually:

- a. Homotrophic
- b. Heterotrophic
- c. Autotrophic
- d. None of the above

Ans. (b) Heterotrophic

167. Micro consumers are:

- a. Producers
- b. Reducers
- c. Decomposers
- d. Both b and c

Ans. (d) Both b and c

168. obtain food directly from hosts.

- a. Parasites
- b. Scavengers
- c. Decomposer
- d. None of these

Ans. (a) Parasites

169. Rate of conversion of light energy into chemical energy of organic molecules in an ecosystem is:

- a. Net primary productivity
- b. Gross primary productivity
- c. Net secondary productivity
- d. Gross secondary productivity

Ans. (a) Net primary productivity

170. Halophytes grow on physiologically dry soil due to:

- a. Excessive salt in water
- b. Excessive salt in plants
- c. Excessive humidity outside
- d. Dry soil

Ans. (a) Excessive salt in water

171. Tropical forests are dense due to:

- a. Wild animals
- b. High temperature and less rain
- c. Low temperature and excess rains
- d. High temperature and excess rain

Ans. (d) High temperature and excess rain

172. The process of change of animals communities in an orderly sequence in an area is:

- a. Biome
- b. Ecad
- c. Biosphere
- d. Ecosystem

Ans. (d) Ecosystem

173. The process of changes called:

- a. Action
- b. Reaction
- c. Interaction
- d. All of the above

Ans. (a) Action

174. The first community which inhabit a bare area is called:

- a. Transitional community
- b. Popular community
- c. Pioneer community
- d. None of the above

Ans. (c) Pioneer community

175. A succession beginning in dry habitat is called:

- a. Hydroarch
- b. Xerach
- c. Halosere
- d. None of the above

Ans. (b) Xerach

176. The last and stable community in an area is called:

- a. Pioneer community
- b. Transitional community
- c. Climax community
- d. Seral community

Ans. (c) Climax community

177. Sequence of successional stages on a bare rock are called:

- a. Holosere
- b. Hydrosere
- c. Xerosere
- d. Lithosere

Ans. (d) Lithosere

178. The entire series of communities of biotic succession from pioneer to climax community is known as:

- a. Seral
- b. Sera
- c. Biosis
- d. Ecesis

Ans. (b) Sera

179. The process of successive establishment of the species is:

- a. Seral
- b. Sere
- c. Bisosis
- d. Ecesis

Ans. (d) Ecesis

180. The biotic successive that occurs on a substratum devoid of earlier life is called:

- a. Primary succession b. Secondary succession
- c. Tertiary succession d. None of the above

Ans. (a) Primary succession

181. Name the pioneer plants of xerarch:

- a. Lichens b. Blue green algae
- c. Moss d. Cara

Ans. (a) Lichens

182. Nutrient cycling operates at the scale of:

- a. Closed systems b. Ecological scales
- c. Open system d. Individual space

Ans. (a) Closed systems

183. An ecological niche is a:

- a. Habitat of a plant
- b. Habitat of a small community
- c. Habitat of nocturnal animals
- d. Kind of plant animal association

Ans. (d) Kind of plant animal association

184. Sal forest (*Shorea robusta*) is a:

- a. Deciduous forest b. Evergreen forest
- c. Rain forest d. None of the above

Ans. (a) Deciduous forest

185. Closely related birds occur together due to differences in their nesting and feeding habits given by:

- a. Hackle b. Odum
- c. Crick d. Lack

Ans. (d) Lack

186. Gauss's hypothesis is:

- a. Competitive exclusion
- b. Competitive biodiversity
- c. Competitive species
- d. Competitive ecosystem

Ans. (a) Competitive exclusion

187. The organisms in different geographical regions but occupying same niche are called:

- a. Ecological pyramids
- b. Ecological equivalents
- c. Ecological population
- d. Ecological diversity

Ans. (b) Ecological equivalents

188. Dharma of ecology concept was put forth by:

- a. A. G. Tensely b. Hackle
- c. Khoshoo d. Odum

Ans. (c) Khoshoo

189. Which among the following can be considered as a keystone species in ecological terms?

- a. Pine b. Sesame
- c. Teak d. Popular

Ans. (a) Pine

190. When two species live in the same niche is called:

- a. Narrow niche b. Niche width
- c. Niche overlap d. Niche height

Ans. (c) Niche overlap

191. Which among the following is an example for keystone species of prairie ecosystem?

- a. Prairie tiger b. Prairie elephant
- c. Prairie rabbit d. Prairie dog

Ans. (d) Prairie dog

192. What is not an indirect service of the world's ecosystem?

- a. Nutrient cycling
- b. Water supply
- c. Waste treatment
- d. Waste management

Ans. (b) Water supply

193. The specific aim ecology is to study:

- a. The distribution patterns of plants
- b. The distribution patterns of fruits
- c. The distribution patterns of animals
- d. All of the above

Ans. (a) The distribution patterns of plants

194. A scorpion stalks, kills and then eats a spider. Based on its behavior, which ecological terms describe the scorpion:

- a. Producer, herbivore, decomposer
- b. Producer, carnivore, heterotrophy
- c. Predator, carnivore, consumer
- d. Predator, autotroph, herbivore

Ans. (c) Predator, carnivore, consumer

195. Which organisms are dependent upon other animal for food?

- a. Producers b. Decomposer
- c. Scavengers d. All of the above

Ans. (c) Scavengers

196. A large variety of species composition occurs in:

- a. Desert
- b. Forest
- c. Ocean
- d. Grassland

Ans. (b) Forest

197. Primary productivity is expressed in:

- a. $\text{gm}^{-2}\text{year}^{-1}$
- b. $\text{KCal m}^{-2}\text{year}^{-1}$
- c. Kcal'
- d. Both a and b

Ans. (d) Both a and b

198. The rate of total production of organic matter by the producer per unit area and time is:

- a. Net primary productivity
- b. Secondary productivity
- c. Gross primary productivity
- d. None of the above

Ans. (c) Gross primary productivity

199. The rate at which organic matter is about is stored after the basic metabolic process is:

- a. Net secondary productivity
- b. Net primary productivity
- c. Gross secondary productivity
- d. None of these

Ans. (b) Net primary productivity

200. The main site for decomposition in the ecosystem is:

- a. Upper layer of soil
- b. Middle layer of soil
- c. Lower layer of soil
- d. Earth crust

Ans. (a) Upper layer of soil

201. Energy enters an ecosystem through:

- a. Herbivores
- b. Producers
- c. Carnivores
- d. Decomposers

Ans. (b) Producers

202. Sun loving plants are:

- a. Halophytes
- b. Sciophytes
- c. Heliophytes
- d. Autotrophs

Ans. (c) Heliophytes

203. Water storage tissue has:

- a. Large sized thin walled cells
- b. Mucilage
- c. Large sized vacuoles
- d. All of the above

Ans. (d) All of the above

204. Frequent formation of water blooms in a lake indicates:

- a. Absence of herbivores in the lake
- b. Large production of herbivores in lake
- c. Nutrient deficiency
- d. Nutrient enrichment

Ans. (d) Nutrient enrichment

205. The association of sea anemone and the Hermit crab is called:

- a. Symbiosis
- b. Parasitism
- c. Mutualism
- d. Commensalism

Ans. (a) Symbiosis

206. Shannon-weaver index is used to indicate:

- a. Biodiversity
- b. Soil pollution level
- c. Air pollution level
- d. Water pollution

Ans. (a) Biodiversity

207. Cam photosynthesis is found in:

- a. Submerged plant
- b. Blue-green algae
- c. Succulent plants
- d. Hydrophobic plant

Ans. (c) Succulent plants

208. In primary succession the pioneer organism on xerosere is:

- a. Pteridophytes
- b. Mosses
- c. Green algae
- d. Lichens

Ans. (d) Lichens

209. Example of an omnivore is:

- a. Earthworm
- b. Grasshopper
- c. Cockroach
- d. Lizard

Ans. (c) Cockroach

210. The role of salt marshes can be seen as:

- a. Only marginal to the well being of environment
- b. A system sustaining extreme conditions of sea water
- c. Nuisance to the developmental process
- d. A flood buffer and valuable chemical filter

Ans. (d) A flood buffer and valuable chemical filter

211. Identify the plant which does not have symbiotic nitrogen fixation:

- a. Cycas
- b. Dalbergia sisso
- c. Pinus
- d. Tiktona grandis

Ans. (c) Pinus

212. The timing of bird migration appears to be controlled by:

- a. Geocentric lines of force which prompt the birds to migrate
- b. Temperature suitable for breeding and nesting
- c. Availability of food as less food will lead to starvation
- d. Endocrine glands that respond to the changes in the length of the day

Ans. (a) Geocentric lines of force which prompt the birds to migrate

213. Soil of climax tropical rain forests are:

- a. Poor in all nutrients
- b. Rich in organic compound
- c. Rich in nitrogen only
- d. Rich in carbon only

Ans. (a) Poor in all nutrients

214. Viviparity and pneumatophors are features of

- a. Hydrophytes
- b. Halophytes
- c. Mesophytes
- d. Xerophytes

Ans. (b) Halophytes

215. Submerged hydrophytes have a well developed:

- a. Vascular system
- b. Aerenchyma
- c. Root system
- d. Stomatal system

Ans. (b) Aerenchyma

216. Which type of symbiosis is obligatory:

- a. Mutualism
- b. Parasitism
- c. Commensalism
- d. None of the above

Ans. (a) Mutualism

217. Concept of hyper volume Niche was given by:

- a. DeBary
- b. Haeckel
- c. Hutchinson
- d. Odum

Ans. (c) Hutchinson

218. Mycorrhizae is the association of:

- a. Higher plants and fungi
- b. Lower plants and fungi
- c. Higher plants and Algae
- d. Lower plants and Algae

Ans. (a) Higher plants and fungi

219. Any living thing that successfully competes with people for food space or other essential needs is called?

- a. Virus
- b. Bacteria
- c. Fungi
- d. Pest

Ans. (d) Pest

220. Certain bacteria living in a human's large intestine help to produce vitamin K. This relationship is an example of:

- a. Animal parasitism
- b. Mutualism
- c. Plant parasitism
- d. Commensalism

Ans. (b) Mutualism

221. Hydras, earthworms, grasshoppers and humans are classified in the same:

- a. Phylum
- b. Order
- c. Species
- d. Kingdom

Ans. (d) Kingdom

222. Benthos of pond ecosystem are:

- a. Primary consumers
- b. Producers
- c. Secondary consumers
- d. Tertiary consumers

Ans. (a) Primary consumers

223. During extreme aridity, desert Rat:

- a. Stores water
- b. Uses metabolic water
- c. Saves water
- d. Does not use water

Ans. (b) Uses metabolic water

224. Which one is partially submerged and fixed in mud?

- a. Marsilea
- b. Cyperus
- c. Eichhornia
- d. Typha

Ans. (d) Typha

225. 10% law for energy transfer in food chains was given by:

- a. Lindeman
- b. Stanley
- c. Tensely
- d. Weismann

Ans. (a) Lindeman

226. Niche of a species is:

- a. Place of living
- b. Specific functions and competitive power
- c. Habitat and specific functions
- d. None of these

Ans. (c) Habitat and specific functions

227. Benthic animals live:

- a. Deep in sea
- b. Floating
- c. Submerged
- d. Active swimmer

Ans. (a) Deep in sea

228. Food chain is:

- a. Number of human beings forming a chain for food
- b. Animals near a source of food
- c. Transfer of food energy from producers to consumers
- d. None of these

Ans. (c) Transfer of food energy from producers to consumers

229. Which one is index of environmental conditions and changes?

- a. Pollution
- b. Niches
- c. Communities
- d. Individual

Ans. (b) Niches

230. Increase in number of fauna and decreases in number of flora would be dangerous because of enhanced percentage of:

- a. Diseases
- b. CO₂
- c. O₂
- d. Radioactive pollution

Ans. (b) CO₂

231. The major forest biomes and species diversity is:

- a. Tropical rain forest
- b. Temperate forest
- c. Coniferous forest
- d. None of the above

Ans. (a) Tropical rain forest

232. To the heterotrophy hypothesis, some early heterotrophy evolved into autotrophs because of their ability to synthesize organic compounds from water and:

- a. Carbon dioxide
- b. Carbon monoxide
- c. Oxygen
- d. Nitrogen

Ans. (a) Carbon dioxide

233. According to the heterotrophy hypothesis, autotrophs were able to evolve because heterotrophy made conditions more favorable by:

- a. Producing nitrogen for plants
- b. Adding carbon dioxide to the environment
- c. Adding nitrous oxide to the environment
- d. Storing energy in the bonds of inorganic compounds

Ans. (b) Adding carbon dioxide to the environment

234. Two of the most important atmospheric conditions affecting the dispersion of pollutants are the strength of the wind and the of the air.

- a. Pressure
- b. Moisture
- c. Stability
- d. Temperature

Ans. (c) Stability

235. Ultimately, where does the energy within any ecosystem come from:

- a. Biomass of the plants
- b. Hydro electric energy
- c. Sunlight
- d. Wind energy

Ans. (c) Sunlight

236. Which type of ecosystem contains half of the species on earth?

- a. Tundra
- b. Deciduous forest
- c. Chalk grassland
- d. Tropical rainforest

Ans. (d) Tropical rainforest

237. What is a niche?

- a. Small nook in a tree where birds rest
- b. Functional role of an organism plays in an ecosystem
- c. All plant and animal both are living in particular location
- d. None of the above

Ans. (b) Functional role of an organism plays in an ecosystem

238. Which of these organisms is a scavenger?

- a. Earthworm
- b. Cockroach
- c. Silver fish
- d. Moth

Ans. (a) Earthworm

239. The portion of the earth's crust including rocks, mineral and soil required for plant life is known as:

- a. Lithosphere
- b. Mesosphere
- c. Atmosphere
- d. Biosphere

Ans. (d) Biosphere

240. The transition layer in the in the ocean below which temperature drop rapidly is known as:

- a. Epilimnion
- b. Thermocline
- c. Hypolimnion
- d. Surface water

Ans. (b) Thermocline

241. Warmer uppermost layer of a lake is:

- a. Hyperlimnion
- b. Surface water
- c. Epilimnion
- d. All of the above

Ans. (c) Epilimnion

242. Tropical rain forests occupy what percentage of earth's land area:

- a. 7%
- b. 15%
- c. 20%
- d. 25%

Ans. (a) 7%

243. How much of total water on earth is fresh water?

- a. 2.0%
- b. 3.2%
- c. 3.5%
- d. 0.76%

Ans. (d) 0.76%

244. The statement "complete competitors cannot coexist" is inferred from:

- a. Bergman's law
- b. Gauss's principle
- c. Blackman's rule
- d. Hutchinson's theory

Ans. (b) Gauss's principle

245. The law of tolerance was given by:

- a. Shelford
- b. Blackman
- c. Bergman
- d. Heckle

Ans. (a) Shelford

246. Biological or physiological races are also known as:

- a. Biome
- b. Ecads
- c. Ecotone
- d. Ectogens

Ans. (d) Ectogens

247. Which zone of a pond does not receive light?

- a. Littoral
- b. Limnetic
- c. Profundal
- d. Nekton

Ans. (c) Profundal

248. Significant seasonal variation in the phytoplanktonic population of lakes is observed in lakes located in which climatic zone:

- a. Tropical
- b. Taiga
- c. Temperate
- d. All of the above

Ans. (c) Temperate

249. Cold blooded animals are known as:

- a. Poikilothermic animal
- b. Cryophilic animals
- c. Eurythermic animal
- d. None of these

Ans. (a) Poikilothermic animal

250. Salt glands can be found in which group of animals:

- a. Amphibians
- b. Mollusca
- c. Arthropoda
- d. Birds and Reptiles

Ans. (d) Birds and Reptiles

251. Thermocline in a lake is the zone of:

- a. Constant temperature
- b. Rapid temperature change
- c. Highest temperature
- d. Lowest temperature

Ans. (b) Rapid temperature change

252. Pyrology is the study of:

- a. Global warming
- b. Role of fire in ecology
- c. Distribution of plants in forests in relation to sunlight
- d. Metrology

Ans. (b) Role of fire in ecology

253. In ecology the law of minimum was given by:

- a. Fleming
- b. Blackman
- c. Heckle
- d. Liebig

Ans. (d) Liebig

254. What is the primary source of food for marine life?

- a. Phytoplankton
- b. Zooplankton
- c. Sea weeds
- d. Grassland

Ans. (a) Phytoplankton

255. Water bodies in which the water is more salty than freshwater but less salty than water in the oceans are called:

- a. Pelagic
- b. Omnilimnic
- c. Brackish
- d. Both a and b

Ans. (a) Pelagic

256. Gross primary productivity (GPP) also referred as:

- a. Apparent photosynthesis
- b. Net assimilation
- c. Total assimilation
- d. Total production

Ans. (c) Total assimilation

257. The rate of increase in the biomass of consumers per unit is and time is:

- a. Gross primary productivity
- b. Net primary productivity
- c. Secondary productivity
- d. Net productivity

Ans. (c) Secondary productivity

258. The herbivores consume about of assimilated energy in respiration.

- a. 50%
- b. 30%
- c. 70%
- d. 40%

Ans. (b) 30%

259. Net productivity is expressed in:

- a. $\text{gm}^{-2} \text{year}^{-1}$
- b. $\text{Kcalm}^{-2} \text{year}^{-1}$
- c. $\text{Cg m}^{-2} \text{day}^{-1}$
- d. $\text{CO}_2 \text{ fixed/g Chl/hour}$

Ans. (c) $\text{Cg m}^{-2} \text{day}^{-1}$

260. Gross primary productivity is expressed in:

- a. $\text{Gm}^{-2} \text{year}^{-1}$
- b. $\text{Kcalm}^{-2} \text{year}^{-1}$
- c. $\text{Cg m}^2 \text{day}^{-1}$
- d. $\text{CO}_2 \text{ fixed/g Chl/hour}$

Ans. (d) $\text{CO}_2 \text{ fixed/g Chl/hour}$

261. Net primary productivity of deserts is:

- a. $1 \text{ ton ha}^{-1} \text{year}^{-1}$
- b. $2 \text{ ton ha}^{-1} \text{year}^{-1}$
- c. $5 \text{ ton ha}^{-1} \text{year}^{-1}$
- d. $10 \text{ ton ha}^{-1} \text{year}^{-1}$

Ans. (a) $1 \text{ ton ha}^{-1} \text{year}^{-1}$

262. Stem of submerged hydrophytes is soft and weak because of:

- a. Absence of stomata
- b. Absence of xylem
- c. Absence of phloem
- d. Feebly developed supporting tissue and xylem

Ans. (d) Feebly developed supporting tissue and xylem

263. Aquatic plants generally have a:

- a. Well developed vascular system
- b. Well developed root system
- c. Well developed stomatal system
- d. Reduced vascular system

Ans. (d) Reduced vascular system

264. The floating leaves of an aquatic plants have:

- a. Stomata on upper surface
- b. Stomata on lower surface
- c. Stomata on both the surfaces
- d. No stomata

Ans. (a) Stomata on upper surface

265. A plant devoid of roots is:

- a. Wolffia
- b. Vallisneria
- c. Hydrilla
- d. Azolla

Ans. (a) Wolffia

266. Typha is a:

- a. Submerged hydrophyte
- b. Floating hydrophyte
- c. Attached hydrophyte with floating leaves
- d. Emerged hydrophyte

Ans. (d) Emerged hydrophyte

267. In submerged hydrophytes the stomata occur:

- a. On upper surface
- b. On lower surface
- c. No where
- d. On both the surface

Ans. (c) No where

268. Which character is not present in the hydrophytes?

- a. Poor roots
- b. Plentiful xylem and sclerenchyma
- c. Leaves with stomata on upper surface or absent
- d. Abundant aerenchyma.

