EXERCISE – I (Conceptual Question) Build Up your Understanding

ORGANISM TO SOME TERMINOLOGY

1. Endemic plants -
(1) Cosmopolitan (2) Occur in a particular area
(3) Occur at high altitudes (4) Occur on north pole

2. Increase of population under optimum condition is termed.
(1) Reproductive ability (2)Secondary production
(3) Biotic potential (4) Biomass

3. Occurence of endemic species in South America and Australia due to :-
(1) These species has been extinct from other regions
(2) Continental separation
(3) There is no terrestrial route to these places
(4) Retrogressive evolution

4. In a population unrestricted reproductive capacity is called as :
(1) Biotic potential (2) Fertility (3) Carrying capacity (4) Birth rate

5. What is true for individuals of same species :
(1) Live in same niche (2) Live in same habitat
(3) Interbreeding (4) Live in different habitat

6. When the two ecosystems overlap each other the area is called.
(1) Ecotone (2) Niche (3) Edge effect (4) Ecotypes

7. The community which starts succession at a place is termed
(1) Climax community (2) Seral community (3) Pioneer community (4) Primary community

8. Earliest settlers on barren lands or the farmers of nature are
(1) Diatoms (2) Lichens (3)Moss & grasses (4) Ferns

9. In plant succession last community is called :
(1) Ecotone (2) Climax community
(3) Seral community (4) Ecosystem

10. Group of two or more than two plant species is called as:-
(1) Plant community (2) Animal ecosystem (3) Plant ecosystem (4) Ecological niche ·

11. Stable plant community formed during succession is called-

(1) Sere community (2) Climax community
(3) Dominant community (4) Ecotone

12. Succession in a water body leads to formation of
(1) Mesophytic vegetation (2) Xerophytic vegetation
(3) Halophytic vegetation (4) Epiphytic vegetation

13. Competition for food, light and space is most severe in-
(1) Closely related species growing in the same area (in the same niche)
(2) Closely related species growing in different habitat
(3) Distantly related species growing in the same habitat
(4) Distantly related species growing in different habitat

14. Most successful parasites are those which do not
(1) Grow free (2) Kill their host (3) Reproduce sexually (4) Survive in soil

15. The basic unit of ecological study is :-
(1) species (2) organism (3) community (4) biosphere

16. Mycorrhizae relationship between fungi and roots of higher plants is ?
(1) Parasitic relationship (2) Saprophytic relationship
(3) Symbiotic relationship (4) Epiphytic relationship

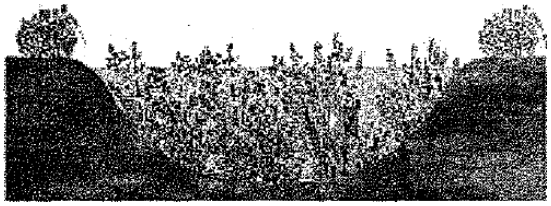
17. Parasites adversely affect :
(1) Survival of host (2) Growth of host
(3) Reproduction potential of host (4) All of the above

18. Identify the correct match :-

Column – I	**Column – I**
(i) Species diversity	(a) Great influence on community stability
(ii) Species dominance	(b) Zonation according to the need of light
(iii) Stratification	(c) Different types of species in a community
(iv) Keystone species	(d) Highest number of type of species

(1) i-c, ii-b, iii-a, iv-d (2) i-c, ii-d, iii-b, iv-a (3) i-b, ii-a, iii-d, iv-c (4) i-b, ii-d, iii-a, iv-c

19. The given diagram is related to which stage of succession?



(1) Pioneer community (2) Reed swamp stage
(3) Submerged plant stage (4) Submerged free floatins plant stage

20. The group of organisms of different species forms a :-
(1) Community (2) Population (3) Ecosystem (4) Biome

21. Consider the following statements and select the option which includes all the correct ones only:
(a) Succession is parallel with the changes in the physical environment.
(b) As succession proceeds, the number and types of animals and decomposers also change.
(c) Littoral zone has high diversity.
(d) Key stone species are abundantly found in a community.
(1) a, band d (2) b, c and d (3) a, c and d (4) a, band c

