

ZOOLOGY QUESTION BANK

TDC - PART-I

HONOURS PAPER-II **(Ecology, Animal behavior and** **Biometry)**

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MULTIPLE CHOICE QUESTIONS



UNIVERSITY DEPARTMENT OF
ZOOLOGY

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ECOLOGY

1. Ecology term was coined by-
(a) Hutchinson (b) Aristotle (c) Drawin (d) Haeckel
2. The study of the structure and function of nature and environment is known as
(a) Ecology (b) Autecology
(c) Synecology (d) None of these
3. Study of the ecology of the individual is known as-
(a) Synecology (b) Community ecology
(c) Autecology (d) Ecosystem
4. The organisms which can manufacture food substances from simple components viz., water and carbon-dioxide are called
(a) Producers (b) Consumers
(c) Decomposers (d) None of these
5. The natural place of an organism or community is known as
(a) Niche (b) Biome (c) Habit (d) Habitat
6. Which is the renewable exhaustible natural energy resource?
(a) Biomass (b) Kerosene
(c) Petroleum (d) Coal
7. According to Shelford's law of tolerance, the organism's wide environmental factor tolerance limit show
(a) Narrow distribution with low population size
(b) Wide distribution with high population size
(c) Narrow distribution with high population size
(d) Wide distribution with low population size
8. Plants growing under direct sunlight known as
(a) Heliophytes (b) Sciophytes (c) Psamphytes (d) Dicots
9. Plants growing under shade are known as
(a) Psamphytes (b) Sciophytes
(c) Heliophytes (d) Monocots
10. Which of the following requires maximum energy?
(a) Primary producer (b) Primary consumer
(c) Secondary producer (d) Decamposer

11. The bottom area where production is less than respiration in a pond ecosystem is termed as
(a) Profundal zone (b) Tidal zone
(c) Benthic zone (d) Limnetic zone
12. Which is not the characteristics of a population?
(a) Natality (b) Mortality (c) Stratification (d) Sex ratio
13. The ability of a population to increase under ideal environmental conditions is called -
(a) Natality (b) Carrying capacity
(c) Biotic potential (d) Absolute natality
14. Select a non-denitrifying bacteria
(a) Pseudomonas aeruginosa (b) Thiobacillus
(c) Thiobacillus denitrificans (d) Bacillus ramosus
15. What is the name of the feature that allows organisms to survive in the conditioning of its habitat?
(a) Adjustment (b) Adaptation
(c) Acclimatisation (d) Adaptive variation
16. Shelford's law of tolerance is named after
(a) James Shelford (b) Jacob Shelford
(c) Ernest Shelford (d) None of these
17. Wide variety of living organisms is called-
(a) Biodiversity (b) Population (c) Habitat (d) Diversity
18. Animals adopt a similar state like sleep to reduce their metabolic rate, it is called
(a) Migration (b) Transpiration (c) Hibernation (d) None of these
19. Hyenas and vultures are
(a) Omnivorous (b) Scavengers
(c) Carnivorous (d) Herbivorous
20. Which of the following is the smallest artificial ecosystem that has sustained for a long period?
(a) Folsom pond (b) Folsom bottle
(c) Folsom stream (d) None of these

21.group of species exploits the abiotic and biotic resources in the same way.
(a) community (b) Ecads (c) Biomes (d) Guild
22. Which is/are the abiotic camponents of an ecosystem?
(a) Soil (b) Protein (c) Carbon (d) All of thes above
23. The set of ecosystem is called -
(a) Atomosphere (b) Hydrosphere
(c) Biosphere (d) None of these
24. Acid rain is a result of-
(a) Excess amount of CO₂ (b) Excess amount of NH₃
(c) Excess amount of SO₂ and NO₂ (d) Excess amount of CO
25. The greenhouse effect in the atmosphere is produced due to
(a) Absorption and re-emission of infrared radiation by the atmosphere
(b) Absorption and re-emission of ultraviolet radiation by the atmosphere
(c) Absorption and re-emission of visible light by the atmosphere
(d) Absorption and re-emission of visible light by clouds
26. The result of acid disposition is
(a) Dying forests and lakes (b) Acid indigestion in humans
(c) Green house effect lessens (d) All of these
27. The reason of soild pollution is
(a) Oil and fuel dumping (b) Diseharge of sewage
(c) Nuclear wastes (d) All of these
28. Which one mammal is adapted for desert?
(a) Dipodymus (b) Horse (c) Sheep (d) None of these
29. Carbon dioxide is
(a) Abiotic factor (b) Biotic factor (c) Abiotic (d) None
30. Dogs, Cats, Foxes, Wolves etc. are
(a) Primary consumers (b) Secondary consumers
(c) Producers (d) Decomposers
31. Green plants are
(a) Producers (b) Primary consumers
(c) Secondary consumers (d) Decomposers