Ans. (b) Plentiful xylem and sclerenchyma

269. In an ecosystem dispersion of energy is followed by:

- a. Gain heat
- b. Loss of heat
- c. Gain and loss of heat
- d. Cannot predict

Ans. (b) Loss of heat

270. The average trophic levels in the food chain of an ecosystem:

- a. 3–5
- b. 2–7
- c. 2–6
- d. 6–8

Ans. (a) 3–5

271. The transfer energy from one trophic level to the next trophic level is called:

- a. Food habitat
- b. Food chain
- c. Food web
- d. Food nexus

Ans. (b) Food chain

272. The consumers that are not preyed upon by other animals are:

- a. Top carnivores
- b. Primary carnivores
- c. Secondary carnivores
- d. Tertiary carnivores

Ans. (a) Top carnivores

273. All are constituents of aquatic food chain *except*:

- a. Phytoplankton
- b. Zooplankton
- c. Wolf
- d. Small fish

Ans. (c) Wolf

274. All are the constituents of terrestrial food chain *except*:

- a. Grasshopper
- b. Rabbit
- c. Snake
- d. Crocodile

Ans. (d) Crocodile

275. The ecosystem exhibiting detritus food chain largely depends on:

- a. Solar energy
- b. Organic matter
- c. Plants
- d. All of the above

Ans. (b) Organic matter

276. Which character is not present in the xerophytes?

- a. Thick cuticle
- b. Well developed mechanical tissue
- c. Well developed conducting tissues
- d. Spongy parenchyma

Ans. (d) Spongy parenchyma

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

- a. Spines
- b. Sclerenchymatous tissue that provides extra mechanical support
- c. Tearing of corners while the middle remains saved
- d. Bending towards opposite side

Ans. (b) Sclerenchymatous tissue that provides extra mechanical support

278. Amongst hydrophytes finely dissected leaves occurs in:

- a. Submerged plants
- b. Emerged plants
- c. Free floating plants
- d. None of the above

Ans. (a) Submerged plants

279. The term biocoenosis was given by:

- a. Tansley
- b. Odum
- c. Carl mobius
- d. Warming

Ans. (a) Tansley

280. Who proposed the term ecosystem?

- a. Gardner
- b. Odum
- c. Tansley
- d. Warming

Ans. (c) Tansley

281. A network of food chain in an ecosystem is:

- a. Food work
- b. Food universe
- c. Food web
- d. Trophic level

Ans. (c) Food web

282. Ecological pyramids were developed by:

- a. Charles Elton
- b. James Elton
- c. Baud Elton
- d. E.P. Odum

Ans. (a) Charles Elton

283. Charles Elton was a ecologist.

- a. American
- b. British
- c. Canadian
- d. Dutch

Ans. (d) Dutch

284. Ecological pyramid is also called:

- a. Eltonian pyramids
- b. Charles pyramids
- c. Hierarchal pyramids
- d. All of the above

Ans. (a) Eltonian pyramid

285. is the basic structured unit of plant.

- a. Protein
- b. Lipids
- c. Cellulose
- d. Hemicellulose

Ans. (c) Cellulose

286. How much percent of energy is used for photo-synthesis?

- a. 2
- b. 1
- c. 5
- d. 10

Ans. (b) 1

287. The importance of ecosystem lies in:

- a. Cycling of materials
- b. Flow of energy
- c. Both a and b
- d. None of the above

Ans. (c) Both a and b

288. An ecosystem does not normally alter because it is in a state of:

- a. Homeostasis
- b. Imbalance
- c. Deficient light
- d. Deficient components

Ans. (a) Homeostasis

289. Homeostasis is:

- a. Tendency of biological systems to change with change in environment
- b. Tendency of biological systems to resist change
- c. Disturbance of self regulatory system and natural controls
- d. Biotic materials used in homeopathic medicines

Ans. (b) Tendency of biological systems to resist change

290. The two components of an ecosystem are:

- a. Plants and animals
- b. Weeds, trees, animals and man
- c. Energy flow and mineral cycling
- d. Biotic and abiotic

Ans. (d) Biotic and abiotic

291. An ecosystem is:

- a. Different communities of plants, animals and microbes together with their physicochemical environment
- b. Different communities of plants and microbes alongwith their physicochemical environments

- c. A localized assemblage of several plants and animals
- d. An assemblage of plants, animals and their surroundings

Ans. (a) Different communities of plants, animals and microbes together with their physicochemical environment

292. The driving force of an ecosystem is:

- a. Biomass
- b. Producers
- c. Carbohydrates in producers
- d. Solar energy

Ans. (d) Solar energy

293. Ecosystem is:

- a. Both open and closed depending upon community
- b. Always open
- c. Always closed
- d. Both open and closed depending upon biomass

Ans. (a) Both open and closed depending upon community

294. The percentage of energy transferred from one trophic level to another is:

- a. Ecological pyramid
- b. Trophic level
- c. Ecological efficiency
- d. Food chain

Ans. (c) Ecological efficiency

295. In a terrestrial ecosystem the maximum biomes occur in:

- a. Producers
- b. Consumers
- c. Herbivores
- d. Omnivores

Ans. (a) Producers

296. In an aquatic habitat the pyramid of biomass is:

- a. Upright
- b. Inverted
- c. Long
- d. Different in shape

Ans. (b) Inverted

297. The energy content is expressed in:

- a. Kcal/m²/yr
- b. Kj/cm²/yr
- c. Kk/m²/yr
- d. Both a and b

Ans. (d) Both a and b

298. The details of entrapment of energy by different consumers in an ecosystem was elucidated by:

- a. John Elton
- b. Odum
- c. Fleming
- d. Griffith

Ans. (b) Odum

299. The major ecosystem with their groups of climax plants and associated animal are called:

- a. Biosphere
- b. Biome
- c. Biomass
- d. Ecology

Ans. (b) Biome

300. Energy entering on organism from outside is 100% efficient in case of:

- a. Unicellular green algae
- b. All green plants
- c. Some photosynthetic bacteria
- d. No photoautotroph

Ans. (d) No photoautotroph

301. The major components of an ecosystem are:

- a. Food chain and decomposers
- b. Mineral cycling and energy flow
- c. Food chain and energy flow
- d. Energy flow and decomposers

Ans. (b) Mineral cycling and energy flow

302. Biotic components on an ecosystem include:

- a. Producers, consumers and decomposers
- b. Producers and consumers
- c. Producers only
- d. Consumers only

Ans. (a) Producers, consumers and decomposers

303. A food chain can have trophic levels:

- a. Three or four
- b. Three
- c. Two
- d. One

Ans. (a) Three or four

304. In food chain, the initial organisms are:

- a. Top consumers
- b. Secondary consumers
- c. Primary consumers
- d. Photosynthates

Ans. (d) Photosynthates

305. In a food chain, herbivores/deer are:

- a. Primary producers
- b. Primary consumers
- c. Secondary consumers
- d. Decomposers

Ans. (b) Primary consumers

306. Some adjustments in the ecological response to a changed environment:

- a. Adjustment
- b. Acclimation
- c. Amplitude
- d. Tolerant

Ans. (b) Acclimation

307. Ecological tolerance of a species is known as:

- a. Adjustment
- b. Acclimation
- c. Amplitude
- d. Tolerant

Ans. (c) Amplitude

308. The term niche was used by:

- a. John Elton
- b. Odum
- c. Griffith
- d. Grinnel

Ans. (d) Grinnel

309. At field capacity the soil doesn't contain which type of water:

- a. Hygroscopic water
- b. Water vapour
- c. Capillary water
- d. Gravitational water

Ans. (d) Gravitational water

310. As per central forestry commission (CFC) how many forest types are found in our country:

- a. 10
- b. 20
- c. 16
- d. 26

Ans. (c) 16

311. Helophytes are:

- a. Aquatic plants
- b. Submerge plants
- c. Terrestrial plants
- d. Aerial plants

Ans. (c) Terrestrial plants

312. Psammophytes grow on:

- a. Sand and gravel
- b. Slit and sand
- c. Rocks and stones
- d. Clay and slit

Ans. (a) Sand and gravel

313. Stomata are absent in which group of plants:

- a. Aquatic helophytes
- b. Submerged helophytes
- c. Emergent helophytes
- d. Lithophytes

Ans. (b) Submerged helophytes

314. Example of a hydrocole is:

- a. Buffalo
- b. Cow
- c. Fish
- d. Rhino

Ans. (c) Fish

315. The response of plants to relative length of day and night is called:

- a. Thigmotropism
- b. Geotropism
- c. Phototropism
- d. Photoperiodis

Ans. (d) Photoperiodis

316. Dense forests have:

- a. Crown density 65% or more
- b. Crown density 75% or more
- c. Crown density 55% or more
- d. Crown density 40% or more

Ans. (d) Crown density 40% or more

317. Largest cover (20.7%) in India:

- a. Tamil Nadu
- b. Jharkhand
- c. Andhra Pradesh
- d. Madhya Pradesh

Ans. (d) Madhya Pradesh

318. Mycorrhizal association is found best:

- a. Moss and lichen
- b. Fungus and lichen
- c. Fungus and moss
- d. Fungus and angiosperms

Ans. (d) Fungus and angiosperms

319. Riparian area is an area:

- a. Near the glacier
- b. Good for growing fruit crops
- c. Near the banks of streams and rivers
- d. Soil contains mostly sand and gravel

Ans. (c) Near the banks of streams and rivers

320. In India, forest coverage in percentage and how much area?

- a. 21% and 67.83 million ha
- b. 25% and 67.83 million ha
- c. 24% and 69.85 million ha
- d. 35% and 69.85 million ha

Ans. (a) 21% and 67.83 million ha

321. The word tundra is derived from:

- a. English
- b. Spanish
- c. Finnish
- d. Greek

Ans. (c) Finnish

322. Tundra means:

- a. Forest
- b. Desert
- c. Barren land
- d. Grass land

Ans. (c) Barren land

323. Permafrost exists in:

- a. Alpine tundra
- b. Arctic tundra
- c. Antarctic tundra
- d. Both a and b

Ans. (b) Arctic tundra

324. Green plants constitute:

- a. First trophic level b. Second trophic level
- c. Third trophic level d. Complete food chain

Ans. (a) First trophic level

325. Mycorrhiza helps in the uptake of which nutrient:

- a. P and Zn b. P and Mg
- c. P and K d. P and S

Ans. (a) P and Zn

326. In our country dense forests cover % of the total geographical area.

- a. 15.60 b. 12.40
- c. 11.71 d. 19.50

Ans. (c) 11.71

327. Tropical forests cover % of earth's land mass.

- a. 3 b. 5
- c. 7 d. 10

Ans. (c) 7

328. Herbivores are:

- a. Primary producers b. Secondary producers
- c. Decomposers d. Consumers

Ans. (b) Secondary producers

329. Mangroves are found in:

- a. Coastal areas b. Forests in arid areas
- c. Running water d. None of the above

Ans. (a) Coastal areas

330. Higher level of species richness observed in:

- a. Tropical rain forests
- b. Deciduous forest
- c. Tropical grassland
- d. Coniferous forest

Ans. (a) Tropical rain forests

331. Synecology means study of the ecology of:

- a. One species b. Pathogenic organisms
- c. A community d. A population

Ans. (c) A community

332. Timberline refers to:

- a. Edge of a community
- b. Edge of coast land
- c. Altitudinal limit of tree growth
- d. Edge of forest

Ans. (c) Altitudinal limit of tree growth

333. Direct nutrient cycling that is from plant back to plant is seen in:

- a. Deciduous forests
- b. Tropical wet evergreen forests
- c. Mangrove forests
- d. Deciduous forest

Ans. (b) Tropical wet evergreen forests

334. Which habitat is the least productive in terms of biomass production rate?

- a. Coral reef
- b. Estuary
- c. Shallow sea water near land
- d. Open ocean

Ans. (d) Open ocean

335. First link in food chain is green plant because:

- a. It alone can synthesise food
- b. It is fixed at one place
- c. It can pick up everything
- d. It can eat everything

Ans. (a) It alone can synthesise food

336. What is true of ecosystem?

- a. Primary consumers are least dependent upon producers
- b. Primary consumers outnumber producers
- c. Producers are more than primary consumers
- d. Secondary consumers are the largest and most powerful

Ans. (c) Producers are more than primary consumers

337. Which is correct food chain in grassland?

- a. Grass → snake → insect → deer
- b. Grass → wolf → deer → buffalo
- c. Bacteria → grass → rabbit → wolf
- d. Grass → insect → frog → snake

Ans. (d) Grass → insect → frog → snake

338. Food chain in which microorganisms breakdown the food formed by primary producers is:

- a. Parasitic food chain
- b. Detritus food chain
- c. Consumers food chain
- d. Predator food chain

Ans. (b) Detritus food chain

339. Food level of an ecosystem are known as:

- a. Producer levels b. Herbivore levels
- c. Consumer levels d. Trophic levels

Ans. (d) Trophic levels

340. Tropical dry deciduous forests occur in India in:

- a. Madhya Pradesh
- b. Andaman
- c. Eastern Himalayas
- d. Kerala

Ans. (a) Madhya Pradesh

341. Plants of salty sea shore wet lands are:

- a. Heliophytes
- b. Hydrophytes
- c. Halophytes
- d. Saprophytes

Ans. (c) Halophytes

342. Biome with broad leaved resinous fire resistant drought enduring plants is:

- a. Chaparral
- b. Deciduous forest
- c. Steppes
- d. Savannah

Ans. (a) Chaparral

343. Keystone species of an ecosystem are the ones which are:

- a. Most frequent
- b. Attain large biomass
- c. Present in maximum number
- d. Contribute to ecosystem properties

Ans. (d) Contribute to ecosystem properties

344. During adverse season, therophytes survive through:

- a. Rhizomes
- b. Bulbs
- c. Seeds
- d. Bulbs

Ans. (c) Seeds

345. Amount of energy transferred from one trophic level to next is:

- a. 1.5%
- b. 15%
- c. 10%
- d. 18%

Ans. (c) 10%

346. Climatic and edaphic factors controlling distribution of a community constitute:

- a. Ecotone
- b. Ecophene
- c. Epharmony
- d. Ecological niche

Ans. (d) Ecological niche

347. In an ecosystem, bacteria are:

- a. Macroconsumers
- b. Microconsumers
- c. Primary consumers
- d. Secondary consumers

Ans. (b) Microconsumers

348. Species diversity is lowest in ecosystem:

- a. Desert
- b. Tundra
- c. Grassland
- d. Deciduous forest

Ans. (b) Tundra

349. Concept of life forms was given by:

- a. Weaver
- b. Clements
- c. Raunchier
- d. Turesson

Ans. (c) Raunchier

350. Who proposed the concept of ecological pyramids?

- a. Odum
- b. Elements
- c. Tansley
- d. Elton

Ans. (d) Elton

351. Transfer of energy in different trophic levels of an ecosystem is:

- a. Biosystem
- b. Bioenergetics
- c. Geobiocoenosis
- d. Holocoenosis

Ans. (b) Bioenergetics

352. A food chain comprises:

- a. Producers, herbivores and carnivores
- b. Producers, consumers and decomposers
- c. Producers and primary consumers
- d. Producers, carnivores and decomposers

Ans. (a) Producers, herbivores and carnivores

353. Biological equilibrium is equilibrium amongst:

- a. Producers and decomposers
- b. Producers and consumers
- c. Producers, consumers and decomposers
- d. Consumers and decomposers

Ans. (c) Producers, consumers and decomposers

354. An ecosystem is an interacting system of:

- a. Communities
- b. Communities and their physical environment
- c. Populations
- d. Individuals

Ans. (b) Communities and their physical environment

355. Upper part of sea/aquatic ecosystem contains:

- a. Plankton
- b. Nekton
- c. Plankton and nekton
- d. Benthos

Ans. (a) Plankton

356. Energy transfer from organism to organism in a natural community develops:

- a. Biological control
- b. Food chain
- c. Natural barriers
- d. Food web

Ans. (b) Food chain

357. A group of interconnected food chains is:

- a. Complex of food chains
- b. Food cycle
- c. Food web
- d. Pyramid of energy

Ans. (c) Food web

358. Which one is the primary consumer?

- a. Saprophyte
- b. Herbivores
- c. Carnivores
- d. Scavenger

Ans. (b) Herbivores

359. Decomposer of an ecosystem include:

- a. Microscopic animals
- b. Bacteria and fungi
- c. Both a and b
- d. None of the above

Ans. (b) Bacteria and fungi

360. Phytoplankton are destroyed. It will:

- a. Cause spurt in population of primary consumers
- b. Rapid growth of algae
- c. Affect the food chain
- d. Have no effect

Ans. (c) Affect the food chain

361. In an aqueous environment, microscopic animals and plants are collectively known as:

- a. Herbivores
- b. Commensals
- c. Plankton
- d. Flora and fauna

Ans. (c) Plankton

362. Energy stored at the consumer level is:

- a. Gross primary productivity
- b. Net primary productivity
- c. Net productivity
- d. Secondary productivity

Ans. (d) Secondary productivity

363. Nepenthes belongs to the category of:

- a. Primary consumer
- b. Producers
- c. Secondary consumers
- d. Both b and c

Ans. (d) Both b and c

364. Siddhartha found an vegetarian field mouse being swallowed by snake which in turn formed the meal for a hawk. What is the position of snake in the food chain?