22. Which of the following is an epiphyte ?
(1) Orchid (2) Lianas (3) Santalum (4) Mango

23. The correct statement for parasites is/are :-
(a) Host specific parasites & hosts tend to co-evolve
(b) Parasites have highly developed sense organs
(c) Parasites may reduce population density of host
(d) Parasites have highly developed digestive system ·
(1) a and b (2) n and c (3) a and c (4) a and d

ECOLOGY – ECOSYSTEM TO PRODUCTIVITY

24. In an ecosystem :
(1) Primary producers are more than primary consumers
(2) Primary consumers are larger than primary producers
(3) Secondary consumers are larger than primary producers
(4) Primary consumers are least depend on primary producers

25. Ecosystem term coined by -
(1) Odum (2) Mishra (3) Reiter (4) Tansley

26. Large ecosystems are called -
(1) Biomes (2) Ecotone (3) Ecads (4) Biocoenosis

27. Which one is not a functional aspect of ecosytem ?
(1) Energy flow (2) Productivity (3) Decomposition (4) Stratification

28. Vultures in an ecosystem are –
(1) Predators (2) Scavangers (3) Consumers (4) Top carnivores

29. The maximum energy is stored at which of the following trophic level in any ecosystem –
(1) Producers (2) Herbivores (3) Carnivores (4) Top carnivores

30. The source of energy in an ecosystem is –
(1) Sunlight (2) DNA (3) ATP (4) RNA

31. Ecosystem may be defined as –
(1) A localized association of several plants and animals
(2) Different communities of plants, animals and microbes together with thier physico-chemical environment.
(3) Different communities of plants microbes plus their physico-chemical environment
(4) None of the above

32. The importance of ecosystem lies in –
(1) Flow of energy (2) Cycling of materials (3) Both the above (4) None of the above

33. Ecosystem is –
(1) Any functional unit that includes the whole community in a given area interacting with the abiotic factors
(2) A group of green plants
(3) A group of animals interacting with environment
(4) Man and pets living together

34. Who proposed that ecosystem is symbol of structure& function of nature –
(1) Gardner (2) Odum (3) Tansley (4) Reiter

35. Largest ecosystem of the world are
(1) Forests (2) Grass lands (3) Great lakes (4) Oceans

36. Which of the following is a man made artificial ecosystem
(1) Grassland ecosystem (2) Forest ecosystem
(3) Ecosystem of artificial lakes & dams (4) None of these

37. A pond is a:-
(1) Biome (2) Natural ecosystem
(3) Artificial ecosystem (4) Community of plants & animals

38. Nepenthes (Insectivorous pitcher plant) is-
(1) Producer (2) Consumer (3) Both 1 & 2 (4) None of these

39. Which one is omnivorous –
(1) Frog (2) Lion (3) Deer (4) Man

40. Which biotic components mainly help in recycling of minerals :-
(1) Producers (2) Consumers (3) Decomposers (4) All the above

41. Trophic levels are formed by –
(1) Only plants (2) Only carnivores
(3) Only animals (4) Origanisms linked in food chain

42. In a forest ecosystem green plants are –
(1) Primary producers (2) Consumers
(3) Primary consumers (4) Decomposers

43. In an ecosystem the function of the producers is to
(1) Convert organic compounds into inorganic compounds
(2) Trap solar energy and convert it into chemical energy
(3) Utilize chemical energy
(4) Release energy

44. With regard to ecological food chain, man is a -
(1) Consumer (2) Producer
(3) Both consumer& producer (4) decomposer

45. A plant, being eaten by a herbivore which in turn is eaten by a carnivore makes ~
(1) Food chain (2) Web of Food (3) Omnivores (4) Interdependence

46. When peacock, eats snake which eats insects depends on green plants, the peacock is -
(1) a primary consumer (2) a primary decomposer
(3) a final decomposer of plants (4) the apex of the food pyramid

47. If we completely remove decomposers from an ecosystem, the ecosystem functioning will be adversely affected because -
(1) Mineral movement will be blocked
(2) Herbivores will not receive solar energy
(3) Energy flow will be blocked
(4) Rate of decomposition of other components will be very high

48. Bamboo plant is growing in a far forest then what will be the trophic level of it :-

(1) First trophic level (T_1) (2) Second trophic level (T_2)
(3) Third trophic level (T_3) (4) fourth trophic level (T_4)