32. Volvox, Spirogyra, Ceratium, Oscillatoria etc. are
(a) Phytoplanktons (b) Zooplanktons
(c) Surface floating plants (d) Nektons
33. Insect and insect larvae which feed upon plants are
(a) Nektons (b) Benthos (c) Zooplanktons (d) None of these
34. Animals drifting on water surface through the agencies of water current and include dinoflagellates, helizoans and copepods are
(a) Decomposers (b) Zooplanktons
(c) Nektons (d) Benthos
35. **Pistia, Wolffia, Lemna** etc. are
(a) Filamentous algae (b) Submerged plants
(c) Surface-floating plants (d) Marginal plants
36. Semienclosed body of water where the salinity is intermediate between the sea and fresh water is known as
(a) Pond (b) Delta (c) Estuary (d) Island
37. The ecosystem, where the annual rainfall is intermediate between that of desert and forest lands (25 cm to 75 cm) is known as
(a) Terrestrial ecosystem (b) Fresh water marsh ecosystem
(c) Grassland ecosystem (d) None of these
38. The ecosystem with less than 25 cm of annual rainfall is known as
(a) Grassland ecosystem (b) Terrestrial ecosystem
(c) Desert ecosystem (d) Forest ecosystem
39. Deserts cover about.....of the total land.
(a) 5% (b) 17% (c) 40% (d) 70%
40. Ocean covers about.....of earth's surface.
(a) 5% (b) 17% (c) 40% (d) 70%
41. Forests cover about.....of our land
(a) 5% (b) 17% (c) 40% (d) 70%
42. The youngest and highest mountains of today are the Himalayas, the Andes and the Alps. All of them were thrown up during the Laramide revolution, someyears ago.
(a) 10 million (b) 30 million (c) 10 thousand (d) 30 thousand

43. Annual fixation of CO₂ by green plants in photosynthesis is about
 (a) 4.9×10^{10} kgs (b) $4 \text{ to } 9 \times 10^{13}$ kgs
 (c) $4 \text{ to } 9 \times 10^{10}$ kgs (d) 49×10^{13} kgs
44. According to Hutchinson (1944), the amount of nitrogen fixed biologically is
 (a) 40-70 mg/m²/year (b) 140-700 mg/m²/year
 (c) 1400-7000 mg/m²/year (d) 1.4-7 mg/m²/year
45. According to Hutchinson (1944), the amount of nitrogen fixed by photosynthesis and electrification is about
 (a) 3.5 mg/m²/year (b) 35 mg/m²/year
 (c) 350 mg/m²/year (d) 3500 mg/m²/year
46. The enzyme responsible for nitrogen fixation is
 (a) Nitrifying enzyme (b) Isomerase (c) Lipase (d) Nitrogenase
47. **Nitrosomonas** bacteria converts
 (a) Nitrites into nitrates (b) Ammonia into nitrite
 (c) Nitrates into nitrites (d) Nitrite into ammonia
48. **Nitrobacter** bacteria converts
 (a) Nitrite into ammonia (b) Nitrates into nitrites
 (c) Ammonia into nitrite (d) Nitrites into nitrates
49. **Rhizobium** etc. bacteria help in nitrogen fixation. They
 (a) live freely in the soil (b) live freely in water
 (c) are symbiotic and grow in the roots of leguminous plants
 (d) None of these
50. Some blue green algae play an important role in nitrogen fixation in water. These are
 (a) **Spirogyra** etc. (b) **Oscillatoria**
 (c) **Nostoc, Anabaena** etc. (d) None of these
51. The amount of energy received on a surface outside the earth's atmosphere is
 (a) 1 calory per square millimetre
 (b) 1 calory per square centimeter
 (c) 2 calories per square centimeter
 (d) 5 calories per square centimeter