- a. Producer
- b. Primary consumer
- c. Secondary consumer
- d. Tertiary consumer

Ans. (c) Secondary consumer

365. Which ones occurs at the same trophic level?

- a. Crow and cow
- b. Snake and earthworm
- c. Tiger and wild boar
- d. Deer and Bee

Ans. (d) Deer and Bee

366. Where there is not difference:

- a. T1 and herbivores
- b. Primary consumers and herbivores
- c. Primary carnivores and T2
- d. Secondary consumers and herbivores

Ans. (b) Primary consumers and herbivores

367. 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

Ans. (a) No sunlight but contains consumers and decomposers

368. Flow of energy declines as it passes from lower to higher trophic level. This is explained by:

- a. First law of thermodynamics
- b. Second law of thermodynamics
- c. Newton's second law
- d. Newton's third law

Ans. (b) Second law of thermodynamics

369. If all the plants are to die, all the animals will also die due to deficiency of:

- a. Food
- b. Carbon dioxide
- c. Oxygen
- d. Timber

Ans. (c) Oxygen

370. Pyramid of energy is always:

- a. Upright
- b. Downward
- c. Spindle shaped
- d. Both upright and inverted

Ans. (a) Upright

371. In an ecosystem, which one shows one way passage:

- a. Free energy
- b. Carbon
- c. Nitrogen
- d. Potassium

Ans. (a) Free energy

372. Maximum human population can be supported if all the humans are:

- a. Carnivores
- b. Pure vegetarian
- c. Vegetarian along with use of milk
- d. Vegetarian along with use of milk and eggs

Ans. (b) Pure vegetarian

373. The pyramid which cannot be inverted in a stable ecosystem is that of:

- a. Biomass
- b. Number
- c. Energy
- d. All of the above

Ans. (c) Energy

374. In a tree ecosystem, the pyramid of number is:

- a. Inverted
- b. Upright
- c. Spindle like
- d. Variable

Ans. (a) Inverted

375. Shallow lakes with abundant organic matter are:

- a. Oligotrophic
- b. Saprotrophic
- c. Eutrophic
- d. None of these

Ans. (c) Eutrophic

376. The energy fixed by an ecosystem is:

- a. Primary production
- b. Gross production
- c. Net production
- d. Secondary production

Ans. (b) Gross production

377. Savannahs are:

- a. Grassland with scattered trees
- b. Desert scrubs
- c. Tropical rain forest
- d. Taiga

Ans. (c) Tropical rain forest

378. Pyramid of numbers deals with number of:

- a. Individuals in a community
- b. Species in an area
- c. Individuals in a trophic level
- d. Subspecies in a community

Ans. (c) Individuals in a trophic level

379. Ecosystem creates:

- a. Food chain and food web
- b. Food web
- c. Habitats
- d. None of these

Ans. (a) Food chain and food web

380. In lake ecosystem, the pyramid of biomass is generally:

- a. Inverted
- b. Upright
- c. Horizontal
- d. Spindle shaped

Ans. (a) Inverted

381. Carnivores represent:

- a. Primary consumers
- b. Secondary and tertiary consumers
- c. Secondary consumers
- d. Reducers

Ans. (b) Secondary and tertiary consumers

382. In a food chain, man is:

- a. Primary and secondary consumer
- b. Primary consumer
- c. Secondary consumer
- d. Producer

Ans. (a) Primary and secondary consumer

383. Pyramid of number in a pond ecosystem is:

- a. Irregular
- b. Inverted
- c. Upright
- d. Spindle shaped

Ans. (c) Upright

384. Pyramid of number in a forest ecosystem is:

- a. Upright
- b. Inverted
- c. Irregular
- d. Linear

Ans. (a) Upright

385. Species diversity increases as one proceeds from:

- a. High altitude to low altitude and high latitude to low latitude
- b. Low altitude to high altitude and low latitude to high latitude
- c. Low altitude to high altitude and low latitude to high latitude
- d. High altitude to low altitude and low latitude to high latitude

Ans. (a) High altitude to low altitude and high latitude to low latitude

386. In grass deer tiger food chain, grass biomass is one tone. The tiger biomass shall be:

- 100 kg
- 50 kg
- 30 kg
- 10 kg

Ans. (d) 10 kg

387. In a food chain, the largest population is that of:

- Producers
- Decomposers
- Secondary consumers
- Primary consumers

Ans. (a) Producers

388. Xeric environment is characterized by:

- Precipitation
- Low atmospheric humidity
- Extremes of temperature
- High rate of vapourisation

Ans. (b) Low atmospheric humidity

389. Second most important trophic level in a lake is:

- Zooplankton
- Phytoplankton
- Benthos
- Neuston

Ans. (a) Zooplankton

390. Which receives the maximum energy?

- Producers
- Primary consumers
- Secondary consumers
- None of the above

Ans. (a) Producers

391. Read the following statements carefully and mark the correct answer using the codes given below:

- The energy requirement of an ecosystem is inversely proportion to its complexity
- Energy flow in an ecosystem is bidirectional
- Food webs help to maintain the stability of the ecosystem
- In complex ecosystem species diversity is high

- 3 and 4
- 1, 3 and 4
- 1, 2 and 4
- 1, 2 and 3

Ans. (b) 1, 3 and 4

392. In an ecosystem, which of the given components would form a part such that each component influences the properties of the other?

- Abiotic environment
- Biotic communities
- Produces communities

Select the correct answer using the codes given below:

Codes:

- | | |
|------------|---------------|
| a. 2 and 3 | b. 1 and 3 |
| c. 1 and 2 | d. 1, 2 and 3 |

Ans. (b) 1 and 3

393. Consider the following regions of India:

- Eastern Himalaya
- Western Ghats
- Eastern Ghats
- Western Himalaya

Which of these are designated as biodiversity Hot spots in India?

- | | |
|------------|------------|
| a. 3 and 4 | b. 2 and 4 |
| c. 1 and 3 | d. 1 and 2 |

Ans. (a) 3 and 4

394. Consider the following statements: The concept of growing multipurpose trees in Social Forestry and Agro-forestry is for:

- | | |
|----------|-----------|
| 1. Food | 2. Fuel |
| 3. Fruit | 4. Fodder |

Which of the above statements are correct?

- 1, 2 and 3
- 1, 3 and 4
- 2, 3 and 4
- 1, 2 and 4

Ans. (d) 1, 2 and 4

395. Phanerophytes are further classified into following four sub-life forms depending upon the height of mature plant:

- Nanophanerophytes
- Microphanerophytes
- Megaphanerophytes
- Mesophanerophytes

The correct sequence of these on descending order is:

- Codes:**
- 3, 2, 1, 4
 - 3, 4, 2, 1
 - 4, 2, 3, 1
 - (f) 1, 2, 3, 4

Ans. (b) 3, 4, 2, 1

396. Which of the species give below indicate the higher salinity level of the soil?

1. Prosopis juliflora
2. Azadirachta indica
3. Suaeda fruticosa
4. Chenopodium album

Select the correct answer using the codes given below:

- | | |
|------------|------------|
| a. 2 and 4 | b. 3 and 4 |
| c. 2 and 3 | d. 1 and 2 |

Ans. (b) 3 and 4

397. Consider the following trees cultivated extensively in India:

1. Eucalyptus spp.
2. Acacia auriculiformis
3. Leucaena leucocephala

Which of these trees have been introduced from Australia?

- | | |
|------------|---------------|
| a. 1 and 2 | b. 2 and 3 |
| c. 1 and 3 | d. 1, 2 and 3 |

Ans. (d) 1, 2 and 3

398. The four important steps of ecological succession consists of:

1. Invasion
2. Ecesis
3. Competition
4. Migration

The correct sequence in which these steps appear during primary succession is:

- | | |
|---------------|---------------|
| a. 1, 2, 4, 3 | b. 2, 1, 4, 3 |
| c. 1, 2, 3, 4 | d. 2, 1, 3, 4 |

Ans. (a) 1, 2, 4, 3

399. Consider the following statements regarding the introduction of plant materials and seeds:

1. Plant material and seeds are always introduced from developed countries into developing/less developed countries.
2. The import of living plant materials must be accompanied by a certificate of health to prevent introduction of new diseases and insect pests.
3. The superior varieties may be used in hybridization programmes.

Of these statements:

- | | |
|---------------------------|------------------------|
| a. 1, 2 and 3 are correct | b. 1 and 2 are correct |
| c. 2 and 3 are correct | d. 1 and 3 are correct |

Ans. (c) 2 and 3 are correct

400. Which of the following pairs of plant categories and habitat types are correctly matched?

1. Sciophytes Shady
2. Helophytes Sunny
3. Psammophytes Sandy

Codes:

- a. 2 and 3
- b. 1 and 3
- c. 1 and 3
- d. 1, 2 and 3

Ans. (d) 1, 2 and 3

401. Consider the following steps in plant introduction:

1. Site selection and study
2. Quarantine/plant protection, inspection
3. Species selection and import of seeds
4. Seed treatment, nursery development and planting

The correct sequence of these steps is:

- a. 2, 1, 4, 3
- b. 1, 3, 2, 4
- c. 3, 4, 2, 1
- d. 4, 2, 1, 3

Ans. (b) 1, 3, 2, 4

402. Consider the following statements regarding alleopathy:

1. It is the phenomenon of seed dormancy due to the presence of germination inhibitions on the source of seed coat
2. It is the phenomenon of the production of organic substances by one plant having harmful effect on the other
3. It helps proper spacing of the plants to reduce competition
4. It helps the xerophytes to grow in small groups to reduce the transpiration

Of these statements:

- a. 1, 2 and 3 are correct
- b. 1 and 3 are correct
- c. 2 and 3 are correct
- d. 1 and 4 are correct

Ans. (b) 1 and 3 are correct

403. Monotropa and Neotia two saprophytic genera indicate the presence of:

- a. Large microlora in the soil
- b. Humus
- c. High pH value of soil
- d. All of these

Ans. (b) Humus

404. Presence of any five of the following features characterizes an ecological group. Which one is it?

1. High concentration of cell sap
2. Cell walls much lignified and cutinized
3. Water-storage tissue
4. Underground perennating organs
5. Well-developed root system
6. Reduction of leaf-size

- a. Epiphyte b. Halophyte
c. Xerophyte d. Hydrophyte

Ans. (c) Xerophyte

405. If in a geographic region rainfalls is low, temperatures are high, soil is loose and sandy, with a low water-table, it is not reasonable to expect to find there:

- a. A scrub jungle
- b. An evergreen tropical forest
- c. A xerophytic vegetation
- d. A grassland

Ans. (a) A scrub jungle

406. Which of the following statements is wrong?

- a. Forest ecosystem controls pests and insects
- b. Forest ecosystem prevents drought and floods
- c. Forest ecosystem provides habitat for wildlife
- d. Forest ecosystem controls gaseous balance in the atmosphere

Ans. (a) Forest ecosystem controls pests and insects

407. The ranking of the following ecosystem terms of their net productivity in decreasing order is:

- a. Tropical rainforest, swamp or marsh, temperate deciduous forest, grassland, open ocean, desert
- b. Tropical rainforest, grassland, swamp or marsh, temperate deciduous forest, grassland, open ocean, desert
- c. Open ocean, tropical rainforest, grassland, swamp or marsh, temperate deciduous forest, desert
- d. Tropical rainforest, open ocean swamp or marsh, temperate deciduous forest, grassland, desert

Ans. (a) Tropical rainforest, swamp or marsh, temperate deciduous forest, grassland, open ocean, desert

408. The net primary productivity of an ecosystem in the total amount of producer tissue formed per area per unit time, or the gross productivity minus the chemical energy used in:

- a. Reproduction
- b. Cellular respiration
- c. Growth and movement
- d. Photosynthesis

Ans. (b) Cellular respiration

409. A certain place in India has (i) average annual temperature of 27°C (ii) annual rainfall between 200 and 300 cm. (iii) number of rain days ranging from 115 to 150. Which one of the following forest types would be found in a such place?

- a. Most alpine scrub
- b. Himalayan temperate forests
- c. Tropical dry deciduous forests
- d. Tropical wet evergreen forests

Ans. (d) Tropical wet evergreen forests

410. Which one of the following terms denotes the southern temperate vegetation of our country and which is represented by extensive growth of grasses and evergreen forests?

- a. Tundra vegetation
- b. Sholas
- c. Moist tropical forest
- d. Alpine vegetation

Ans. (b) Sholas

411. Which one of the following statements is true for the evergreen trees?

- a. They do not show leaf senescence
- b. They shed their leaves all the year round
- c. They do not shed their leaves
- d. They shed their leaves during particular season only

Ans. (c) They do not shed their leaves

412. Which one of the following taxa is commonly available in the moist alpine scrub vegetation of India?

- a. Dipterocarpus b. Terminalia
- c. Rhododendron d. Shorea

Ans. (c) Rhododendron

413. Sub-tropical pine forest found in:

- a. Western part of Madhya Pradesh
- b. Coastal areas in Tamil Nadu
- c. Hilly region of Meghalaya
- d. Northern part of Assam

Ans. (d) Northern part of Assam

414. Which one of the following groups is found in tropical deciduous forests?

- a. Capparis—Acitcia
- b. Quercus—Rhododendron
- c. Juniperus—Abies
- d. Shoera—Terminalia

Ans. (d) Shoera—Terminalia

415. Among the forest types, which has the highest net primary productivity?

- a. Temperate rain forest
- b. Subtropical forest
- c. Tropical dry deciduous forest
- d. Tropical rain forest

Ans. (d) Tropical rain forest

416. The term "Phytoremediation" refers to the:

- a. Use of plants in the retention of soil water
- b. Use of plants for restoration of degraded forests
- c. Use of plants as remedies to cure diseases
- d. Use of plants for removing pollutants from the environment

Ans. (d) Use of plants for removing pollutants from the environment

417. Which one of the following plant species is of a sand binder in the semi arid region?

- a. Saccharin spontaneus
- b. Saccharin munja
- c. Calotropis procera
- d. Salvadora indica

Ans. (c) Calotropis procera

418. Blue boy (methemoglobinemia) disease is caused by the contamination of drinking water with:

- a. Iodide
- b. Sulphate
- c. Nitrate
- d. Chloride

Ans. (c) Nitrate

419. Which one of the following is an example of a plant adapted to highly saline coastal conditions?

- a. Gnetum gnemon
- b. Taxus baccata
- c. Anacardium occidentale
- d. Connate acida

Ans. (d) Connate acida

420. After the destruction of forests, what type of vegetation is expected to develop?

- a. Evergreen vegetation
- b. Grassland vegetation
- c. Scrub vegetation
- d. Xerophytic vegetation

Ans. (c) Scrub vegetation

421. Stromatolites in the rocks are good indicators of:

- a. Lichen
- b. Prion
- c. Chlorophyceae
- d. Cyanobacteria

Ans. (d) Cyanobacteria

422. The rapid extinction of species in the tropical countries is primarily due to:

- a. Population explosion
- b. Intensive agriculture
- c. Increased pollutions
- d. Climatic changes

Ans. (a) Population explosion

423. Which one of the following is the correct sequence of energy flow in an ecosystem?

- a. Decomposer → Carnivore → Herbivore
- b. Producer → Herbivore → Carnivore
- c. Carnivore → Herbivore → Decomposer
- d. Herbivore → Carnivore → Producer

Ans. (b) Producer → Herbivore → Carnivore

424. Which one of the following species is the nutritious fodder plant introduced by forest department?

- a. Derris elliptica
- b. Stylosanthes hamata
- c. Dodonaea viscosa
- d. Cleome spinosa

Ans. (b) Stylosanthes hamata

425. Which one of the following pairs is not correctly matched?

- a. Chemiphytes—Surviving buds lie close or above the soil surface
- b. Hemicryptophytes—Surviving buds lie on the soil surface
- c. Cryptophytes—Surviving buds lie under soil surface
- d. Therophytes—Surviving buds lie well above the soil surface

Ans. (d) Therophytes—Surviving buds lie well above the soil surface

426. The terms r selection and K selection are used in:

- a. Pollution
- b. Silviculture
- c. Afforestation
- d. Succession

Ans. (c) Afforestation

427. Which one of the following human activities would cause least damage to the ecosystem?

- a. Cultivation of genetically engineered plants
- b. Urban expansion
- c. Shifting agriculture
- d. Organic farming

Ans. (d) Organic farming

428. Which one of the following trophic levels in the food chain has the maximum energy?

- a. Decomposers b. Producers
- c. Carnivores d. Herbivores

Ans. (b) Producers

429. In the hills, the soil erosion takes place due to rapid flow of rain water. It can be most effectively controlled by:

- a. Building dykes
- b. Jhum cultivation
- c. Terrace cultivation
- d. Channelizing the water

Ans. (c) Terrace cultivation

430. Ultraviolet radiations are injurious to plants because they:

- a. Cause genetic aberrations
- b. Cause dehydration
- c. Increase respiration
- d. Break phosphate bonds

Ans. (a) Cause genetic aberrations

431. Chemiphytes are:

- a. Seasonal plants that propagate through seeds and complete their life cycle within a short period
- b. Trees, shrubs, climbers, etc. where the buds are composed on upright shoots, at least 25 cm above surface
- c. Perennial plants with buds in or just below the soil surface
- d. Surface plants with prostrate habit with the buds formed at the surface of the ground or up to 25 cm above the surface

Ans. (d) Surface plants with prostrate habit with the buds formed at the surface of the ground or up to 25 cm above the surface

432. Climax communities show:

- a. Disbalanced P/R ratio
- b. A balanced P/R ratio
- c. A decreased P/R ratio
- d. An increase P/R Ratio

Ans. (b) A balanced P/R ratio

433. If producer is a large tree that supports a number of herbivores animals further attacked by still more ectoparasites, the pyramid of number shall be:

- a. Spindle shaped b. Irregular
- c. Upright d. Inverted

Ans. (d) Inverted

434. Phytoedaphon embraces:

- a. Soil microorganisms
- b. Trees, shrubs, etc.
- c. Earth plants in which the buds are located below the soil surface
- d. Plants that live inside the body of other organism

Ans. (c) Earth plants in which the buds are located below the soil surface

435. A plant that can be used with good profit at less cost for purposes of wasteland reclamation is:

- a. *Leucaena leucocephala*
- b. *Prosopis juliflora*
- c. *Eucalyptus tereticornis*
- d. *Casuarina equisetifolia*

Ans. (b) *Prosopis juliflora*

436. Degradation of forests is caused in main, by:

- a. Over grazing
- b. Soil erosion
- c. Atmospheric pollution
- d. All of these

Ans. (a) Over grazing

437. Of all the ecological pyramids the inverted pyramid is made up of:

- a. The pond ecosystem
- b. The one in which forest trees are primary producers
- c. The one in which the parasites are the tertiary consumers
- d. The one in which the grassland is the primary producer

Ans. (c) The one in which the parasites are the tertiary consumers

438. If we completely remove the decomposers from an ecosystem function will be adversely affected because:

- a. Mineral movement will be blocked
- b. Herbivore will not receive solar energy
- c. Rate of decomposition of other components will be very high
- d. Energy flow will be blocked

Ans. (a) Mineral movement will be blocked

439. Plants developing under the influence of high winds are generally stunted, because:

- a. Low water availability b. Z braded buds
- c. High transpiration d. All of the above

Ans. (d) All of the above

440. The maximum stratification of plants is found in:

- a. Alpine forests
- b. Tropical shrubby forests
- c. Tropical rain forests
- d. Temperate forests

Ans. (c) Tropical rain forests

441. The rate at which light energy is converted to chemical energy of organic molecules in ecosystems:

- a. Gross secondary productivity
- b. Net secondary productivity
- c. Gross primary productivity
- d. Net primary productivity

Ans. (b) Net secondary productivity

442. The percentage of solar energy that falls on the leaves of a plant converted to chemical energy by photosynthesis is:

- a. 100%
- b. 1%
- c. 50%
- d. 10%

Ans. (b) 1%

443. The increasing order which of the following groups of plants survive the radiation is:

- a. Oak, carex pennsylvania, pine
- b. Oak, pine, carex pennsylvania
- c. Carex pennsylvania, oak, pine
- d. Pine, oak, carex pennsylvania

Ans. (b) Oak, pine, carex pennsylvania

444. Eutrophication of a pond has three stages. The order of their occurrence is:

- a. Eutrophic, mesotrophic, oligotrophic
- b. Mesotrophic, eutrophic, oligotrophic
- c. Oligotrophic, mesotrophic, eutrophic
- d. Oligotrophic, eutrophic, mesotrophic

Ans. (c) Oligotrophic, mesotrophic, eutrophic

445. Which one of the following statement is true in respect of India regarding the Dunkel proposal on Plant Breeder's Rights and Patent Law?