49. Path of energy flow in an ecosystem is :
(1) Herbivorous → producer → carnivorous → decomposer
(2) Herbivorous → carnivorous → producer → decomposer
(3) Producer → carnivorous → herbivorous → decomposer
(4) Producer → herbivorous → carnivorous → decomposer

50. Pyramids of energy are -
(1) Always upright (2) Always Inverted (3) Mostly upright (4) Mostly inverted

51. The ecological pyramid of numbers in pond ecosystem is -
(1) Upright (2) Inverted
(3) May upright or Inverted (4) First upright then inverted

52. An ecosystem resists change because it is in a state of-
(1) Homoeostasis (2) Regular Illumination
(3) Static Imbalance (4) Food accumination

53. What is true about any ecosystem
(1) It is self regulatory
(2) It is self sustained
(3) Top carnivores have climax trophic level position
(4) All

54. The Pyramid of numbers in grassland ecosystem will be-
(1) Upright (2) Inverted (3) Irregular (4) Linear

55. Which ecosystem has maximum number of producers in an unit area -
(1) Pond (2) Grassland (3) Forest (4) Tundra

56. The storage of energy at consumer level is known as-
(1) Grass primary production (2) Secondary productivity
(3) Net primary productivity (4) Net productivity

57. Gross primary productivity is -
(1) Rate at which organic molecules are formed in an autotroph
(2) Rate at which organic molecules are used up by an autotroph
(3) Storage of organic molecules in the body of an autotroph
(4) Rate at which organic molecule$ are transferred to next higher trophic level.

ECOLOGY – ABIOTIC FACTOR TO BIOSPHERE

58. Carbon cycle includes (the following is a logical sequence)-
(1) Producer- consumer- decomposer (2) Decomposer - consumer – producer
(3) Producer- decomposer- consumer (4) Consumer- producer- decomposer

59. The bulk of nitrogen in nature is fixed by –
(1) Lighting (2) Chemical industries
(3) Denitrifying, bacteria (4) Symbiotic bacteria

60. 60. The flow of materials from non living components to living components and back to the non living components in a more or less cyclic manner is called a-
(1) Gaseous cycle (2) Sedimentary cycle
(3) Biogeochemical cycle (4) Hydrologic cycle

61. Which is best for plant growth –
(1) Loamy soil (2) Silt (3) Sandy soil (4) Clay soil

62. The least porous soil among the following –
(1) Loamy soil (2) Clay soil (3) Sandy soil (4) Peaty soil

63. The science dealing with soil is called –
(1) Pedology (2) Acarology (3) Geology (4) Palaeantology

64. A good soil is that which –
(1) holds whole of the water entering into it
(2) Allows limited amount of water into it
(3) Allows the water to percolate slowly into it
(4) Allows the water to pass very quickly from it

65. The soil near the surface is usually darker then the soil about one mater down. This is because the top soil is
(1) Young & wet (2) Richer in organic matter
(3) Richer in Ca & Mg (4) Dry

66. A soil is said to be fertile when
(1) It is rich in organic matter
(2) It has capacity to hold water
(3) It has a capacity to hold nutrients
(4) It holds water & all essential nutrients in a definite proportion

67. What is the best pH of the soil for cultivation of plants :-
(1) 3.4 - 5.4 (2) 6.5 - 7.5 (3) 4.5 - 8.5 (4) 5.5 - 6.5

68. Forests near equator region are called –

(1) Deciduous (2) Tropical rain forests
(3) Coniferous forests (4) Temperate forests

69. Grass lands with scattered trees are called –
(1) Pampas (2) Stepps (3) Prairies (4) Savanna

70. Temperate evergreen forests in India found in-
(1) Himalaya (2) W. Bengal (3)Andman (4) Rajasthan

71. Which biome refers to arctic desert –
(1) Tundra (2) Taiga (3) Savannah (4) Thar desert

72. Which biome is most rich in fauna and flora –
(1) Deciduous forests (2) Chaparral
(3) Tropical rain forests (4) Taiga

73. Autumn colouration of leaves appear only in –
(1) Tropical regions (2) evergreen plants
(3) temperate deciduous plants (4) deserts

74. Veldts of Africa & Pampas of south America are
(1) Rain forest biomes (2) Chaparral biomes
(3) Temperate biomes (4) Grassland biomes