52. Earth surface receives about
(a) 19% of the total solar radiation
(b) 29% of the total solar radiation
(c) 87% of the total solar radiation
(d) 57% of the total solar radiation
53. About 8% light energy falls upon plants, of which 75-85% is absorbed and only.... of it is utilized in photosynthesis.
(a) 50% (b) 75% (c) 85% (d) 95%
54. Solid pollutants occur in the form of small particles. These particles may be fine or coarse. Fine particles are
(a) below 100 μ in diameter (b) above 200 μ in diameter
(c) below 10 μ in diameter (d) below 500 μ in diameter
55. Coarse particles of solid pollutants are
(a) below 10 μ in diameter (b) above 100 μ in diameter
(c) below 1 μ in diameter (d) below 50 μ in diameter
56. If cattle is exposed to fluoride containing dust, it suffers from
(a) Necrosis (b) Plurosis (c) Bronchitis (d) Silicosis
57. Motor vehicles alone participate about....of air pollution
(a) 10% (b) 25% (c) 60% (d) 90%
58. The effect of zinc on man is
(a) vomiting, renal damage etc. (b) headache, diarrhoea etc.
(b) anaemia, brain damage etc. (d) Nonte of these
59. The effect of lead on man is
(a) anaemia, brain damage, liver damage etc.
(b) abdominal pai, headache etc. (c) Paralysis
(d) None of these
60. Loudness of sound is measured in terms by
(a) Hertz (Hz) (b) Watt per square metre (W/m^2)
(c) Decibel (dB) (d) Newton
61. Sound produced during ordinary conversation is about
(a) 50-60 dB (b) 90 dB (c) 150 dB (d) 25 dB

62. Thunder clap is uncomfortable loud. It produces
(a) 50 dB (b) 90 dB (c) 120 dB (d) 150 dB
63. Rocket engine produces a sound of
(a) 25 dB (b) 60 dB (c) 120 dB (d) 180 dB
64. The number of sanctuaries in our country is
(a) 53 (b) 73 (c) 247 (d) 566
65. The number of national parks in our country is
(a) 5 (b) 25 (c) 53 (d) 104
66. The unique species of our country are
(a) Tiger, Lion etc. (b) Moneky, Leopard etc.
(c) Golden langur, Black buck, Pigmy hog etc.
(d) Crocodiles, Antelopes etc.
67. The fauna of our country includes
(a) 200 species of mammals, 400 species of birds and 300 species of reptiles
(b) 300 species of mammals, 600 species of birds and 400 species of reptiles
(c) 400 species of mammals, 1200 species of birds and 350 species of reptiles
(d) 100 species mammals, 200 species of birds and 150 species of reptiles.
68. Moisture getting is the primary need of
(a) Desert forms (b) Aquatic forms (c) Aerial forms (d) None
69. Evaporation is avoided either by leaflessness or by reduced leaves in
(a) Aquatic plants (b) Desert plants (c) Grassland plants (d) None
70. Some plants and animals (such as horned toad) have hard surface and spines, which provide them protection in
(a) Aquatic life (b) Aerial life (c) Desert life (d) None
71. Fresh water protozans eliminate their excess water with the help of
(a) Food vacuole (b) Contractile vacuole
(c) Lysosomes (d) Kidney