- a. Dunkel proposals provide for farmer right but not plant breeder's rights
- b. Dunkel proposals will not suit India because they will not allow plant breeder's
- c. The Indian Patent Law provides for process patent, but not for product patent, Dunkel proposals would require introduction of product patent
- d. The plant breeder's right are available for a new variety produced but these will be adversely affected by the Dunkel proposals

Ans. (c) The Indian Patent Law provides for process patent, but not for product patent, Dunkel proposals would require introduction of product patent

446. Which one of the following statements correctly defines the term biomass in the forestry?

- a. The dry weight of the standing crop at a moment of time
- b. The dry weight of crop when the spread of its canopy is maximum height
- c. The dry weight of the crop when it has attained the maximum height
- d. The dry weight of the crop when it has attained the maximum growth

Ans. (a) The dry weight of the standing crop at a moment of time

447. In the grassland, trees do not replace the grasses as part of an ecological succession because of:

- a. Cool temperature and good soil
- b. Water limits and fire
- c. Limited sunlight and paucity of nutrients
- d. Insects and fungi

Ans. (b) Water limits and fire

448. Climax communities:

- a. Have a large number but fewer species of plants than pioneer communities
- b. Have great entropy than pioneer communities
- c. Are less stable than pioneer communities
- d. Are more diverse than pioneer communities

Ans. (a) Have a large number but fewer species of plants than pioneer communities

449. A virgin island has recently been formed naturally in the Bay of Bengal near the Indian sub-continent. Which one of the following sets of plants can most appropriately be grown in this area for its consolidation?

- a. Hopea and casuarina
- b. Avicennia and Rhizophora
- c. Platanus and salix
- d. Picea and Abies

Ans. (a) Hopea and casuarina

450. A particular vegetation zone in the Himalayas, dominated by the coniferous species is called:

- a. Alpine
- b. Sub-alpine
- c. Temperate
- d. Tropical

Ans. (b) Sub-alpine

451. 'Superbug', a biotechnological feat is useful in the:

- a. Biodegradation of plastics
- b. Treatment of cancer

- c. Espionage
- d. Cleaning oil spillage

Ans. (d) Cleaning oil spillage

452. Which one of the following types of vegetation's allows quick absorption of maximum rain water?

- a. Scrub forests
- b. Deciduous forests
- c. Grasslands
- d. Wet evergreen forests

Ans. (c) Grasslands

453. *Nepenthes khasiana*, a rare and ebdangreed pitcher plant, occurs in India in:

- a. Himachal Pradesh
- b. Kerala
- c. Madhya Pradesh
- d. Meghalaya

Ans. (d) Meghalaya

454. The uniform peeling away of the soil surface by the action of flowing water is called:

- a. Sheet erosion
- b. Accelarated erosion
- c. Rill erosion
- d. Slip erosion

Ans. (a) Sheet erosion

455. The easiest way to improve the denude forests of teak in India is to:

- a. Use blue-green algae
- b. Add bacterial culture
- c. Apply fertilizers
- d. Apply mycorrhiza

Ans. (d) Apply mycorrhiza

456. Afforestation with the purpose of environmental, aesthetic and economic development is known as:

- a. Integrated forest management
- b. Social forestry
- c. Scientific forest conservation
- d. Integrated afforestation

Ans. (b) Social forestry

457. Which one of the following groups of plants is used in social forestry?

- a. Subabul, Banyan, Banana, Coconut
- b. Subabul, Eucalyptus, Casaurina, Bamboo
- c. Eucalptus, Mango, Banyan, Euphorbia
- d. Mango, Peepul, Neem, Poinsettia

Ans. (b) Subabul, Eucalyptus, Casaurina, Bamboo

458. The easiest way to improve the denuded forests of teak in India is to:

- a. Use blue-green algae
- b. Add bacterial culture
- c. Apply fertilizers
- d. Apply mycorrhiza

Ans. (d) Apply mycorrhiza

459. Unforeseen detrimental consequences of an environmental modification are described as:

- a. Critical inputs
- b. Backlashes
- c. Non-critical inputs
- d. Sub-critical inputs

Ans. (d) Sub-critical inputs

460. Low laying hilly vegetation with low rainfall and dominated by spinous, thorny bushes is called:

- a. Xeroseral vegetation
- b. Scrub Jungle
- c. Tiga- Tundra
- d. Dune vegetation

Ans. (b) Scrub Jungle

461. Successful cultivation of soybean in many states in India has been hampered by the absence of:

- a. Bradyrhizobium in the soil
- b. Anabaena in the soil
- c. Rhizobium in the soil
- d. Azotobacter in the soil

Ans. (c) Rhizobium in the soil

462. Which one of the following is effective in fixing costal sand belts?

- a. Terminalia arjuna
- b. Casuarina equisetifolia
- c. Pongamia pinnata
- d. Acacia nilotica

Ans. (b) Casuarina equisetifolia

463. In respect of many grasses, the presence of motor cells in the upper epidermis of leaves is to:

- a. Bear unicellular trichomes
- b. Check transpiration by reducing the surface area of the leaf
- c. Store large amounts of water
- d. Increase the surface area of the leaf

Ans. (b) Check transpiration by reducing the surface area of the leaf

464. Excessive arenchyma tissues in the plant are mainly adaptation for:

- a. Mesophytic condition
- b. Epiphytic condition
- c. Hydrophytic condition
- d. Xerophytic condition

Ans. (c) Hydrophytic condition

465. Study of endemism is important to a plant taxonomist because:

- a. Endemics have not been physiographically isolated
- b. Taxonomist is equally concerned with the history of floras

- c. Endemics have been subjected to major climatic revolutions
- d. Of wide distribution of endemics

Ans. (b) Taxonomist is equally concerned with the history of floras

466. Which one of the following sets consist only xerophytic plants?

- a. Acacia, Prosopis, Zizyphus, Optunia
- b. Safflower, Eucalyptus, Asparagus, Acacia
- c. Banyan, Acacia, Zizyphus, Teak
- d. Subabool, Teak, Eucalyptus, Mango

Ans. (a) Acacia, Prosopis, Zizyphus, Optunia

467. Moss-Lichen community is found in the latitude range of:

- a. 0 to 20
- b. 20 to 40
- c. 60 to 80
- d. 40 to 60

Ans. (d) 40 to 60

468. A community of organism interacting with abiotic environmental factors constitutes:

- a. A food chain
- b. An ecosystem
- c. Biogeochemical cycle
- d. A niche

Ans. (b) An ecosystem

469. As one moves up an ecological pyramid, in general:

- a. Productivity increases
- b. Energy levels decrease
- c. Photosynthesis increases
- d. The biomass increases

Ans. (b) Energy levels decrease

470. In the food and energy pyramid the sequence from base upwards is:

- a. Aquatic plants—terrestrial plants—carnivorous animals—large trees—man
- b. Plants—animals that eat plants—animals that eat other animals
- c. Primitive animals—higher animals—man who eats other animals
- d. Aquatic insects—fishes—flowering plants—trees

Ans. (b) Plants—animals that eat plants—animals that eat other animals

471. Which one of the following adaptations is found in desert plants?

- a. Presence of pneumatophores
- b. Presence of strongly cutinized epidermal cells
- c. Presence of spongy stem
- d. Absence of root hairs

Ans. (b) Presence of strongly cutinized epidermal cells

472. Which one of the following statements is correct?

- a. Up to about 15 km above the earth surface both ozone and chlorofluorocarbons are harmful to life
- b. Beyond about 20 km above the surface of the Earth, ozone is vital to life on Earth but chlorofluorocarbons are harmful
- c. Beyond about 20 km above the Earth's surface presence of ozone is vital to life on Earth ozone is vital to life on Earth and chlorofluorocarbons are beneficial
- d. Up to about 15 km above the Earth's surface ozone is beneficial to life but chlorofluorocarbons are harmful

Ans. (c) Beyond about 20 km above the Earth's surface presence of ozone is vital to life on Earth ozone is vital to life on Earth and chlorofluorocarbons are beneficial

473. Secondary plant succession can occur after:

- a. Sand dunes are created
- b. Bare rock is exposed from a retreating glacier
- c. Forests have been found
- d. Farmland is cultivated

Ans. (c) Forests have been found

474. Interlocking of food chains result in:

- a. Food web
- b. Food lock
- c. Food link
- d. Ecological pyramid

Ans. (a) Food web

475. The number of primary producers within a specified area would be maximum in:

- a. Pond ecosystem
- b. Grassland ecosystem
- c. Forest ecosystem
- d. Desert

Ans. (c) Forest ecosystem

476. Which of the following is a correct food chain?

- a. Frog – snake – eagle – grasshopper – grass
- b. Eagle – snake – grasshopper – grass – frog
- c. Grass – grasshopper – frog – snake – eagle
- d. Grasshopper – grass – snake – frog – eagle

Ans. (a) Frog – snake – eagle – grasshopper – grass

477. In a food chain, as we go from lower to higher trophic level, the energy:

- a. Decreases
- b. Remains constant
- c. Increases irregularly
- d. Becomes doubled at each step

Ans. (a) Decreases

478. Read the following statements carefully and mark the correct answer using the codes given below:

1. The energy requirement of an ecosystem is inversely proportional to its complexity
2. Energy flow in an ecosystem is bidirectional
3. Food webs help to maintain the ability of the ecosystem
4. In complex ecosystem species diversity is high

- a. 3 and 4 b. 1, 3 and 4
c. 1, 2 and 4 d. 1, 2 and 3

Ans. (c) 1, 2 and 4

479. The number of individuals of a species in a particular ecosystem at a given time remains constant due to:

- a. Man b. Parasites
c. Predators d. Available food

Ans. (a) Man

480. In ecological pyramid of numbers from base to apex, the number of carnivores:

- a. Remains static b. Increases
c. Decreases d. None of the above

Ans. (b) Increases

481. Which one of the following is a correct set of endangered species of India?

- a. Lion-tailed macaque, Blue bull, Hanuman langur, cheetal.
- b. Snow leopard, Swamp deer, Free ranging rhesus
- c. Kashmir stag, Cheetal, Blue bull, Great Indian bustard
- d. Great Indian bustard, Musk deer, Asiatic lion, Royal Bengal tiger

Ans. (c) Kashmir stag, Cheetal, Blue bull, Great Indian bustard

482. In ecology "Stenotherm" signify animals which can tolerate:

- a. Limited range of moisture
- b. Wide range of temperature
- c. Narrow range of temperature
- d. Wide range of salinity

Ans. (c) Narrow range of temperature

483. The stratified layer of the sea or the pond which does not fluctuate with the climatic conditions is termed:

- a. Lacustrine b. Thermocline
c. Hypolimnion d. Epilimnion

Ans. (b) Thermocline

484. The phenomenon in which the morphology structures are changed with the seasons of the year is termed:

- a. Photoperiodism b. Cyclomorphosis
c. Aestivation d. Hibernation

Ans. (b) Cyclomorphosis

485. A group of animals living in a particular geographical region, using up particular raw materials in that region, and producing particular by-products and end products from:

- a. A biosphere b. An ecological niche
c. Intraspecific reaction d. Interspecific reaction

Ans. (b) An ecological niche

486. Nitrates are useful for increasing the off production. Yet the excess of nitrates we use in the fields mixed with the drinking water results in:

- a. Converting nitrates into nitrites in the stomach which combines with hemoglobin reducing oxygen carrying process, leading to methemoglobinemia
- b. Upsetting enzyme production
- c. Producing more amino acids in the body
- d. Killing the intestinal bacteria

Ans. (a) Converting nitrates into nitrites in the stomach which combines with hemoglobin reducing oxygen carrying process, leading to methemoglobinemia

487. The errant polychaetes during the breeding season transform into pelagic heteronereis and large numbers float on the surface of the sea and this phenomenon is termed:

- a. Predation b. Swarming
c. Commensalism d. Migration

Ans. (b) Swarming

488. Due to the industrial wastes being dumped into water, the aquatic ecosystem is disturbed resulting in the:

- a. Annihilation of all animals
- b. Lack of oxygen due to the death of the aquatic plants
- c. Increase of noxious chemicals
- d. All of the above

Ans. (d) All of the above

489. Eurythermal organism is those are those that can:

- a. Tolerate wide range of fluctuations of temperature
- b. Exist in only high range of temperature
- c. Live in low temperature
- d. Exist in any temperature

Ans. (a) Tolerate wide range of fluctuations of temperature

490. The spraying of DDT in ponds is harmful because it:

- a. Increases the pH of water
- b. Gets accumulated along the food chain
- c. Stabilizes carbon dioxide in water
- d. Reduces the oxygen content in water

Ans. (b) Gets accumulated along the food chain

491. Long snout, reduced eyes and strong backwardly directed claws are characteristic to:

- a. Unguligrades
- b. Volant forms
- c. Fossorial forms
- d. Cursorial forms

Ans. (c) Fossorial forms

492. Readjustment of internal clock with external factors is:

- a. Possible within slight range of time
- b. Possible even with large variation for external time
- c. Not possible
- d. All of these

Ans. (a) Possible within slight range of time

493. Diurnal rhythm signifies:

- a. Lunar variations
- b. Annual variations
- c. Seasonal variations
- d. Variation according to 24 hour duration

Ans. (d) Variation according to 24 hour duration

494. Chronobiology means:

- a. Life-history of an individual
- b. The transformation animal's according to geological time-scale
- c. Periodicity occurring in living organisms
- d. List of biologists according to chronological order

Ans. (d) List of biologists according to chronological order

495. A pollutant is any substance, chemical or other factor that changes natural:

- a. Wildlife of a region
- b. Balance of our environment
- c. Flora of a place
- d. Geochemical cycle

Ans. (b) Balance of our environment

496. The niche of a population is the:

- a. Set of conditions resources it uses
- b. Geographic area it covers

- c. Place where it lives
- d. Set of interactions it has with other population

Ans. (d) Set of interactions it has with other population

497. A stable population, which maintains zero population growth, has a age structure.

- a. Ill-defined
- b. Constant
- c. Variable
- d. None of these

Ans. (b) Constant

498. A life-table is composed of:

- a. Mortally records based on age
- b. A collection of pedigrees from the society
- c. Lists of the current ages of individuals in a population
- d. Records of reproductive events in a life time

Ans. (a) Mortally records based on age

499. The age-structure of populations is its:

- a. Number of young reaching puberty each year
- b. Relative number of death at each age
- c. Number of newborns each year
- d. Relative number of individuals at each age

Ans. (d) Relative number of individuals at each age

500. In some animal populations, crowding causes some individuals to emigrate. Such emigrants usually:

- a. Die
- b. Return to their place of birth
- c. Successfully join other populations
- d. Establish new population elsewhere

Ans. (a) Die

501. Density dependent regulatory factors stabilize a population near its:

- a. Ancestral habitat
- b. Ancestral range
- c. Niche
- d. Carrying capacity

Ans. (d) Carrying capacity

502. Intraspecific competition is strongest when the:

- a. Reproductive rate is at its maximum
- b. Population is at its carrying capacity
- c. Populations overlap in their ranges
- d. Species overlap in their distribution

Ans. (b) Population is at its carrying capacity

503. Intraspecific competition is competition among:

- a. Individuals of a community
- b. Populations and their regulatory factors
- c. Individuals of a population
- d. Species

Ans. (c) Individuals of a population

504. Organisms with very high intrinsic growth rates have:

- No courtship behaviours
- No carrying capacities
- Long generation time
- Short generation time

Ans. (d) Short generation time

505. The carrying capacity of a population is determined by its:

- Death rate
- Limiting resources
- Birth rate
- Population growth rate

Ans. (b) Limiting resources

506. Logistic growth occurs when there is:

- A fixed carrying capacity
- Asexual reproduction only
- No inhibition from crowding
- None of the above

Ans. (a) A fixed carrying capacity

507. Exponential growth occurs when there is:

- No inhibition from crowding
- A fixed carrying capacity
- Sexual reproduction only
- Asexual reproduction only

Ans. (a) No inhibition from crowding

508. Population dispersion is the:

- Mixing of two populations
- Movement from one fixed point to another and back again
- Movement away from a natal site
- Spatial of species per community

Ans. (d) Spatial of species per community

509. Population density is the:

- Number of individuals per species per unit-area or volume
- Number of individuals per species
- Number of individuals per community
- Number of species per community

Ans. (a) Number of individuals per species per unit-area or volume

510. If the rate of addition of a new species increases with respect to the individual loss of the same population, then the graph obtained has:

- Exponential growth
- Declined growth

- Zero population growth
- None of the above

Ans. (a) Exponential growth

511. With regard to environmental pollution, consider the following statements:

- Organic phosphates are degradable chemical insecticides.
- Chlorinated hydrocarbons depress photosynthesis of marine phytoplankton but have no adverse effect on aquatic animals.
- The atmospheric pollutant ozone causes respiratory distress in man but has no adverse effect on plants.
- Sulphur dioxide (SO₂) in air adsorbs on particulate pollutants.

Which of these statements are correct?

- 1, 2, 3 and 4
- 1 and 4
- 2, 3 and 4
- 1, 2 and 3

Ans. (c) 2, 3 and 4

512. Consider the following statements in the context of ecosystem:

- Radiant energy reaching the surface of earth on a clear day is about 2% ultraviolet, 74% visible light and the rest is infrared.
- Visible radiation is the least attenuated during its passage through dense cloud cover and water.
- Thermal radiation is absorbed by biomass to a greater degree than is solar radiation.

Which of these statements is correct?

- 1, 2 and 3
- 1 and 3
- 2 and 3
- 1 and 2

Ans. (c) 2 and 3

513. Consider the following statements:

- The energy flow in an ecosystem results in entropy.
- In prairie ecosystems, 90 percent of the secondary productivity occurs in the soil.
- The detritus chain is of greater importance in energy flow in many ecosystem than are herbivores/carnivores/Omnivores grazing chains.