75. Savannahs are :
(1) Tropical rain forest (2) Desert
(3) Grassland with scattered trees (4) Dense forest with dose canopy

76. All the living organisms and non-living factors of indicates the earth constitute-
(1) Biosphere (2) Community (3) Biome (4) Association

77. The term biosphere is used for the zone of the earth where life exists -
(1) On the lithosphere
(2) In the hydrosphere
(3) In the lithosphere and hydrosphere
(4) In the lithosphere, hydrosphere and atmosphere

78. A biosphere is composed of
(1) Living organisms
(2) Living organisms + Lithosphere
(3) Living organisms + lithosphere + atmosphere
(4) Living organisms + lithosphere + atmosphere + hydrosphere

ECOLOGY-POLLUTION

79. Bloom occurs in -
(1) Oligotrophic lake (2) Eutrophic lake (3) Fast flowing river (4) Rain water

80. Rhododendron is characteristic vegetation of -
(1) Tropical region (2) Mangrove (3) Alpine region (4) Epiphytes

81. Which of the following plant has become a water weed in this country -
(1) Typha (2) Trapa (3) Cyperus (4) Eichornia

82. What is not useful to increase agriculture production
(1) Mechanisation of agriculture (2) Enhanced irrigation facilities
(3) Use of fertilizers (4) Deforestation

83. Which is normally not an air pollutant -
(1) CO (2) SO_2 (3) Hydrocarbons (4) CO_2

84. Acid rains are due to -
(1) O_3 (2) $SO_2 + NO_2$ (3) CO (4) CO_2

85. What is found in photochemical smog -
(1) CO (2) NO_2 (3) Ozone (4) 2 and 3 both

86. Lichens in a habitat indicates-
(1) Zinc in soil (2) Copper in soil
(3) Carbon minixide in air (4) Lack of air pollution

87. Green house effect mainly due to -
(1) SO_2 (2) CO_2 (3) CO (4) O_2

88. Which pollutant exhibits biomagnfication in food chain-
(1) DDT (2) SO_2 (3) CO (4) PAN

89 Which will not cause any atmoshperic pollution -
(1) Hydrogen (2) Sulphur dioxide (3) Carbon dioxide (4) Carbon monoxide

90. Which of the followig is the main factor of water pollution:-
(1) Smoke (2) Industrial waste (3) Detergent (4)Ammonia

91. Main air pollutant among the following is -
(1) CO (2) CO_2 (3) N_2 (4) Sulphur

92. Which is more important for water pollution -
(1) Sound (2) SO_2 (3) Salts of arsenic (4) Sewage

93. Which of the following atmospheric pollutants is not produced by the exhaust of motor vehicle in Delhi-

(1) SO_2 (2) Hydrocarbon gases

(3) Fly ash (4)CO

94. Pollution can be controlled by -

(1) Sewage treatment

(2) Checking atomic blasts

(3) Manufacturing electrically operated vehicles

(4) All the above

95. If water pollution continues at its present rate, it Will eventually-

(1) Stop water cycle

(2) Prevent precipitation

(3) Make oxygen molecules unavailable to water plants.

(4) Make nitrate molecules unavailable to water plants.

96. Exposure of plants to high fluoride concentration results in necrosis or chlorosis characterstically in –

(1) Petiole but not in lamina (2) Only mid rib in lamina

(3) Leaf tip and leaf margins (4) Stem tips only

97. In cities like Bombay and Calcutta the major air pollutants are -

(1) Ozone (2) Carbon monoxide and oxides of Sulphur

(3) Hydrocarbons and hot air (4) Algal spores and marsh gas

98. Recent reports of acid rains in industrial cities are due to the effect of atmospheric pollution by

(1) Excessive release of NO_2 and SO_2 by burning of fossil fuels.

(2) Exessive release of CO_2 by burning of fuel like, wood and characol, cutting of forests and increased animal population.

(3) Excessive release of NH3 by industrial plants and coal gas.