72. In sea, we find that from the surface to bottom temperature
(a) decreases (b) increases (c) does not change (d) either a or b
73. Bioluminescence is useful in
(a) Deep sea forms (b) Desert forms
(c) Terrestrial forms (d) Aerial forms
74. Organs of locomotion and digestion may be lost in
(a) Parasites (b) Symbionts (c) Commensals (d) None
75. Excessive capacity for egg production is observed in
(a) Endoparasites (b) commensals (c) Symbionts (d) None
76. Leach is
(a) Sanguivorous (b) Endoparasite (c) Symbiont (d) Herbivorous
77. A relation between coral polyps and zooxanthellae is known as
(a) Parasitism (b) Commensalism
(c) Mutualism (d) Symbiosis
78. A relationship between zoochlorellae (green algae) and turbellarian worm is called
(a) Parasitism (b) Commensalism
(c) Mutualism (d) Symbiosis
79. **Escherichia coli** of human colon is an example of
(a) Parasitism (b) Commensalism (c) Mutualism (d) Symbiosis
80. A relationship between decapod crustacean, **poynox** and **chaetopterus** (marine annelid) is
(a) Parasitism (b) commensalism (c) Mutualism (d) None
81. Who was the first scientist to coin the term SMOG and to describe the layers of smog?
(a) Nikola Tesla (b) Stephen Hawking
(c) Henry Antoine (d) Nicolous Copernicus
82. Which of the following pollutants are responsible for the cause of smog?
(a) From incinerators (b) Emissions from Vehicles
(c) Both (d) None of these
83. Which of the following is called the secondary air pollutant?
(a) PANS (b) Ozone (c) Carbon monoxide (d) Nitrogen dioxide

84. Which of the following particles is called the particulate pollutants?
(a) Ozone (b) Radon (c) Fly Ash (d) Ethylene
85. Which of the following agents is responsible for turning the Tajmahal yellow?
(a) Sulphur (b) Sulphur dioxide (c) Chlorine (d) Nitrogen dioxide
86. Which of the following statement is true about smog?
(a) Smog is derived from the fog
(b) Smog is derived from the smoke
(c) Smog is derived from water vapour
(d) Smog is derived from fog and smoke both
87. Which type of precautions should be taken to survive when the ozone level is high?
(a) Drive less (b) Stay hydrated (c) Both (d) None
88. Which of the following statements is true about the air quality index?
(a) It indicates the colour of the air.
(b) It predicts ozone levels in your area
(c) It determines the intensity of sound
(d) It estimates air pollution mainly sulphur content in the air
89. Which of the following diseases are caused by smog?
(a) Rickets (b) Bronchitis
(c) Breathing Problem (d) All of these above
90. DDT is an example of
(a) Primary pollutant (b) Secondary Pollutant
(c) Biodegradable pollutant (d) Non-Biodegradable Pollutant
91. How many different types of primary pollutants together contribute to about 90 percent of the global air pollution?
(a) Three (b) Five (c) Seven (d) Nine
92. Which of the following agents is mainly responsible for the secondary pollutants?
(a) Sulphur trioxide (b) Nitrogen dioxide
(c) Smog and ozone (d) All of the above
93. Which of the following industries play a major role in polluting air and increasing air pollution?
(a) Manufacture of gases industries? (b) Brick manufacturing industries
(c) Electrical appliances and electrical goods industries
(d) All of the above

94. Increased levels of air pollution results in.....
(a) Soil erosian (b) Global warming
(c) Blood Vascular Problems (d) Respiratory problem
95. The Taj Mahal, golden Temple, Lotus Temple and other famous heritage monuments are being affected by
(a) Air Pollution (b) Water pollution
(c) Noise Pollution (d) All of the above
96. Which of the following gases are called greenhouse gases?
(a) Nitrogen (b) Methane (c) Carbon dioxide (d) Both b and c
97. Which of the following rivers is called the world's most polluted river?
(a) Ganga (b) Yamuna (c) Cauvery (d) Chenab
98. Which of the following are the primary causes of water pollution?
(a) Animals (b) Plants
(c) Human activities (d) None of these
99. Which of the following statements are true about CNG-Compressed natural gas?
(a) It is a harmful fuel (b) It is a clean fuel
(c) It is a polluting fuel (d) All of the above
100. Which of the following salts is the main cause of permanent hardness of water?
(a) Magnesium sulphate (b) Magnesium carbonate
(c) Magnesium bicarbonate (d) None of the above
101. Which of the following is mainly responsible for water pollution
(a) Oil refineries (b) Paper factories
(c) Deforestation (d) a and b
102. Chlorofluorocarbon are nonflammable chemicals mainly used in
(a) Refrigerators (b) Air conditioners
(c) Perfumes (d) All of the above
103. Which is the health effects of excess fluoride in drinking water?
(a) Fluorosis (b) Toothaches
(c) Lung disease (d) Intestinal infection