Which of these statements are correct?

- 1 and 3
- 2 and 3
- 1, 2 and 3
- 1 and 2

Ans. (d) 1 and 2

514. The acceptable concept of ecological niche is that is represents the:

- a. Unique combination of the trophic status and the microhabitat of a species
- b. Sum total of a species use of biotic and abiotic resources of the environment
- c. Unique microhabitat of a species
- d. Trophic status of a species in a community

Ans. (a) Unique combination of the trophic status and the microhabitat of a species

515. Which one of the following statements about circadian rhythm is correct?

- a. Circadian rhythm is necessary because earth is tilted on its axis
- b. The period of circadian rhythm is not exactly 24 hours
- c. An animal's circadian rhythm has a period of exact 24 hours
- d. Circadian rhythm, dependent on endogenous clock, is restricted to birds and mammals

Ans. (d) Circadian rhythm, dependent on endogenous clock, is restricted to birds and mammals

516. In India, the lion-tailed Macaque is found only in:

- a. Western Ghats
- b. Gundy National Park
- c. Eastern Ghats
- d. Bandipur Biosphere Reserve

Ans. (a) Western Ghats

517. One of the major adaptive features of the desert animal is:

- a. Reduced excretion
- b. Reduced metabolic activity
- c. Conservation of metabolic water
- d. Production of metabolic water

Ans. (c) Conservation of metabolic water

518. Removal of the keystone predator from a community will result in:

- a. Decrease in primary productivity
- b. Increase in prey population densities
- c. General decline in species diversity
- d. Dominance of an alternate predator

Ans. (c) General decline in species diversity

519. The 'biological clock' in higher vertebrates is regulated by:

- a. Thymus
- b. Suprachiasmatic nucleus in hypothalamus

- c. Cerebral cortex
- d. The pituitary gland

Ans. (b) Suprachiasmatic nucleus in hypothalamus

520. The approximate number of species reptiles described so far is:

- a. 4100
- b. 6300
- c. 18,200
- d. 26500

Ans. (d) 26500

521. In the population growth curve given below, in which segment the growth rate will be maximum?

- a. 4
- b. 3
- c. 2
- d. 1

Ans. (a) 4

522. Which one of the following statements is not correct pertaining to changes in the abiotic environment?

- a. In the troposphere, photo oxidation of hydrocarbons in the presence of nitrogen oxides produces ozone
- b. At global level, human activities contribute nine times more particulate matter or aerosols into the air than do natural processes
- c. Temperature is the major factor in the creation of ocean currents and air currents
- d. Annual changes in temperature in aquatic environments are more marked in temperate fresh water climates than in other climates

Ans. (a) In the troposphere, photo oxidation of hydrocarbons in the presence of nitrogen oxides produces ozone

523. Which one of the following ecological pyramids can never be inverted?

- a. Pyramid of energy
- b. Pyramid of biomass
- c. Pyramid of size
- d. Pyramid of number

Ans. (a) Pyramid of energy

524. Definitely the lowest temperature at which organisms can live is known as:

- a. Incipient lethal low temperature
- b. Minimum critical temperature
- c. Minimum effective temperature
- d. Minimum survival temperature

Ans. (c) Minimum effective temperature

525. For greenhouse effect, which of the following statements are correct?

1. Intensive plantation can produce large amount of CO which traps heat and produces the greenhouse effect
2. Extensive use of fossil fuel and intensive plantation result in the production of large amount of CO and HO form in a thick layer that prevents the heat from being reradiated out
3. Excessive use of fossil fuel produces heat, which is absorbed by the CO and water vapor in the atmosphere and causes green house effect
4. Increasing level of CO tends to warm air in the lower layer of the atmosphere on global scale resulting in global warming global scale resulting in global warming

Select the correct answer using the codes given below:
Codes:

- | | |
|------------|------------|
| a. 1 and 4 | b. 3 and 4 |
| c. 2 and 3 | d. 1 and 2 |

Ans. (b) 3 and 4

526. Ecological equivalents are the taxonomically different organism which occupy:

- a. Same or similar ecological niches performing similar functions in different geographical regions
- b. Same or similar ecological niches performing different functions in different geographical regions
- c. Different ecological niches performing similar functions in the same geographical region
- d. Same or similar ecological niches performing different functions in the same geographical region

Ans. (b) Same or similar ecological niches performing different functions in different geographical regions

527. Running water communities of clean hill streams are characterized by the predominance of:

- | | |
|----------------|------------------|
| a. Megaloptera | b. Diptera |
| c. Coleoptera | d. Ephemeroptera |

Ans. (c) Coleoptera

528. Lindeman's law of trophic efficiency states that the efficiency of energy transfer:

- a. From one trophic level to the next is about 10%
- b. Is unlimited
- c. From one trophic level to the next is highly variable
- d. From one trophic level to the next about 60%

Ans. (a) From one trophic level to the next is about 10%

529. In most birds after hatching the young ones normally begin to follow their mothers. This type of behavior is known as:

- a. Trial and error learning
- b. Parental care
- c. Reflex behavior
- d. Imprinting

Ans. (d) Imprinting

530. When relatively palatable and unprotected species of animal imitates the relatively unpalatable or well protected species. It is called:

- a. Warning mimicry
- b. Alluring mimicry
- c. Batesian mimicry
- d. Mullerian mimicry

Ans. (c) Batesian mimicry

531. The eulittoral zone provides which one of the following sets of major habitats?

- a. Abyssal, sandy and rocky
- b. Benthic, deep sea and estuary
- c. Submerged rocks, rocks with loose stones and mud
- d. Rocky, sandy and muddy shores

Ans. (a) Abyssal, sandy and rocky

532. Consider the following pairs:

1. Bathyal zone: Arch benthic zone
2. Littoral zone: Limnetic zone
3. Oceanic zone: Sub-littoral zone

Which of these pairs are correctly matched?

- | | |
|------------|---------------|
| a. 2 and 3 | b. 1 and 2 |
| c. 1 and 3 | d. 1, 2 and 3 |

Ans. (d) 1, 2 and 3

533. Neustons are the organism which:

- a. Can swim in water
- b. Rest or swim on the surface of water
- c. Can float of water
- d. Rest on the bottom of water

Ans. (b) Rest or swim on the surface of water

534. The number of links in a food chain depends upon the:

- a. Length of day
- b. Length of food chain in an ecosystem
- c. Number of production in an ecosystem
- d. Number of organism in an ecosystem

Ans. (c) Number of production in an ecosystem

535. A river bed from its origin to its mouth is a:

- a. Acute curve for most of the route followed by a small smooth curve
- b. Acute curve in beginning followed by smooth curve
- c. Irregular curve
- d. Smooth curve

Ans. (b) Acute curve in beginning followed by smooth curve

536. Deposition of material on the earth's surface by river and other agents is known as:

- a. Trophic succession
- b. Aggradation
- c. Profundation
- d. Biocoenosis

Ans. (b) Aggradation

537. Consider the following statements:

Lotic ecosystems are characterized by:

- 1. Lack of thermal stratification
- 2. Oxygen stagnation in deep layers of water
- 3. A greater land – water interchange

Which of the above statements are correct?

- a. 1, 2 and 3
- b. 2 and 3
- c. 1 and 3
- d. 1 and 2

Ans. (b) 2 and 3

538. The occurrence of relatively definite sequence of communities over a period of time in the same area is known as:

- a. Species stabilization
- b. Species continuation
- c. Ecosystem development
- d. Ecological succession

Ans. (d) Ecological succession

539. In which one of the following terrestrial biomes does the variety of life reach its culmination?

- a. Northern coniferous forests
- b. Temperate deciduous forests
- c. Tropical grasslands
- d. Tropical rain forests

Ans. (d) Tropical rain forests

540. Circadian rhythm is the ability to time and repeat functions at:

- a. One month intervals without environmental cues such as day light
- b. 24 hours intervals even without environmental cues such as day light
- c. One year intervals linked to changes in the seasons
- d. About 24 hours intervals linked to daylight

Ans. (b) 24 hours intervals even without environmental cues such as day light

541. Which one of the following pairs is not correctly matched?

- a. Slender Loris – Southern India
- b. Loin-tailed macaque–Southern India
- c. Golden Langur–North–West Assam
- d. Hoolock gibbon–Arunachal Pradesh

Ans. (b) Loin-tailed macaque–Southern India

542. Old world cuckoos and the brown-headed of North America do not build nests of their own rather, they deposits their eggs in the nests of other birds. This type of relationship is designated as:

- a. Symbiosis
- b. Social parasitism
- c. Commensalism
- d. Mutualism

Ans. (b) Social parasitism

543. Deserts constitutes the most extreme of all the terrestrial environments. Communities living here demand which of the following special adaptations?

- 1. Morphological
- 2. Physiological
- 3. Ethological

Select the correct answer using the codes given below:

- a. 1, 2 and 3
- b. 2 and 3
- c. 1 and 3
- d. 1 and 2

Ans. (d) 1 and 2

544. In the animal kingdom, several degrees of interspecific interaction can be recognized. Which one of the following is true for protocol-operation interactions?

- a. Both partners gain, though each is also able to survive separately
- b. Presence of one species appears to have no effect on a second species
- c. One of the species is harmed by the relationship
- d. Both partners gain but neither can survive without the other

Ans. (a) Both partners gain, though each is also able to survive separately

545. The total output of photosynthesis including the organic matter used up in respiration during the period of measurement is called:

- a. Secondary productivity
- b. Net community productivity
- c. Gross primary productivity
- d. Net primary productivity

Ans. (c) Gross primary productivity

546. Productivity is the amount of organic matter produced:

- a. Per unit area in twelve hours of photoperiod
- b. Per unit area per unit time
- c. Per unit area per unit day
- d. None of the above

Ans. (a) Per unit area in twelve hours of photoperiod

547. Ratios between energy flow at different points along the food chains when expressed as percentages, are called:

- a. Ecological gradients
- b. Relative ratio energy flow
- c. Ecological efficiencies
- d. Energy flow efficiencies

Ans. (c) Ecological efficiencies

548. Which one of the following statements is not true about energy flow?

- a. The pyramid of energy are both top right and inverted
- b. There is unidirectional flow of energy
- c. The energy captured by the autotrophs does not revert back to solar input
- d. Energy flow is greatly reduced at each successive trophic level from producers to herbivores and then to carnivores

Ans. (a) The pyramid of energy are both top right and inverted

549. Similar niches in different communities or in different regions are commonly occupied by species possessing similar habits, adaptations and adjustments. Such species are called:

- a. Diverse species
- b. Ecological dominants
- c. Ecotypes
- d. Ecological equivalents

Ans. (b) Ecological dominants

550. Consider the following statements Ecological dominants are those species that.

1. Exert major controlling influence
2. Live in a community
3. Affect the environment of all other species
4. Control the energy flow

Which of the above statements is/are correct?

- a. 1, 2, 3 and 4
- b. 2 alone
- c. 1, 3 and 4
- d. 1 alone

Ans. (c) 1, 3 and 4

551. Which one of the following pairs is not correctly matched?

- a. Cursorily adaptations-Limb bones
- b. Fossorial adaptations-Developed shoulder girdle
- c. Arboreal adaptations-Webbed feet
- d. Volant adaptations-Fusion of certain bones

Ans. (c) Arboreal adaptations-Webbed feet

552. Ex-situ conservation refers to preservation:

- a. Outside the natural areas of occurrence
- b. In restricted area of occurrence
- c. In herbaria
- d. In arboreta

Ans. (a) Outside the natural areas of occurrence

553. Which one of the following statements is true?

- a. Higher the altitude we go higher is the pressure, more the depth we go lesser is the pressure we encounter
- b. Higher the altitude we go lesser is the pressure, more the depth we go lesser is the pressure, we encounter
- c. Higher the altitude we go higher is the pressure, more the depth we go lesser is the pressure we encounter
- d. Higher the altitude we go lesser is the pressure, more the depth we encounter

Ans. (d) Higher the altitude we go lesser is the pressure, more the depth we encounter

554. Photoperiodism is the:

- a. Movement influenced by the wavelength of light
- b. Response of an organism to the duration of light
- c. Movement of the part of the organism with respect to the light
- d. Orientation of locomotion

Ans. (b) Response of an organism to the duration of light

555. What is the correct sequence of zonation in the lentic environment?

1. Profundal zone
2. Littoral zone
3. Sub-littoral zone

Select the correct answer using the codes given below:

- a. 3, 2, 1
- b. 2, 3, 1
- c. 2, 1, 3
- d. 1, 3, 2

Ans. (b) 2, 3, 1

556. Critical activity of two barnacles in relation to temperature are given above. Which one of the following is the most appropriate explanation of the figure of the figure?

- Upper intertidal species shows greater thermal tolerance than lower intertidal species
- There is a rapid depression of activity when temperature increases above 6°C
- Both the species are more active above 20°C
- Both the barnacles maintain their activity under narrow ranges of temperatures

Ans. (a) Upper intertidal species shows greater thermal tolerance than lower intertidal species

557. The desert animals confine their activities during night time, because they:

- Face less competition for food during night
- Have a problem of conservation of water during the daytime
- Get sufficient food during night
- Can see well during the night

Ans. (b) Have a problem of conservation of water during the daytime

558. Which one of the following can achieve protection and conservation of biodiversity?

- Game sanctuary
- National parks
- Biosphere reserve
- Ecodevelopment

Ans. (c) Biosphere reserve

559. Which one of the following is the group of major greenhouse gases?

- Ethane, oxides of nitrogen, carbon monoxide and chlorofluorocarbons
- Carbon dioxide, methane, chlorofluorocarbons and oxides of nitrogen
- Carbon dioxide, oxides of nitrogen, ethane, chlorofluorocarbons
- Carbon monoxide, methane, chlorofluorocarbons, and chlorofluorocarbons

Ans. (b) Carbon dioxide, methane, chlorofluorocarbons and oxides of nitrogen

560. Fruit flies emerge from pupal stage at dawn even after fifteen generations of flies reared under conditions of constant height. This due to:

- Lunar exogenous rhythm
- Lunar endogenous rhythm
- Diurnal exogenous rhythm
- Diurnal endogenous rhythm

Ans. (d) Diurnal endogenous rhythm

561. Consider the following species:

- Sloth bear
- Musk deer
- Bison
- Black buck

The endangered species among these include:

- 1, 2 and 3
- 1, 2 and 4
- 1, 3 and 4
- 2, 3 and 4

Ans. (d) 2, 3 and 4

562. The association between ungulates (such as cattle) and rumen bacteria is a well-known example of:

- Neutralization
- Obligate symbiosis
- Parasitism
- Antibiosis

Ans. (b) Obligate symbiosis

563. Consider the following statements: Desert animals tide over the external heat by:

- Adopting appropriate nocturnal habits.
- Burrowing.
- Adjusting their internal body temperature suitability.

Of these statements:

- 1, 2 and 3 are correct
- 1 and 3 are correct
- 2 and 3 are correct
- 1 and 2 are correct

Ans. (a) 1, 2 and 3 are correct

564. Consider the following desert adaptations:

- Copious salivation and licking of body
- High tolerance of dehydration
- High storage capacity of water
- Fluctuating body temperature

The set of adaptations relevant to the case of camel would include:

- 1, 2 and 3
- 1, 2 and 4
- 1, 3 and 4
- 2, 3 and 4

Ans. (d) 2, 3 and 4

565. When an animal population produces a substance harmful to a competing population the interaction is known as:

- Interference
- Pathogenesis
- Antibiosis
- Allelopathy

Ans. (c) Antibiosis

566. Compensation level in an aquatic ecosystem in the one where oxygen:

- Release in photosynthesis balances loss by respiration
- Level is just sufficient to maintain decomposers
- Level is just sufficient to maintain producers
- And carbon dioxide are in equal proportion

Ans. (a) Release in photosynthesis balances loss by respiration

567. The most important characteristics of the deep sea include:

- High temperature, low pressure and high oxygen level
- Low temperature, high pressure and low oxygen level
- High temperature, high pressure and high oxygen level
- Low temperature, low pressure and low oxygen level

Ans. (b) Low temperature, high pressure and low oxygen level

568. Which of the following gives the best overall picture of the functional nature of community?

- Food web
- Pyramid of numbers
- Pyramid of energy
- Pyramid of biomass

Ans. (a) Food web

569. Consider the following organism:

- Pheretima
- Calanus
- Shark
- Herring

The correct sequence of the arrangement of the organisms in order of their trophic levels is:

- 2, 1, 3, 4
- 1, 2, 3, 4
- 2, 1, 4, 3
- 1, 2, 4, 3

Ans. (c) 2, 1, 4, 3

570. Which one of the following is the main cause of photochemical smog?

- Environmental conditions favouring excessive evaporation resulting in smog formation in the morning
- Nitrogen oxides and hydrocarbons in the air, exposed to ultraviolet light
- Increase in atmospheric carbon dioxide concentration leading to greenhouse effect
- Carbon dioxide acting as nuclei for water droplet formation

Ans. (d) Carbon dioxide acting as nuclei for water droplet formation

571. Which one of the following sets of environmental factors refers to the only density dependent factors?

- Food, salinity, accumulation of metabolites, light
- Temperature, salinity, predation, disease
- Food, predation, disease, accumulation of metabolites
- Temperature, food, disease, light

Ans. (c) Food, predation, disease, accumulation of metabolites

572. A functional aspect of an ecosystem is:

- Light, temperature oxygen and carbon dioxide
- Producers, consumers and abiotic environment
- Regulation of populations
- Both a and b

Ans. (c) Regulation of populations

573. Keystone species in an ecosystem are those:

- Attaining large biomass
- That is most frequent
- Contributing to ecosystem properties
- Present in maximum number

Ans. (c) Contributing to ecosystem properties

574. Increase in the percentage of fauna and decrease in flora may be dangerous because it enhance percentage of:

- Carbon dioxide
- Radioactive fall-out
- Oxygen
- Diseases

Ans. (a) Carbon dioxide

575. The rate at which light energy is converted into chemical energy of any organic molecules is the ecosystems:

- Gross secondary productivity
- Net secondary productivity
- Gross primary productivity
- Net primary productivity

Ans. (c) Gross primary productivity

576. Minamata disease is a pollution related disease which results from:

- Release of industrial waste of mercury into fishing water
- Accumulation of arsenic into atmosphere
- Release of human organic waste into drinking water
- Oil spills into sea

Ans. (a) Release of industrial waste of mercury into fishing water

577. Which one of the following statement is correct?

- a. Up to about 15 km above the Earth's surface both ozone and chlorofluorocarbons are harmful for life
- b. Beyond about 20 km above the Earth's Surface, presence of ozone is vital to life on earth and chlorofluorocarbons are beneficial
- c. Beyond about 20 km about the surface of the Earth, ozone is vital to life on the earth, but chlorofluorocarbons are harmful
- d. Up to about 15 km above the earth surface both ozone and chlorofluorocarbons are harmful to life

Ans. (c) Beyond about 20 km about the surface of the Earth, ozone is vital to life on the earth, but chlorofluorocarbons are harmful

578. Biological oxygen demand refers to the amount of oxygen required to:

- a. Facilitate respiration
- b. Convert inorganic material to their oxides and causes their precipitation
- c. Synthesises organic compounds
- d. Breakdown the organic materials

Ans. (d) Breakdown the organic materials

579. At which one of the following trophic level is DDT sprayed to control insect, pest of crop?

- a. Tertiary consumers b. Secondary consumer
- c. Primary consumer d. Primary producers

Ans. (c) Primary consumer

580. Which one of the following body structures of an insect is an adaption entirely meant for water conservation?

- a. Malphling tubules b. Intimal lining
- c. Invigilated spiracles d. Trachea

Ans. (a) Malphling tubules

581. Which one of the chemical is not related to biological magnification?

- a. Polychlorinated biphenyls
- b. Organophosphates
- c. Heavy metal
- d. Chlorinated hydrocarbon

Ans. (b) Organophosphates

582. "Ecotone" is best described as the:

- a. Maximum biomass an ecosystem can support
- b. Transition between two or more diverse communities
- c. Potentiality of an animal to adjust to new circumstances
- d. State of equilibrium among various trophic levels is an ecosystem

Ans. (b) Transition between two or more diverse communities

583. The animals inhabiting grassland ecosystem are characterized by:

- a. Acute sense of smell b. Swift locomotion
- c. Capacity of mimic d. Good sight

Ans. (b) Swift locomotion

584. Which one of the following is not a cause leading to the endangered status of a species?

- a. Migration
- b. Unregulated commercial exploitation
- c. Environmental pollution
- d. Destruction of habitat

Ans. (a) Migration

585. Which one of the following animals requires comparatively less energy for lung maintenance?

- a. Elephant b. Fish
- c. Birds d. Mosquito

Ans. (a) Elephant

586. Skeletal structures of terrestrial animals are more elaborate than that of aquatic vertebrate because:

- a. Density of water is much greater than that of air
- b. Movement is much easier in air than in water
- c. Water contains more nutrients than air
- d. Air is more mobile than water

Ans. (a) Density of water is much greater than that of air

587. The biomass of one trophic level getting incorporated in the biomass of the next trophic level is the:

- a. Ecological gradient
- b. Ecological efficiency
- c. Energy flow efficiency
- d. Relative ratio of energy flow

Ans. (b) Ecological efficiency

588. Which of the following pairs are correctly matched?

- A. Atenohaline
 - B. Euryhaline
 - C. Osmoconformers
 - D. Osmoregulators
1. Limited tolerance to changes in the osmotic concentration of external environment.
 2. Wide range tolerance of osmotic concentration.
 3. Animals which are incapable of osmo-regulation.
 4. Animals which change in volume as the external osmotic concentration changes.