(4) Excessive release of CO in atmosphere by incomplete combustion of coke, characoal and other carbonaceous fuels in pandty of oxygen,

99. Which is the greatest air pollutant these days

(1) Factories (2) Motor vehicles

(3) Domestic appliances (4) animals

100. Removal of the soil by the action of wind and water is known as-

(1) Erosion (2) Fossilization (3) Leaching (4) Calcification

101. Eutrophication refers to-

(1) High production in an aquatic ecosystem (2) Low production in an aquatic ecosystem
(3) Low production in a terrestrial (4) Stable production in a terrestrial ecosystem

102. Photochemical smog was first observed in -
(1) London (2) Los Angeles (3) Paris (4)Tokyo

103. Domestic waste will lead to
(1) Biodegradable pollution (2) Nondegradable pollution
(3) Thermal pollution of soil (4) Air pollution

104. The major source of BOD in the river Ganga is-
(1) Leaf litter (2) Fishes
(3) Human waste (4) Aquatic plants

105. If a lake is contaminated with DDT, its highest concentration would be found in -
(1) Primary consumer (2) Secondary consumer
(3) Tertiary consumer (4) None of these

106. The most harmful air pollutant produced by automobiles is -
(1) HNO_2 (2) NO (3) SO_2 (4) CO

107. Sewage water can be purified by-
(1) Aquatic plant (2) Micro organism (3) Penicillin (4) Fishes

108. Major pollulant in Jet plane emission is -
(1) SO_2 (2) CFC (3) CO (4) $CC1_4$

109. It is said that Tajmahal may be destroyed due to
(1) Flood in Yamuna river
(2) Air pollutants released from oil refinery of Mathura
(3) Decomposition of marble as a result of high temperature
(4) All the above

110. Meltingof the ice caps might result from
(1) Depletion of ozone layer (2) Excess CFC in atmosphere
(3) Excess C02 in the atmosphere (4) Excess water rain

111. Cotton dust is an important pollutant in -
(1) Delhi (2)Ahmedabad (3) Madras (4) Calcutta

112. Some effects of SO_2 and its transformation products on plant include -
(1) Chlorophyll destruction (2) Plasmolysis

(3) Golgi body destruction (4) None

113. All the following contribute to pollution except -
(1) Thermal power plant (2) Automobiles
(3) Nuclear power plant (4) Hydroelectric power project

114. The molecular action_ of ultraviolet light is mainly reflected through -
(1) Destruction of hydrogen bonds in DNA (2) Photodynamic action
(3) Formationof pyrimidine (4) Formation of sticky metaphase

115. Spraying of DDT on crops produces pollution of -
(1) Soil and water only (2) Air and soil only
(3) Air, soil and water (4) Air and water only

116. What is B.O.D. :-
(1) The amount of O_2 utilised by organisms in water
(2) The amount of O_2 utilized by micro organisms for decomposition
(3) The total amount of 0 2 present in water.
(4) All of the above

117. What is the intensity of sound in normal conversation
(1) 10 - 20 decibal (2) 30 - 60 decibal (3) 70- 90 decibal (4) 120 - 150 decibal

118. Which of the following is absent in polluted water:-
(1) Hydrilla (2) Water hyacinth (3) Larva of stone fly (4) Blue green algae

119. Maximum green house gas released by which country:-
(1) India (2) France (3) China (4) Britain

120. Ozone layer of upper atmosphere destroyed by :
(1) Sulphurdioxide (2) Carbondioxide
(3) Chlorofluorocarbon (4) Smog

121. Most hazardous metal pollutant of automobile exhaust is:
(1) Hg (2) Cd (3) Pb (4) Cu

122. B.O.D. is connected with
(1) Organic matter (2) Microbes (3) Both (4) None

123. Phytotron is a device by which -
(1) electrons are bombarbed
(2) protons are liberated
(3) plants are grown i? controlled environment

(4) Mutations are produced in plants

124. Which is not a renewable source-
(1) Forest (2) Coal (3) Water (4) Forest organism

125. Biosphere refers to
(1) Plants of the world (2) Special plants
(3) Area occupied by living beings (4) Plants of a particular area

126. Which of the following is the non conventional source of energy
(1) Coal (2) Petroleum
(3) Electricity from nuclear power plants (4) Solar radiations

127. Petroleum resource is
(1) Renewable (2)Non renewable
(3) Synthetic (4) Infinite& nonconventional

128. Red data book is famous for-
(1) Extinct plants and animals (2) Extinct plants only
(3) Endangered plants and animals (4) Extinct animals only