104. The main sources of Arsenic in water are.....
(a) Floods (b) Fertilizers
(c) Industrial wastes (d) Both b and c
105. Which of the following is not a water borne disease?
(a) Typhoid (b) Chloera (c) Hepatitis (d) Measles
106. Species of all animals and plants living within a certain area is known as
(a) Biome (b) Biota (c) Both (d) None
107. Indian wild life protection act was constituted in the year
(a) 1947 (b) 1950 (c) 1972 (d) 1980
108. Important methods of wild life management are-
(a) Protection by law (b) Restoration of the natural habitat
(c) Establishments of parks and sanctuaries
(d) All of the above
109. Identify the correct match between tiger reserve and its state
(a) Manas - Assam (b) Corbett - Madhy Pradesh
(c) Bandipur - Tamil Nadu (d) Palanau- Orissa
110. Which of the following is the matching pair of a sanctuary and its main protected wild animal?
(a) Kaziranga - musk deer (d) Gir- Lion
(c) Sunderban - Rhino (d) All of these
111. Identify the correctly matched pair
(a) Corbett park - Aves (b) Runn of Kutch - Chinkara
(c) Gir forest - Rhino (d) Kajiranga - Elephant
112. The breeding place of Flamingo (Hansawar) in India is most likely
(a) Chilka lake (b) Sambhar lake
(c) Ghana vihar (d) Runn of kutch
113. Which is the major cause of diminishing wild life number?
(a) Paucity of drinking water (b) Habitat destruction
(c) Cannibalism (d) Deforestation
114. Which of the following is mainly responsible for extinction of wild life?
(a) Pollution (b) Hunting for flesh
(c) Deforestation (d) All of these

115. Indri-Indri Lemus is found in
(a) Madagaskar (b) Mauritius (c) India (d) Sri Lanka
116. Viable material of endangered species can be preserved by
(a) Gene bank (b) Gene library
(c) Gene pool (d) Herbarium
117. Which one is endangered mammalian species?
(a) **Panthera uncia** (snow Leopard)
(b) **Panthera leo** (Lion)
(c) **Presbytis Pilaelus** (Capped langur)
(d) All of the above
118. Which endangered animal is the source of the world's finest, lightest, warmest and most expansive wool - the shahtoosh?
(a) Nilgai (b) Cheetal
(c) Kashmiri goat (d) Chiru (Tibetan Antelope)
119. According to IUCN Red list, what is the status of red Panda?
(a) Extinct species (b) Endangered species
(c) Vulnerable species (d) Critically endangered species
120. Which of the following pairs of an animal and a plant represents endangered organisms in India?
(a) Banyan and Black Duck
(b) Benlinckia nicobarica and Red Panda
(c) Tamarind and Rhesus monkey
(d) Cinchona and Leopard
121. Montreal protocol which calls for appropriate action to protect the ozone layer from human activities was passed in the year-
(a) 1985 (b) 1986 (c) 1987 (d) 1988
122. The environment protection act was passed in the year
(a) 1985 (b) 1986 (c) 1987 (d) 1988
123. The forest conservation act was constituted in the year-
(a) 1975 (b) 1980 (c) 1985 (d) 1990
124. Prevention and control of water pollution act was passed in the year
(a) 1971 (b) 1972 (c) 1973 (d) 1974