Codes:

- a. 1, 2 and 3 b. 1, 3 and 4
c. 1, 2 and 4 d. 2, 3 and 4

Ans. (a) 1, 2 and 3

589. Starfish are:

- a. Benthomic creatures b. Abyssal creatures
c. Lotic creatures d. Pelagic creatures

Ans. (a) Benthomic creatures

590. The maximum possible rate of increase of population of a given species under ideal conditions would depend upon its:

- a. Biomass b. Biotic potential
c. Potential natality d. Carrying capacity

Ans. (b) Biotic potential

591. Some insect populations have one generation per year. Some insects also depend upon annual crops. Besides, there is the phenomenon called algal bloom. In all these case the growth curve is:

- a. "J" shaped
b. Sigmoid type
c. Oscillatory
d. Not any definite shape or pattern

Ans. (a) "J" shaped

592. A community with low species diversity and high dominance is said to be:

- a. Both are productive and stable
b. Neither productive nor stable
c. Productive but unstable
d. Unproductive but stable

Ans. (d) Unproductive but stable

593. Forest floors in general support a wide variety of athropods. The predominant forms closely associate with forest litters are the:

- a. Spiders b. Mites
c. Ants d. Insects

Ans. (b) Mites

594. Biological clocks of living organisms:

- a. Are independent for changes in environment
b. Are regulated by environmental stimuli
c. Oscillate continuously and environment does not initiate or stop their function
d. Are chemosensory systems receptive to environmental stimuli

Ans. (a) Are independent for changes in environment

595. Which one of the following sets consists entirely of endangered wild life species of India?

- a. Himalayan musk deer, Great Indian bustard, Snow leopard, Kaehmir stag, Wild Ass
b. Egret, Black bear, Bison, Spotted deer
c. Himalayan musk deer, Indian lion, Rhino, Wild buffalo, Golden cat
d. Himalayan musk deer, Black buck, Indian lion, Rhino, Sambar

Ans. (a) Himalayan musk deer, Great Indian bustard, Snow leopard, Kaehmir stag, Wild Ass

596. The nature of interrelationship between corals and zooxanthellae is called:

- a. Protocooperation
b. Amensalism
c. Physiological symbiosis
d. Cleaning symbiosis

Ans. (c) Physiological symbiosis

597. Which of the following pairs are correctly matched?

- Amensalism:** A population is inhibited whereas the other populations remain unaffected.
- Predation:** A population uses the other as its food.
- Mutualism:** Interaction favourable to both and obligatory.

Select the correct answer using the codes given below:

- a. 2 and 3 b. 1 and 3
c. 1 and 2 d. 1, 2 and 3

Ans. (d) 1, 2 and 3

598. Consider the following statements. In an ecosystem, energy:

- Movement is unidirectional
- Is lost irretrievably
- Movement is non-cyclic
- Movement is from higher to lower trophic levels

Of these statements:

- a. 2, 3 and 4 are correct
b. 1, 3 and 4 are correct
c. 1, 2 and 4 are correct
d. 1, 2 and 3 are correct

Ans. (b) 1, 3 and 4 are correct

599. Humus is:

- a. Potentially decomposed organic matter in a pond
b. Totally decomposed organic matter in a pond
c. Partially decomposed organic matter in the soil
d. Totally decomposed organic matter in the soil

Ans. (c) Partially decomposed organic matter in the soil

600. The pelagic animals remain floating in open waters without sinking to the bottom. For this ability to remain afloat, which of the following adaptations have been developed by these organisms?

1. Reduced skeletal and shell materials
2. Incorporation of large amounts of water or air in their tissues
3. Glandular structures that secrete gases into them
4. Hollow bones

Select the correct answer by using the codes given below:

- | | |
|---------------|---------------|
| a. 1, 2 and 4 | b. 1, 3 and 4 |
| c. 1, 2 and 3 | d. 2, 3 and 4 |

Ans. (c) 1, 2 and 3

601. Species having wide geographical ranges often develop locally adapted populations called:

- | | |
|--------------|---------------|
| a. Ecotypes | b. Syntypes |
| c. Paratypes | d. Prototypes |

Ans. (c) Paratypes

602. As compared to most of the plants, the red algae can thrive at greater depths in water because they:

- a. Have developed tolerance to toxic metabolites
- b. Possess supplementary pigments for absorption of light
- c. Can tolerate very cold medium
- d. Possess special enzymes for photosynthesis in poor light

Ans. (b) Possess supplementary pigments for absorption of light

603. The ratio between the energy flow at different points along the food chain, when expressed as percentages is called:

- a. Ecological efficiency
- b. Energy flow efficiency
- c. Relative ratio of energy flow
- d. Ecological gradient

Ans. (a) Ecological efficiency

604. In an ecosystem, which of the given component would form a part such that each component influences the properties of the other?

1. Abiotic environment
2. Biotic components
3. Producer communities

Select the correct answer using the codes given below:

Codes:

- | | |
|------------|---------------|
| a. 2 and 3 | b. 1 and 3 |
| c. 1 and 2 | d. 1, 2 and 3 |

Ans. (c) 1 and 2

605. Which of the following statements is/are true?

1. A community and its habitat mutually interact
2. A community and its habitat are interdependent
3. A community and its habitat exist independently

Select the correct answer using the codes given below:

Codes:

- | | |
|------------|------------|
| a. 2 alone | b. 1 and 3 |
| c. 1 alone | d. 1 and 2 |

Ans. (a) 2 alone

606. Which one of the following forests is known to be a 'forest that never burn'?

- a. Tundra forest
- b. Deciduous forest
- c. Tropical rain forest
- d. Coniferous forest

Ans. (c) Tropical rain forest

607. Circadian rhythm is the metabolic or behavioral rhythm of:

- | | |
|--------------------|--------------------|
| a. 24 months cycle | b. 24 days cycle |
| c. 24 hours cycle | d. 24 minute cycle |

Ans. (c) 24 hours cycle

608. The ecological importance of predators in a community lies in the fact that they help to:

- a. Balance the population of prey
- b. Increase the population of prey
- c. Break up the population of prey
- d. Reduce the population of prey

Ans. (d) Reduce the population of prey

609. The tendency towards increased variability and density of species at community junction is known as the:

- | | |
|---------------------|----------------|
| a. Biotic potential | b. Vital index |
| c. Variability | d. Edge effect |

Ans. (d) Edge effect

610. The movements of individuals into and out of population are caused by birth, death, and immigration and emigration. Such a state denotes:

- | | |
|------------------------|-----------------------------|
| a. Basic biotic school | b. Regulation of population |
| c. Population turnover | d. Population density |

Ans. (b) Regulation of population

611. Which one of the following pairs is not correctly matched?

- a. Bandipur Sanctuary—Karnataka
- b. Dachigam Sanctuary—West Bengal

- c. Kanha National Park—Madhya Pradesh
- d. Manas Sanctuary—Assam

Ans. (b) Dachigam Sanctuary—West Bengal

612. The discharge of raw sewage into waterways causes the collapse of aquatic ecosystems, primarily because of:

- a. Growth of algae
- b. Increased levels of carbon dioxide
- c. Lack of nutrients
- d. Lack of dissolved oxygen

Ans. (a) Growth of algae

613. During migration birds determine compass directions using:

- a. Celestial bodies
- b. Mountains and landmarkings
- c. Water bodies and mountains
- d. Landmarkings and water bodies

Ans. (c) Water bodies and mountains

614. Both Zebra and the African lion live in the tropical grasslands but occupy different:

- a. Habitats
- b. Ecological niche
- c. Environments
- d. Biospheres

Ans. (b) Ecological niche

615. Which of the following factors is not responsible for coral bleaching?

- a. Overgrazing by manta ray and snapper fish
- b. Increase level of CO₂ in seawater
- c. 3–5°C decline in ocean temperature for 5–10 days
- d. 1–2°C rise in ocean temperature of 5–6 weeks

Ans. (a) Overgrazing by manta ray and snapper fish

616. Which of the following statements is not true for giant tube worm's observed at hydrothermal vents?

- a. The hemoglobin present in tube worm binds both H₂S and O₂
- b. Tube worms have the fastest growth rate compared to any known marine invertebrates
- c. Tube worms obtained their nutrients from symbiotic chemolithotrophic bacteria
- d. Digestive tract tube worms produces combination of thermostable proteases and polysaccharases

Ans. (d) Digestive tract tube worms produces combination of thermostable proteases and polysaccharases

617. What are zooxanthellae?

- a. Xanthomonas-infected zooplankton
- b. A species of crab
- c. Algae living in corals
- d. Deep sea dwelling brightly pigmented fish

Ans. (c) Algae living in corals

618. The first group of organism that colonize the hydrothermal vents are:

- a. Crabs
- b. Chemoautotrophic sulfur bacteria
- c. Chemolithotrophic bacteria
- d. Tube worms

Ans. (c) Chemolithotrophic bacteria

619. Marine snow is:

- a. A common name for white crabs which are observed in the Arctic region
- b. A common name given to a cephalopod in Antarctica which has the ability to grow at low temperature
- c. Formation of ice crystals in the upper layer of ocean during winter
- d. A continuous shower of organic detritus falling from the upper layer of water

Ans. (d) A continuous shower of organic detritus falling from the upper layer of water

620. Which of the following mixture of organism could be cultured to demonstrate integrated multi-trophic aquaculture for treatment of effluent rich in nitrogen and phosphorus?

- a. Phytoplankton-starfish-catfish
- b. Gracilariac corticata-starfish-clams
- c. Phytoplankton-shellfish (oyster and clams)-marine fishes
- d. Phytoplankton-porphyrria yezoensis phythium prophase

Ans. (c) Phytoplankton-shellfish (oyster and clams)-marine fishes

621. Gause's competitive exclusion principle states that:

- a. If two competitors permanently coexist, they must have different limiting resources
- b. If two species consume some resource that is essential to the survival of both, one will eventually exclude the other
- c. Two species consume each other limiting resource; one will always competitively exclude the other
- d. If two competitors are grown together, one will always exclude the other

Ans. (b) If two species consume some resource that is essential to the survival of both, one will eventually exclude the other

622. Uniform spacing patterns in certain plant species are most often associated with which of the following?

- a. Patterns of high humidity
- b. Antagonistic interactions among individuals in the population
- c. Concentration of resources within the population range
- d. Random distribution of seeds

Ans. (b) Antagonistic interactions among individuals in the population

623. Consider a population which is changing from one generation to the next as per the equations $N(t) = R N(t-1)$ and R represents the size of the population at time number of individuals in the next generation per individuals in the next generation. Under which of the following conditions is the population likely to become extinct?

- a. $R > 1$
- b. $R = 1$
- c. $R < 1$
- d. $R = 1$

Ans. (c) $R < 1$

624. If a population of size N is growing at an exponential rate, which of the following is correct:

- a. N vs. time will be a straight line
- b. N vs. $\log(\text{time})$ will be a straight line
- c. $\log(N)$ vs. $\log(\text{time})$ will be straight line
- d. $\log(N)$ vs. $\log \text{time}$ will be a straight line

Ans. (d) $\log(N)$ vs. $\log \text{time}$ will be a straight line

625. Two species of herbivores compete for resources in grassland. In general, species A is better at utilizing the resources and is more abundant than species B. Which one of the following statements is correct?

- a. The relative abundance can change in either direction
- b. Species B increases relative to Species A
- c. Species A increases relative to Species B
- d. The relative abundance of the two species remains the same

Ans. (d) The relative abundance of the two species remains the same

626. Which of the following plants with particular traits is most vulnerable in fragmented forest landscape?

- a. Cross-pollinated and wind-dispersed
- b. Self-pollinated and animal-dispersed
- c. Cross-pollinated and animal-dispersed
- d. Self-pollinated and wind-dispersed

Ans. (c) Cross-pollinated and animal-dispersed

627. Carbon sequestration in ocean relates to:

- a. Study of the intricate food web chain in the marine ocean
- b. Formation of marine snow that is transported from photic zone to deep sea by ocean upwelling
- c. Mechanism by which the carbon from bacteria and phytoplankton is recycled by lytic marine bacteriophage
- d. Technique of iron fertilization to encourage phytoplankton growth which would remove carbon from atmosphere over a period of time

Ans. (d) Technique of iron fertilization to encourage phytoplankton growth which would remove carbon from atmosphere over a period of time

628. Electro-mineral accretion is a process of:

- a. Depositing a layer of mineral on ocean floor for promoting spawning of some marine fishes
- b. Dissolution of minerals from sea bed rocks by applying high electrical current (instead of blast in deep sea that damages marine life) promoting easier drilling activity for oil extraction
- c. *In vitro* method of isolating trace minerals from seawater by applying suitable potential difference across the electrodes
- d. Applying a low voltage current to a metallic structure in ocean leading on which coral planate can attach and grow

Ans. (d) Applying a low voltage current to a metallic structure in ocean leading on which coral planate can attach and grow

629. The most abundant photoplankton that has the capability to grow in oligotrophic niches of oceans under low-high or high light conditions is:

- a. *Oscillatoria* spp.
- b. *Nodularia* spp.
- c. *Prochlorococcus*
- d. *Synechococcus* spp.

Ans. (c) *Prochlorococcus*

630. The role of oceanic Dimethyl sulfide (DMS) emitted by phytoplankton in influencing earth's climate may be attributed to the fact that:

- a. The acidification of sea water due to production of sulfuric acid as a by production due to oxidation of DMS in seawater acts as a carbon sink
- b. DMS reacts with atmospheric CO_2 to form organosulfur compounds such as DMSO and sulpholane which has the characteristic smell of decaying organic matter (carbon sink)
- c. Excessive DMS traps heat contributing partly to global warming

- d. DMS produces sulfate aerosols that act as could condensation nuclei which in turn reflect incoming solar radiation

Ans. (d) DMS produces sulfate aerosols that act as could condensation nuclei which in turn reflect incoming solar radiation

631. Riftia pachyptila, a vestimentiferan, present only near the hydrothermal vent systems obtain their primary nutrition:

- By trapping marine snow that descend from photic zone using plume
- From the planktons that are ingested with the help of plume
- From the organic molecules synthesized by the chemosynthetic bacteria that oxidize hydrogen sulfide, using dissolved oxygen from water
- From the decomposing detritus on which the tubeworm grows

Ans. (c) From the organic molecules synthesized by the chemosynthetic bacteria that oxidize hydrogen sulfide, using dissolved oxygen from water

632. A lithoautotroph:

- Requires light for producing
- Is always an extremophile
- Can be bacterial or eukaryotic cell
- Derives energy from reduced compound of mineral origin

Ans. (d) Can be bacterial or eukaryotic cell

633. Exclusive economic zone is a sea zone which stretches from the seawards edge of the state's territorial sea out to:

- 10,000 nautical miles from its coast
- 1000 nautical miles from its coast
- 50 nautical miles from its coast
- 200 nautical miles from its coast

Ans. (d) 200 nautical miles from its coast

634. Probiotics in aquaculture are regularly used to:

- For vaccinating the fish against general bacterial infection
- Improve the water quality of the pond
- Improve the fecundity of fish
- Increase the size and weight of fish

Ans. (c) Improve the fecundity of fish

635. El Niño is defined by:

- Temperature anomaly which occurs approximately every 100 years
- Warming or cooling for a period of 48 h in Pacific Ocean

- Warming or cooling of at least 5°C averaged over the east-central tropical Pacific Ocean
- Prolonged differences in Pacific Ocean surface temperature when compared with average value

Ans. (d) Prolonged differences in Pacific Ocean surface temperature when compared with average value

636. Considering environment and ecosystem, identify, the incorrect statements:

- Photoperiodism has no relation with the environment and ecosystem, rather it is a biological event taking place in every plant
- The slower rise of environmental temperature may be attributed to the reflection of solar energy back to other spaces to slow down global warming
- The change in species composition community structure and function overtime is ecological succession
- In detrital food chain, it is very difficult to measure the energy flow although the uses of radioactive tracers give some idea about the energy flow

Ans. (a) Photoperiodism has no relation with the environment and ecosystem, rather it is a biological event taking place in every plant

637. The term "ecological succession" refers to:

- Changes in the community due to a disturbance in the habitat
- A transition phase wherein one species is replaced by another set of species
- A process wherein newer species populate a region that was devoid of flora and fauna
- All of the above

Ans. (d) All of the above

638. Which of the following statements are incorrect on ecological point of view?

- Primary succession involving xerosere is initiated in a wet habitat
- Halos commonly found in electronic equipment are one of the active forces destroying the protective ozone layer in the stratosphere
- Alpha-Diversity is the diversity of species within a habitat or community

- Q, S
- Q, R
- P, R
- P, Q

Ans. (c) P, R

639. The term biological magnification refers to the increased levels in a food web. Which one of the following options correctly states the reason for the increment of a toxin in the ecosystem?