129. Green book contains:-
(1) The list of endangered plants
(2) The list of extinct plants
(3) The list of rare plants grown in botanical gardens
(4) Flora of certain area

130. The method by which endangered plant species are conserved in a botanical garden or in some controlled circumstances -
(1) Afforestation (2) In situ conservation
(3) Ex situ conservation (4) None of the above

131. Which one of the following may be the reason for extinction of plant species due to human activities-
(1) Earthquakes (2) Pollution (3) Diseases (4) Evolution

132. The main aim of plant conservation is-
(1) To conserve the necessary ecological activities and life supporting systems
(2) To conserve species diversity and range of genetic meterial
(3) Both the above
(4) None of the above

133. Which of the following species in an endangered state

(1) Indian bustard & rhino (2) Asiatic donkey
(3) Black buck (4) All the above

134. Wild life protection act was enacted in India in
(1) 1947 (2) 1962 (3) 1972 (4) 1992

135. Number of wild life is continuously decreasing. What is the main reason of this :-
(1) Predation (2) Cutting down of forest
(3) Destruction of habitat (4) Hunting

136. One of the following is associated with the conservation of forests
(1) Kaziranga (2) Ghana (3) Silent valley (4) Gir

ANSWER KEY

EXERCISE-I (Conceptual Questions)

1.	(2)	**2.**	(3)	**3.**	(2)	**4.**	(1)	**5.**	(3)	**6.**	(1)	**7.**	(3)
8.	(2)	**9.**	(2)	**10.**	(1)	**11.**	(2)	**12.**	(1)	**13.**	(1)	**14.**	(2)
15.	(2)	**16.**	(3)	**17.**	(4)	**18.**	(2)	**19.**	(2)	**20.**	(1)	**21.**	(4)
22.	(1)	**23.**	(3)	**24.**	(1)	**25.**	(4)	**26.**	(1)	**27.**	(4)	**28.**	(2)
29.	(1)	**30.**	(1)	**31.**	(2)	**32.**	(3)	**33.**	(1)	**34.**	(3)	**35.**	(4)
36.	(3)	**37.**	(2)	**38.**	(3)	**39.**	(4)	**40.**	(3)	**41.**	(4)	**42.**	(1)
43.	(2)	**44.**	(1)	**45.**	(1)	**46.**	(4)	**47.**	(1)	**48.**	(1)	**49.**	(4)
50.	(1)	**51.**	(1)	**52.**	(1)	**53.**	(4)	**54.**	(1)	**55.**	(1)	**56.**	(2)
57.	(1)	**58.**	(1)	**59.**	(4)	**60.**	(3)	**61.**	(1)	**62.**	(2)	**63.**	(1)
64.	(3)	**65.**	(2)	**66.**	(4)	**67.**	(4)	**68.**	(2)	**69.**	(4)	**70.**	(1)
71.	(1)	**72.**	(3)	**73.**	(3)	**74.**	(4)	**75.**	(3)	**76.**	(1)	**77.**	(4)
78.	(4)	**79.**	(2)	**80.**	(3)	**81.**	(4)	**82.**	(4)	**83.**	(4)	**84.**	(2)
85.	(4)	**86.**	(4)	**87.**	(2)	**88.**	(1)	**89.**	(1)	**90.**	(2)	**91.**	(1)
92.	(4)	**93.**	(3)	**94.**	(4)	**95.**	(3)	**96.**	(3)	**97.**	(2)	**98.**	(1)
99.	(2)	**100.**	(1)	**101.**	(1)	**102.**	(2)	**103.**	(1)	**104.**	(3)	**105.**	(3)
106.	(4)	**107.**	(2)	**108.**	(2)	**109.**	(2)	**110.**	(3)	**111.**	(2)	**112.**	(1)
113.	(4)	**114.**	(1)	**115.**	(3)	**116.**	(2)	**117.**	(2)	**118.**	(3)	**119.**	(3)
120.	(3)	**121.**	(3)	**122.**	(3)	**123.**	(3)	**124.**	(2)	**125.**	(3)	**126.**	(4)
127.	(2)	**128.**	(3)	**129.**	(3)	**130.**	(3)	**131.**	(2)	**132.**	(3)	**133.**	(4)
134.	(3)	**135.**	(3)	**136.**	(3)								