125. Prevention and control of air pollution act was passed in the year-
(a) 1972 (b) 1981 (c) 1986 (d) 1990
126. A single bacterium in the soil interacts with
(a) The water (b) Air
(c) Particles of soil around it (d) All of the above
127. The region of earth, where life exists is known as
(a) Atmosphere (b) Biosphere (c) Lithosphere (d) Hydrosphere
128. In the biosphere energy is reserved from
(a) The Sun (b) The interior of the earth
(c) a & b both (d) Work
129. The Biosphere consists of the following
(a) Lakes (b) Soils
(c) Solid sediments (d) All of the above
130. In which of the following form, the waste products are discharged into the biosphere?
(a) Gaseous (b) Liquid (c) Solid (d) All of the above
131. Ecosystem is smallest unit of
(a) Ionosphere (b) Lithosphere (c) Biosphere (d) Mesosphere
132. Energy.....in an ecosystem
(a) is released (b) is absorbed (c) flows (d) None of the above
133. The set of ecosystems is called a-
(a) Biome (b) Climate (c) Subsystem (d) Structure
134. The following is an example of terrestrial biome-
(a) Tropical rain forest (b) Rivers (c) Streams (d) All of the above
135. Terrestrial biomes has a rapid exchange of-
(a) CO₂ (b) O₂ (c) Water (d) All of the above
136. Which of the following is a constituent of eco-system?
(a) Plants (b) Birds (c) Animals (d) All of these
137. What kind of ecosystem is known as sustainable?
(a) The one in which all species are in a balance
(b) The one in which there are no animals
(c) The one in which animals feed on each other
(d) All of the above
138. An eco-system comprises of

- (a) Living organisms (b) Non-living organisms
(c) Both living and non-living organisms
(d) Only plants
139. Which of the following statement is true?
(a) Eco-system may vary in size
(b) Eco-System are always very large
(c) Eco-system are always very small
(d) None of the above
140. If one part of eco-system is damaged, what happens
(a) It does not have any impact on the ecosystem
(b) It completely destrynos the ecosystem
(c) It has an impact on everything else in the ecoystem
(d) All of the above
141. Give below is one of the types of ecological pyramids. This type represents
(a) Pyramid of numbers in a grassland
(b) Pyramid of biomass in a follow land
(c) Pyramid of biomass in a lake
(d) Energy pyramid in a spring
142. Energy transferred from one trophic level to another is
(a) 5 (b) 10% (c) 15% (d) 20%
143. Maximum absorpion of rain fall water is done by
(a) Tropical deciduous forest (b) Tropical evergreen forest
(c) Tropical savannah (d) Scrule forest
144. Which of the following is called as a detrivore?
(a) An animal feeding on decaying organic matter
(b) An animal feeding on a plant
(c) A plant feeding on an animal
(d) An animal feeding on another animal
145. Which of the following pairs is incorrect?
(a) Tundra-Permafrost (b) Praire-epiphytes
(c) Savanna-Acacia trees (d) Coniferous forest-evergren trees
146. The most abundant element present in the plant is-
(a) Nitrogen (b) Carbon (c) Iron (d) Magnesium

147. These belong to the category of primary consumer-
(a) Insects and cattle (b) Eagle and snakes
(c) Water snakes (d) Snakes and frogs
148. Largest reservoir of sulphur is-
(a) Atmosphere (b) Rocks (c) Ocean (d) Lake
149. Maximum productivity is found in-
(a) Grassland (b) Desert (c) Ocean (d) Tropical rainforest
150. Zone of atmosphere near the ground is
(a) Troposphere (b) Stratosphere
(c) Homosphere (d) None of these

Animal Behaviour

151. Some behaviour patterns appear only after a specific developmental state or time. This is called
(a) Imprinting (b) Maturation (c) Learning (d) Instinct
152. The change in behaviour by life experiences is called
(a) Instinct (b) Maturation (c) Learning (d) Imprinting
153. The decrease in response to repeated or continuous stimulation is called
(a) Instinct (b) Maturation (c) Habituation (d) Imprinting
154. The uses of mental process to associate experiences and solve problems called-
(a) Instinct (b) Maturation (c) Habituation (d) Insight
155. The behaviour in which one animal is aggressive or attacks other animal, the other responds by returning the aggression or submitting is called-
(a) Agnostic (b) Territory (c) Hierarchy (d) Altruism
156. The organisation of group of animals in such a way that some members of the group have greater access to resources like food or mates than other is called
(a) Agnostic (b) Territory (c) Hierarchy (d) Altruism
157. The site defend by territorial animal by agonistic behaviour is
(a) Hierarchy (b) Altruism (c) Agnostic (d) Territory