- a. The toxin to begin with was not toxic by metabolism in the primary producers
- b. The toxin cannot be degraded by microorganism and consequently persist in the environment for year
- c. The toxin is highly toxic to primary producers, relatively less toxic to primary consumers, and non-toxic to secondary consumers. Thus, a higher level of toxin is seen is representing higher trophic levels
- d. Both b and c

Ans. (d) Both b and c

640. El Nino is defined by:

- a. Temperature anomaly which occurs approximately every 100 years
- b. Warming or cooling for a period of 48 h in Pacific Ocean
- c. Warming or cooling of at least 5°C averaged over the east-central tropical Pacific Ocean
- d. Prolonged differences in Pacific Ocean surface temperature when compared with average value

Ans. (d) Prolonged differences in Pacific Ocean surface temperature when compared with average value

641. Considering environment and ecosystem, identify, the incorrect statements:

- a. Photoperiodic has no relation with the environment and ecosystem, rather it is a biological event taking place in every plant
- b. The slower rise of environmental temperature may be attributed to the in pollution in environment which reflects enough solar energy back to other space to slow down global warming
- c. The change in species composition community structure and function over time is ecological succession
- d. In detrital food chain, it is very difficult to measure the energy flow although the uses of radioactive tracers give some idea about the energy flow

Ans. (a) Photoperiodic has no relation with the environment and ecosystem, rather it is a biological event taking place in every plant

642. The probable Geographic Origin of the following crops is called: Wheat and Barley, flax, lettuce, onions cabbage carrots cucumbers melons and fruit and nuts:

- a. South-east Asia
- b. The Fertile Crescent
- c. Mesoamerica and North America
- d. South America

Ans. (b) The Fertile Crescent

643. The main role of bacteria in the carbon cycle involves:

- a. Assimilation of nitrogenous compounds
- b. Photosynthesis
- c. Digestion or breakdown of organic compounds
- d. Chemosynthesis

Ans. (c) Digestion or breakdown of organic compounds

644. Which of the following pairs is a sedimentary type of biogeochemical cycle?

- a. Phosphorus and carbon
- b. Oxygen and nitrogen
- c. Phosphorus and sulphur
- d. Phosphorus and nitrogen

Ans. (c) Phosphorus and sulphur

645. Which one of the following is not a gaseous biogeochemical cycle in ecosystem?

- a. Phosphorus cycle
- b. Sulphur cycle
- c. Carbon cycle
- d. Nitrogen cycle

Ans. (a) Phosphorus cycle

646. Natural reservoir of phosphorus is:

- a. Sea water
- b. Fossils
- c. Rock
- d. Animal bones

Ans. (c) Rock

647. The correct sequence of plants in a hydrosere is:

- a. Pistia → Volvox → Scirpus → Hydrilla → Oak → Lantana
- b. Volvox → Hydrilla → Pistia → Scirpus → Lantana → Oak
- c. Oak → Lantana → Scirpus → Pistia → Hydrilla → Volvox
- d. Oak → Lantana → Volvox → Hydrilla → Pistia → Scirpus

Ans. (b) Volvox → Hydrilla → Pistia → Scirpus → Lantana → Oak

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

- a. Rate of energy flow
- b. Number of individuals
- c. Dry weight
- d. Fresh weight

Ans. (d) Fresh weight

649. The primary succession refers to the development of communities on a:

- a. Pond, freshly filled with water after a dry phase
- b. Freshly cleared crop field

- c. Newly-exposed habitat with no record of earlier vegetation
- d. Forest clearing after devastating fire

Ans. (c) Newly-exposed habitat with no record of earlier vegetation

650. Which one of the following types of organisms occupies more than one trophic level in a pond ecosystem?

- a. Zooplankton
- b. Fish
- c. Frog
- d. Phytoplankton

Ans. (b) Fish

651. Which one of the following is the most stable ecosystem?

- a. Desert
- b. Forest
- c. Ocean
- d. Mountain

Ans. (c) Ocean

652. Bamboo plant is growing in forest then what will be the trophic level of it?

- a. Fourth trophic level
- b. Third trophic level
- c. Second trophic level
- d. First trophic level

Ans. (d) First trophic level

653. Both, hydrarch and xerarch successions lead to:

- a. Xeric conditions
- b. Medium water conditions
- c. Excessive wet conditions
- d. Highly dry conditions

Ans. (b) Medium water conditions

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

- a. It follows primary succession
- b. It occurs on a deforested site
- c. It begins on a bare rock
- d. It is similar to primary succession except that it has relatively fast pace?

Ans. (b) It occurs on a deforested site

655. Plant decomposers are:

- a. Animalia and Monera
- b. Protista and Animalia
- c. Fungi and plants
- d. Monera and fungi

Ans. (d) Monera and fungi

656. Which of these is responsible for highest biomass in aquatic ecosystem?

- a. Diatoms
- b. Benthic and brown algae
- c. Sea grass and slime moulds
- d. Nanoplankton, blue-green algae, green algae

Ans. (b) Benthic and brown algae

657. Energy transfer from one trophic level to other, in a food chain, is:

- a. 2%
- b. 1%
- c. 20%
- d. 10%

Ans. (d) 10%

658. The second stage of hydrosere is occupied by plants like:

- a. Vallisneria
- b. Salix
- c. Typha
- d. Azolla

Ans. (a) Vallisneria

659. In a terrestrial ecosystem such as forest, maximum energy is available at which trophic level?

- a. T₂
- b. T₁
- c. T₃
- d. T₄

Ans. (b) T₁

660. The slow rate of decomposition of fallen logs in nature due to their:

- a. Anaerobic environment around them
- b. Poor nitrogen content
- c. Low moisture content
- d. Low cellulose content

Ans. (c) Low moisture content

661. In desert grasslands, which types of animals are relatively more abundant?

- a. Arboreal
- b. Diurnal
- c. Fossorial
- d. Aquatic

Ans. (c) Fossorial

662. Which one of the following animals may occupy more than one trophic levels in the same ecosystem at the same time?

- a. Lion
- b. Sparrow
- c. Frog
- d. Goat

Ans. (b) Sparrow

663. Which one of the following acts as "Nature's scavengers"?

- a. Animals
- b. Men
- c. Microorganisms
- d. Insects

Ans. (c) Microorganisms

664. The 10% energy transfer law of food chain was given by:

- a. Weismann
- b. Stanley
- c. Tansley
- d. Lindemann

Ans. (b) Stanley

665. Which one of the following statements for pyramid of energy is incorrect, whereas the remaining three are correct?

- a. It is inverted in shape
- b. It shows energy content of different trophic level organisms
- c. Its base is broad
- d. It is upright in shape

Ans. (a) It is inverted in shape

666. In a biotic community, the primary consumers are:

- a. Omnivores
- b. Carnivores
- c. Herbivores
- d. Detritivores

Ans. (c) Herbivores

667. Mass of living matter at a trophic level in an area at any time is called:

- a. Humus
- b. Detritus
- c. Standing crop
- d. Standing state

Ans. (c) Standing crop

668. If we completely remove the decomposers from an ecosystem, its functioning will be adversely affected, because:

- a. Herbivores will not receive solar energy
- b. Energy flow will be blocked
- c. The rate of decomposition will be very high
- d. Mineral movement will be blocked

Ans. (d) Mineral movement will be blocked

669. Of a total incident solar radiation the proportion of PAR is:

- a. Less than 50%
- b. About 60%
- c. About 60%
- d. More than 80%

Ans. (a) Less than 50%

670. The dominant second trophic level, in a lake ecosystem, is:

- a. Submerged rooted vegetation
- b. Benthos
- c. Zooplanktons
- d. Phytoplanktons

Ans. (c) Zooplanktons

671. Identify the likely organisms (a), (b), (c) and (d) in the food chain web shown below:

Options:

- | (a) | (b) | (c) | (d) |
|-------------|----------|----------|--------|
| a. Squirrel | Cat | Rat | Pigeon |
| b. Rat | Dog | Tortoise | Crow |
| c. Dog | Squirrel | Bat | Deer |
| d. Deer | Rabbit | Frog | Rat |

Ans. (d)

672. Consider the following statements concerning food chains:

1. The length of food chains may vary from 2 to 8 trophic levels
2. The length of food chains is generally limited to 3–4 trophic levels due to energy loss
3. Removal of most of the carnivores resulted in an increased population of deers
4. Removal of 80% tigers from an area resulted in greatly increased growth of vegetation

Which two of the above statements are correct?

- a. 1 and 4
- b. 3 and 4
- c. 2 and 3
- d. 1 and 2

Ans. (c) 2 and 3

673. An ecosystem which can be easily damaged but can recover after some time if damaging effect stops will be having:

- a. High stability and high resilience
- b. Low stability and low resilience
- c. High stability and low resilience
- d. Low stability and high resilience

Ans. (d) Low stability and high resilience

674. Identify the positive link "A" the following food chain:

Plant → Insect → Frog → "A" → Eagle

- a. Wolf
- b. Rabbit
- c. Parrot
- d. Cobra

Ans. (d) Cobra

675. Which of the following is expected to have the highest value (gm/m²/yr) in a grassland ecosystem?

- a. Net production (NP)
- b. Gross production (GP)
- c. Tertiary production
- d. Secondary production

Ans. (b) Gross production (GP)

676. Given below is an imaginary pyramid of numbers. What could be one of the possibilities about certain organisms at some of the different levels?

- a. Level PP is "phytoplanktons" in sea and "Whale" on top level TC
- b. Level PC is "insects" and level SC is "small insectivorous birds"
- c. Level PC is "rats" and level SC "cats"
- d. Level one PP is "Pipal trees" and level SC is "sheep"

Ans. (b) Level PC is "insects" and level SC is "small insectivorous birds"

677. The net rate at which light energy is converted into chemical energy of organic molecules is the ecosystems:

- a. Gross secondary productivity
- b. Net primary productivity
- c. Gross primary productivity
- d. Net secondary productivity

Ans. (c) Gross primary productivity

678. The upright pyramid of number is absent in:

- a. Forest
- b. Pond
- c. Grassland
- d. Lake

Ans. (a) Forest

679. When man eats fish which feeds on zooplankton which have eaten small plants, the producer in the chain is:

- a. Man
- b. Fish
- c. Small plants
- d. Zooplankton

Ans. (c) Small plants

680. Which of the following ecosystem has the highest gross primary productivity?

- a. Coral reef
- b. Grassland
- c. Rain forest
- d. Mangroves

Ans. (c) Rain forest

681. About 70% of total global carbon is found in:

- a. Oceans
- b. Agroecosystems
- c. Grasslands
- d. Forests

Ans. (a) Oceans

682. Which one of the following is a primary consumer in maize field ecosystem?

- a. Phytoplankton
- b. Wolf
- c. Lion
- d. Grasshopper

Ans. (d) Grasshopper

683. Secondary productivity is rate of formations of new organic matter by:

- a. Producer
- b. Decomposer
- c. Consumer
- d. Parasite

Ans. (c) Consumer

684. Which of the following groups is absolutely essential functional component of the ecosystem?

- a. Detritivores
- b. Producers
- c. Producers and herbivores
- d. Producers and detritivores

Ans. (d) Producers and detritivores

685. The biomass available for consumption by the herbivores and the decomposers is called:

- a. Standing crop
- b. Secondary productivity
- c. Net primary productivity
- d. Gross primary productivity

Ans. (c) Net primary productivity

686. The rate of formation of new organic matter by rabbit in grassland is called:

- a. Gross primary productivity
- b. Net primary productivity
- c. Secondary productivity
- d. Net productivity

Ans. (c) Secondary productivity

687. Which one of the following is not a functional unit of an ecosystem?

- a. Decomposition
- b. Energy flow
- c. Stratification
- d. Productivity

Ans. (c) Stratification

688. Climax communities:

- a. Has a large number but fewer species than pioneer communities
- b. Have great entropy than pioneer communities
- c. Are less stable than pioneer communities
- d. Are more diverse than pioneer communities

Ans. (d) Are more diverse than pioneer communities

689. Choose the correct identification for the given stage of succession and is protected by which stage respectively?

- Phytoplankton, Marsh—meadow
- Submerged plant, scrub stage
- Submerged free floating, Reed—swamp
- Marsh—meadow, Reed—swamp

Ans. (c) Submerged free floating, Reed—swamp

690. The phosphates remain outside the natural cycle for a long time:

- When they are incorporated in bone and teeth
- When the bodies of organisms excrete and decompose
- When they form compounds with metals
- Both a and c

Ans. (d) Both a and c

691. Atmospheric input is negligible in:

- Nitrogen cycle
- Oxygen cycle
- Phosphorus cycle
- Carbon cycle

Ans. (c) Phosphorus cycle

692. "Occur on newly cooled lava, Faster succession, Progress to mesic condition, occurs on flooded land, slower succession changes in flora only" from the above given features, how many are associated with primary succession?

- Five
- Four
- Three
- Two

Ans. (c) Three

693. Consider the following statements about carbon cycle and choose how many statements are correct?

- Atmosphere has 71% of total global carbon.
- Decomposers contribute substantially to CO₂ pool by their processing of waste materials and dead organic matter of land and oceans.
- 4×10^{13} kg carbon is fixed through photosynthesis annually
- No respiratory input into atmosphere.
- Carbon constitutes 49% of dry wt. of organisms.

- Five
- Four
- Three
- Two

Ans. (c) Three

694. Pyramid of number in a cropland ecosystem is:

- Spindle shaped
- Rhomboidal
- Inverted
- Upright

Ans. (d) Upright

695. In the hydrosere, the reed—swamp stage is followed by:

- Phytoplankton
- Submerged plant stage
- Submerged free floating plant stage
- Marsh—meadow stage

Ans. (d) Marsh—meadow stage

696. Which of the following statement is not correct about energy flow in an ecosystem?

- Ecological efficiency is generally 10%
- Energy flow is cycle
- Energy flow is unidirectional
- Pyramid of energy is always straight

Ans. (b) Energy flow is cycle

697. Successful establishment of a species in a new area is called:

- Ecesis
- Germination
- Reaction
- Coaction

Ans. (a) Ecesis

698. Grazing food chain:

- Does not add energy into ecosystem
- Is based on energy present in detritus
- Binds the inorganic nutrients into organic matter
- Provides inorganic matter to detritus food chain

Ans. (c) Binds the inorganic nutrients into organic matter

699. Which is not true for humus?

- They are degradation product of protein and fats and are produced by the process of mineralization
- Act as reservoir of nutrients and increases water holding capacity of soil
- Highly resistant to microbial action
- Dark coloured amorphous substance

Ans. (a) They are degradation product of protein and fats and are produced by the process of mineralization

700. Mark the correct match:

- Omnivores—Cockroaches, crows
- Nanoecosystem—Valley and forest
- Primary colonizer—Viruses
- Secondary consumer—Zooplankton

Ans. (a) Omnivores—Cockroaches, crows

701. Which of the following ecological pyramids is most representative of functional characteristics of an ecosystem?

- Pyramid of energy
- Pyramid of number

- c. Pyramid of biomass
- d. All are equally representative

Ans. (a) Pyramid of energy

702. The respiratory loss of producers, herbivores and carnivores are respectively:

- a. Always 10%
- b. 20%, 40%, 80%
- c. 20%, 30%, 60%
- d. 10%, 20%, 30%

Ans. (c) 20%, 30%, 60%

703. Energy requirement for maintenance of body with successively higher trophical level.

- a. Always 10%
- b. Remain same
- c. Increases
- d. Decreases

Ans. (c) Increases

704. In tropical rain forest most of the energy in ecosystem flows through:

- a. Parasitic food chain
- b. Grazing food chain
- c. Detritus food chain
- d. Both a and b

Ans. (c) Detritus food chain

705. Earth is a/an:

- a. Closed system
- b. Open system
- c. Both a and b
- d. None of these

Ans. (c) Both a and b

706. A food web:

- a. Increases variety as well as quantity of food at each trophic level
- b. Decreases variety of food but increases quantity of food at each trophic level
- c. Delicately balances the inter relations amongst organisms
- d. Increases variety of food at each trophic level

Ans. (a) Increases variety as well as quantity of food at each trophic level

707. Find an incorrect statement for DFC:

- a. Plays a major role in terrestrial systems
- b. Requires specific detritivores
- c. Terminates in GFC
- d. Starts with solar energy

Ans. (d) Starts with solar energy

708. Which of the following are called as key industry animals?

- a. Top carnivores
- b. Herbivores
- c. Decomposers
- d. Autotrophs

Ans. (b) Herbivores

709. Least productive ecosystem is:

- a. Tundra
- b. Forest
- c. Savannah
- d. Grassland

Ans. (a) Tundra

710. If producer is a large tree that supports a number of herbivorous animals which are further attacked by ectoparasites, the pyramid of number shall can be:

- a. Spindle shaped
- b. Irregular
- c. Upright
- d. Inverted

Ans. (d) Inverted

711. Nutrient immobilization:

- a. Is covalent linking of nutrients with one another?
- b. Prevents leaching of nutrients
- c. Is incorporation of nutrients in microbes?
- d. More than one option is correct

Ans. (d) More than one option is correct

712. Which of the following phenomena does not play a significant role in the maintenance of homeostasis in an ecosystem?

- a. Feedback
- b. Self regulation
- c. Biotic potential
- d. Carrying capacity

Ans. (c) Biotic potential

713. An ecosystem contains:

- a. Producers and consumers
- b. Green plants, animals, decomposers and abiotic environment
- c. Green plants and decomposers
- d. Green plants and animals

Ans. (b) Green plants, animals, decomposers and abiotic environment

714. Consider the following statements (A–D) and select the correct option stating which ones are true (T) and which are false (F).

Statements:

- A. Vertical distribution of different species occupying different levels in a community is called stratification
- B. Net primary productivity minus respiration losses in the gross primary productivity
- C. Rate of biomass production is called decomposition
- D. Annual net primary productivity of oceans is 55 billion tons

(A)	(B)	(C)	(D)
a. F	T	F	T
b. T	F	T	F
c. T	F	F	T
d. F	T	F	F

Ans. (c)

715. Stratification is well developed in:

- a. Temperate forests
- b. Alpine vegetation
- c. Grasslands
- d. Tropical rain forests

Ans. (d) Tropical rain forests

716. For net primary productivity energy captured is:

- a. 2–5% of APR
- b. 2–10% of APR
- c. 1–5% of incident radiation
- d. 0.8–4% of incident radiation

Ans. (d) 0.8–4% of incident radiation

717. Which of the following ecosystems has highest productivity?

- a. Desert shrub
- b. Tropical rain forest
- c. Temperate coniferous forest
- d. Tropical deciduous forest

Ans. (b) Tropical rain forest

718. Which of the following is a functional aspect of an ecosystem?

- a. Topography
- b. Homeostasis
- c. Inorganic nutrients
- d. Species composition

Ans. (b) Homeostasis

719. Which is not true regarding ecosystem?

- a. Characterized by a major vegetation type
- b. Only requirement is input of energy
- c. Cyclic exchange of materials between living beings and environment
- d. Self sufficient unit

Ans. (a) Characterized by a major vegetation type

720. Which is not a structural aspect of an ecosystem?

- a. Life cycle
- b. Diversity
- c. Species composition
- d. Productivity

Ans. (b) Diversity

721. Which of the following are artificial aquatic ecosystems?

- a. Fishery tanks and aquaria
- b. Lakes and canals
- c. Large dams and reservoirs
- d. All of the above

Ans. (d) All of the above

722. Which of the following food chain shows spindle shaped pyramid of number?

- a. Tree → Birds → Insects → Bacteria
- b. Tree → Birds → Hawks
- c. Phytoplankton → Zooplankton → Small fish
- d. Grass → Insects → Frog

Ans. (b) Tree → Birds → Hawks

723. Choose the correct sequence of transitional communities in Xerach succession:

- a. Lichens → Mosses → Herbs
- b. Bryophytes → Herbs → Shrubs
- c. Bryophytes → Forest → Shrubs
- d. Mosses → Lichens → Grasses

Ans. (b) Bryophytes → Herbs → Shrubs

724. Which of the following organisms were not given any place in ecological pyramids?

- a. Decomposers
- b. Parasites
- c. Working at several trophic levels
- d. More than one option is correct

Ans. (d) More than one option is correct

725. According to Robert Constanza average price tag for ecosystem services is:

- a. US \$ 13 trillion
- b. US \$ 180 trillion
- c. US \$ 33 trillion
- d. US \$ 18 trillion

Ans. (c) US \$ 33 trillion

726. Major utilization of carbon from atmosphere is through:

- a. Human activities
- b. Respiration
- c. Photosynthesis
- d. Decomposition

Ans. (c) Photosynthesis

727. Mineralization is performed by:

- a. Earthworms and termites
- b. Saprophytic bacteria and fungi
- c. Detritivores
- d. Small carnivores

Ans. (b) Saprophytic bacteria and fungi

728. Area where succession can take several thousands years to reach climax community is:

- a. Abandoned farm lands
- b. Flooded land
- c. Sand dunes
- d. Brunt and cut the forests

Ans. (b) Flooded land

729. Productivity contributed by oceans is but area covered is comparatively

- a. 50%, 71%
- b. 10%, 71%
- c. Low, more
- d. High, less

Ans. (c) Low, more

730. Choose odd one out w. r. t. gaseous cycle:

- a. Phosphorus
- b. Nitrogen
- c. Hydrogen
- d. Carbon

Ans. (a) Phosphorus

731. Which of the following organisms convert plant matter into animal matter?

- a. Frog
- b. Termites
- c. Goat
- d. Earthworm

Ans. (c) Goat

732. Seral stages in succession:

- a. Show maximum niche specialization
- b. More numerous in secondary successions
- c. Have higher biomass
- d. Possess low diversity

Ans. (d) Possess low diversity

733. The most common shape of pyramid of number is:

- a. Upright
- b. Spindle
- c. Umed
- d. Inverted

Ans. (a) Upright

734. Amount of inorganic substances present in an ecosystem is Energy flow is a feature of ecosystem.

- a. Standing state, structural
- b. Standing crop, functional
- c. Standing state, functional
- d. Standing crop, structural

Ans. (c) Standing state, functional

735. Choose the correct change during ecological succession:

- a. Humus content decreases
- b. Low degree of diversity
- c. Decomposers also change
- d. Total biomass decreases

Ans. (c) Decomposers also change

736. Which of the following trophic levels are occupied by sparrow?

- a. Primary consumer, secondary consumer
- b. Primary producer, secondary producer
- c. Secondary consumers, top carnivores
- d. Primary consumers, primary producer

Ans. (a) Primary consumer, secondary consumer

737. Choose incorrect option for the cost distribution of ecosystem services:

- a. Habitat for wildlife—6%
- b. Climate regulation—6%
- c. Nutrient cycling—> 10%
- d. Soil formation—50%

Ans. (c) Nutrient cycling—> 10%

738. Raw material for decomposition represented by dead organic matter is:

- a. Humus
- b. Minerals
- c. Only roots
- d. Detritus

Ans. (d) Detritus

739. Carbon constitutes of dry weight of organism and percentage is dissolved in oceans out of total global carbon.

- a. 71%, 71%
- b. 49%, 49%
- c. 71%, 49%
- d. 49%, 71%

Ans. (d) 49%, 71%

740. Major site of decomposition in the soil and water bodies respectively is:

- a. Bottom and top layer
- b. Upper and top layer
- c. Upper and bottom layer
- d. Bottom and upper layer

Ans. (c) Upper and bottom layer

741. Succession proceeds from:

- a. Mesic → Xeric conditions
- b. Xeric → Mesic conditions
- c. Hydric → Mesic conditions
- d. More than one options is correct

Ans. (d) More than one options is correct

742. Pioneer community established on a bare rock is:

- a. Higher plants
- b. Phytoplankton
- c. Lichens
- d. Mosses

Ans. (c) Lichens

743. To make the study of global ecosystem easier, it is broadly divided into how many basic categorizes?

- a. Five
- b. Four
- c. Three
- d. Two

Ans. (d) Two

744. Ecological succession is and changes in species composition.

- a. Sequential and disorderly
- b. Gradual and un-sequential
- c. Unpredictable and orderly
- d. Orderly and sequential

Ans. (d) Orderly and sequential

745. What percentage of PAR can be captured by plants?

- a. 50%
- b. 20%
- c. 2–10%
- d. 1–5%

Ans. (c) 2–10%

746. In hydrarch succession, reed swamp stage is preceded by:

- a. Floating stage
- b. Sedge meadow stage
- c. Forest community
- d. Scrub stage

Ans. (a) Floating stage

747. Mummification results in the formation of substance.

- a. Light coloured, colloidal
- b. Amorphous, light coloured
- c. Acidic, dark coloured
- d. Colloidal, basic

Ans. (c) Acidic, dark coloured

748. Major conduit of energy in land and aquatic ecosystem is transferred through and respectively.

- a. GFC, GFC
- b. DFC, GFC
- c. PFC, GFC
- d. GFC, DFC

Ans. (b) DFC, GFC

749. Buildup of organic material in soil is under which of the following conditions to:

- a. Aerobic conditions > 25°C temperature
- b. Nitrogen detritus, optimum moisture
- c. Warm temperature, humid environment
- d. < 10°C temperature, absence of oxygen

Ans. (d) < 10°C temperature, absence of oxygen

750. Choose odd one out w. r. t. functional species of ecosystem:

- a. Nutrient cycling
- b. Specious compositions
- c. Decomposition
- d. Energy flow

Ans. (b) Specious compositions

751. Magnitude of primary productivity is affected by:

- a. Photosynthetic capacity producers
- b. Temperature availability of nutrients
- c. Solar radiations available, availability of nutrients
- d. All of the above

Ans. (d) All of the above

752. If 10,000 J of energy fall on piece of land, then what is the energy available at T₂ level?

- a. 10 J
- b. 1 J
- c. 100 J
- d. 1000 J

Ans. (a) 10 J

753. Rate of production of organic matter by producers per unit time and area is:

- a. NPP–R
- b. GPP
- c. NPP
- d. More than one option is correct

Ans. (b) GPP

754. Choose incorrect option w. r. t. amount of living material present in different trophic levels at a given time:

- a. Expressed both as biomass and number
- b. Is always represented as dry weight only
- c. Is equivalent to standing crop
- d. Can be measured as number

Ans. (a) Expressed both as biomass and number

755. Which of the following represents largest man made ecosystem?

- a. Agroecosystem
- b. Aquarium
- c. Garden
- d. Zoo

Ans. (a) Agroecosystem

756. Trees → Birds → Lice → Bacteria. Above food chain is:

- a. Parasitic
- b. Detritus
- c. Grazing
- d. Predatory

Ans. (a) Parasitic

757. Researchers like Robert Constanza, et. al. have put an average price tag of US \$ trillion a year on the fundamental ecological services.

- a. 6
- b. 10
- c. 33
- d. 50

Ans. (c) 33

758. Phosphorus is major component of:

- a. Cellular energy transfer system
- b. Biological membranes
- c. Nucleic acids
- d. All of these

Ans. (d) All of these

759. What amount of carbon is fixed in the biosphere through photosynthesis annually?

- a. 4×10^{13} kg
- b. 10^4 kg
- c. 3×10^4 kg
- d. 4×10^{13} g

Ans. (a) 4×10^{13} kg

760. During the process of ecological succession:

- a. Food chain relationship become simple
- b. Niche become specialized
- c. Structural complexity decreases
- d. Species diversity decreases

Ans. (b) Niche become specialized

761. Succession stages that occur on rock is called:

- a. Hydrosere
- b. Lithosere
- c. Halosere
- d. Hydrarch

Ans. (b) Lithosere

762. For tree and grassland ecosystems, pyramid of biomass is:

- a. U-shaped
- b. Spindle shaped
- c. Inverted
- d. Upright

Ans. (d) Upright

763. Amount of living material present different trophic levels at a given time is called:

- a. Standing crops
- b. GPP
- c. Standing state
- d. Standing quality

Ans. (a) Standing crops

764. Which of the following statement about GFC is incorrect?

- a. Major conduit for energy flow in aquatic ecosystems
- b. Size of organisms commonly increases at higher trophic levels

- c. Begins with consumers
- d. Sun is the source of energy

Ans. (c) Begins with consumers

765. Mark the odd one (w. r. t. second trophic level):

- a. Zooplanktons
- b. Cow
- c. Grasshopper
- d. Wolf

Ans. (d) Wolf

766. What percentage of incident solar radiation is captured in photosynthesis by plants?

- a. 50%
- b. 1–5%
- c. 0.2–1%
- d. 0.8–4%

Ans. (b) 1–5%

767. Most important climatic factors that regulate rate of decomposition are:

- a. Moisture and soil pH
- b. Aeration and temperature
- c. Soil pH and aeration
- d. Temperature and soil moisture

Ans. (d) Temperature and soil moisture

768. Mark the odd one w. r. t. humus:

- a. Serves as a reservoir of nutrients
- b. Undergoes decomposition at very fast rate
- c. Colloidal in nature
- d. Slightly acidic

Ans. (a) Serves as a reservoir of nutrients

769. Which of the following statement about decomposition is incorrect?

- a. Saprophytic bacteria and fungi secrete digestive enzymes over the fragmented detritus
- b. In fragmentation, detritivores break down detritus into smaller particles
- c. Water insoluble organic nutrients go down into the soil horizon during the process of leaching
- d. Decomposers break down complex organic matter into organic substances

Ans. (c) Water insoluble organic nutrients go down into the soil horizon during the process of leaching

770. Mark the incorrect match:

- a. Secondary productivity—rate of formation of new organic matter by consumers
- b. 55 billion tons—annual NPP of oceans
- c. GPP—available biomass for the consumption to herbivores
- d. Primary productivity—varies in different types of ecosystems

Ans. (c) GPP—available biomass for the consumption to herbivores

771. Rate of organic matter stored by producers in their bodies per unit time and area is called:

- a. Ecological efficiency
- b. Secondary productivity
- c. NPP
- d. GPP

Ans. (c) NPP

772. Which of the following ecosystem can be included in the least productive category?

- a. Sugarcane field
- b. Tropical rain forest
- c. Desert
- d. Coral reef

Ans. (a) Sugarcane field

773. Primary productivity is expressed in terms of:

- a. $\frac{K_{cal}}{m^2}$
- b. Yr/gm²
- c. $\frac{K_{cal} \times Yr}{m^2}$
- d. $(K_{cal} m^{-2}) yr^{-1}$

Ans. (c) $\frac{K_{cal} \times Yr}{m^2}$

774. Boundaries between one ecosystem and another are indistinct and overlapping therefore all ecosystems on the earth are joined together to form a single global ecosystem known as:

- a. Community
- b. Biosphere
- c. Species
- d. Population

Ans. (b) Biosphere

775. Artificial ecosystems are characterized by:

- a. More cycling of nutrients
- b. Complex food chain
- c. High diversity
- d. High productivity

Ans. (a) More cycling of nutrients

776. Which of the following ecosystem lacks one or more structural component(s)?

- a. Forest ecosystem
- b. Deep sea
- c. Freshly formed rain water pond
- d. More than one option is correct

Ans. (c) Freshly formed rain water pond

777. Which biome is characterized by low temperatures, permafrost and little precipitation?

- a. Tropical rainforest
- b. Tundra
- c. Desert
- d. Taiga

Ans. (b) Tundra

778. Which term describes the maximum population size that an environment can support indefinitely?

- a. Carrying capacity
- b. Growth rate
- c. Density-dependent factor
- d. Limiting factor

Ans. (a) Carrying capacity

779. Which of the following are the two correct properties of air?

- a. Air has weight and is colorless
- b. Air has taste and is invisible
- c. Air has no pressure and occupies no space
- d. It is not tasteless less and is a mixture of many gases

Ans. (d) It is not tasteless less and is a mixture of many gases

780. Identify the correct sequence of atmospheric layers form the ground level:

- a. Thermosphere → mesosphere → stratosphere → troposphere
- b. Mesosphere → stratosphere → troposphere → thermosphere
- c. Troposphere → stratosphere → mesosphere → thermosphere
- d. Stratosphere → troposphere → mesosphere → thermosphere

Ans. (c) Troposphere → stratosphere → mesosphere → thermosphere

781. Mention the category that is the worst sufferer of destruction of environment:

- a. Moderate class
- b. Rich
- c. Poor
- d. All of the above

Ans. (c) Poor

782. Name the most frequent as well as naturally happening disaster.

- a. Earthquake
- b. Flood
- c. Tsunami
- d. None of the above

Ans. (b) Flood

783. How many biodiversity hotspots exist in the world?

- a. 34
- b. 30
- c. 35
- d. 36

Ans. (d) 36

784. Name the day that is celebrated as the World Environment Day.

- a. June 5th b. June 6th
- c. June 8th d. June 10th

Ans. (a) June 5th

785. What would happen to the Earth in the absence of ants?

- a. Destruction of life b. Little impact
- c. Reduction in termites d. No effect

Ans. (a) Destruction of life

786. Which activity can tend to lower the water table?

- a. Overgrazing
- b. Human population growth
- c. Soil erosion
- d. Over extraction of groundwater

Ans. (d) Over extraction of groundwater

787. Jowar as well as Bajra grows in regions having:

- a. High amount of moisture
- b. Low amount of moisture
- c. No moisture
- d. None of the above

Ans. (b) Low amount of moisture

788. What is the reason behind the blue color of the sky?

- a. The water vapor is present
- b. The sunlight gets scattered due to the air molecules
- c. The blue light gets absorbed by the air
- d. The blue light is emitted through the atmosphere

Ans. (b) The sunlight gets scattered due to the air molecules

789. Name the sea that is commonly referred to as an oceanic desert.

- a. Sargasso Sea b. Red Sea
- c. Sea of Japan d. Arabian Sea

Ans. (a) Sargasso Sea

790. Name the gas that is vital in maintaining atmospheric temperature.

- a. Oxygen b. Carbon dioxide
- c. Nitrogen d. None of the above

Ans. (b) Carbon dioxide

791. Who discovered the term 'ecosystem'?

- a. Odum b. Elton
- c. Arthur G Tansley d. Clements

Ans. (c) Arthur G Tansley

792. All species on earth with each other along with their respective environments collectively constitute:

- a. Biosphere b. Atmosphere
- c. Hydrosphere d. Lithosphere

Ans. (a) Biosphere

793. Which two countries of the world constitute about 57% of the large dams?

- a. India and China b. India and Brazil
- c. China and Brazil d. India and Japan

Ans. (a) India and China

794. Environmental science is called multidisciplinary as it involves:

- a. Only physical aspects of environment
- b. Only chemical aspects of environment
- c. Only biological components of the environment
- d. All of the above

Ans. (d) All of the above

795. The branch of environmental studies deals with:

- a. The study of humanities
- b. The study of new materials
- c. Natural world and living organisms surrounding them
- d. Incorporation of deep-sea ocean

Ans. (c) Natural world and living organisms surrounding them

796. Environmental science teaches the citizens to be:

- a. More sustainable b. Not ecofriendly
- c. To cut trees d. To pollute water

Ans. (a) More sustainable

797. Environmental science deals with:

- a. Ecosystem functioning
- b. Ecology and biomes
- c. Environmental regulations
- d. All of the above

Ans. (d) All of the above

798. Environmental sciences is also component of:

- a. Earth systems b. Water systems
- c. Ocean systems d. All of the above

Ans. (d) All of the above

799. The atmospheric science deals with:

- a. Oceans
- b. Gases we breath around us

- c. Forests
- d. Mountains

Ans. (b) Gases we breath around us

800. The segment of the environment dealing with soils is:

- a. Atmosphere
- b. Lithosphere
- c. Hydrosphere
- d. Ionosphere

Ans. (b) Lithosphere

801. The segment of environment dealing with oceans is:

- a. Atmosphere
- b. Lithosphere
- c. Hydrosphere
- d. Ionosphere

Ans. (c) Hydrosphere

802. With reference to food chains in ecosystems, consider the following statements:

1. A food chain illustrates the order in which a chain of organisms feed upon each other
2. Food chains are found within the populations of a species
3. A food chain illustrates the numbers of each organism which are eaten by others

Which of the statements given above is/are correct?

- a. 1 only
- b. 1 and 2 only

- c. 1, 2 and 3
- d. None

Ans. (a) 1 only

803. In the grasslands, trees do not replace the grasses as a part of an ecological succession because of:

- a. Insects and fungi
- b. Limited sunlight and paucity of nutrients
- c. Water limits and fire
- d. None of the above

Ans. (c) Water limits and fire

804. As per the 2006 millennium ecosystem assessment, which one of the following is supporting service?

- a. Production of food
- b. Control of climate
- c. Nutrient cycling
- d. Disease regulation

Ans. (c) Nutrient cycling

805. Lichens, which are capable of initiating ecological succession even on a bare rock, are actually a symbiotic association of:

- a. Algae and bacteria
- b. Algae and fungi
- c. Bacteria and fungi
- d. Fungi and mosses

Ans. (b) Algae and fungi