158. The interaction in which an individual gives up or sacrifices some of its own reproductive potential to benefit another individual is called-
- (a) Agnostic (b) Territory (c) Hierarchy (d) Altruism
159. Which one of the following term is generally restricted to directed movements or orientations in plants?
- (a) Tropism (b) Innate (c) Imprinting (d) None of these
160. In which one of the following order of Insecta has more learning power?
- (a) Diptera (b) Hymenoptera (c) Lepidoptera (d) Coleoptera
161. In which one of the following insects social behaviour reaches its highest development?
- (a) Wasps (b) Honey bee (c) Termites (d) None
162. In Termites, there are -
- (a) 3 grades of kings and queens, 3 types of soldiers and 2 types of workers
- (b) 2 grades of kings and queens, 2 types of soldiers and 2 types of workers
- (c) 2 grades of kings and queens, 3 types of soldiers and 2 types of workers.
- (d) 2 grades of kings and queens, 2 types of soldiers and 3 types of workers.
163. Reflex action is-
- (a) Inborn (b) always by learning (c) both (d) None of these
164. In which one of the following parental care is not found generally?
- (a) Fish (b) Amphibia (c) Reptile (d) Mammals
165. In which one of the following social behaviour is also found?
- (a) Amphibia (b) Birds (c) Mammals (d) All
166. Migration in birds is helpful in getting better conditions of-
- (a) Food (b) Shelter (c) Both (d) None
167. Taxes is generally used to refer to stimulus - response movement in
- (a) Lower animals (b) Higher animals (c) Both (d) None

168. Birds are-
(a) Oviparous (b) Viviparous (c) Both (d) None
169. Reptiles are -
(a) Oviparous (b) Viviparous (c) Both (d) None
170. Mammals may be
(a) Oviparous (b) ovoviparous (c) Viviparous (d) All
171. Which one of the following is component of Innate behaviour?
(a) Taxes (b) Kinesis (c) Instincts (d) All
172. Which one of the following is component of Learned behaviour?
(a) Learning (b) Reasoning (c) Both (d) Both
173. When only the speed of movement is affected by external stimulation, it is called
(a) Orthokinesis (b) Klinokinesis (c) Both (d) None
174. If the rate of turning is affected by external stimulation, this is called
(a) Tropism (b) Orthokinesis (c) Klinokinesis (d) None of these
175. Which is the basic manifestations of biological clock?
(a) Circadian rhythms (b) Lunar periodicities
(c) Seasonal cycles (d) All of these
176. What are the kinds of bird migration?
(a) Latitudinal (b) Altitudinal (c) Longitudinal (d) All of these
177. Long lasting adjustment which maintains equilibrium and posture are-
(a) Tonic reflex (b) Phasic reflex
(c) Both (d) None
178. Short-lived adjustments such as flexion response is known as
(a) Tonic reflex (b) Phasic reflex (c) Both (d) None
179. Which one of the following is in born reflex?
(a) Sneezing (b) Cycling (c) Driving (d) None
180. If a needle is pinched to a particular leg, than only that leg withdraws itself, other leg is not withdrawn. This is called-
(a) Phasic reflex (b) Tonic reflex (c) Localized reflex (d) None of these
181. The science of animal behaviour is known as-
(a) Ethology (b) Ichthyology (c) Entomology (d) None of these

182. All long-distance migrants birds fly for several hundreds of miles without drink or food. This is due to-
- (a) deposition of fat before migration
 - (b) depositioin of glycogen before migration
 - (c) deposition of useful enzymes
 - (d) None of these
183. In which one of the following bird longest migration is found?
- (a) Arctic Tern
 - (b) Swift
 - (c) Plover
 - (d) None of these
184. In fishes, parental care is provided by
- (a) Male
 - (b) Female
 - (c) Both
 - (d) None
185. Orientation of a dragon-fly towards its prey is
- (a) Phototaxis
 - (b) Mentotaxis
 - (c) Tropotaxis
 - (d) Telotaxis
186. Light compass responses, involve orientation at a constant angle to the direction of a source of stimulation. Such response is
- (a) Menotaxis
 - (b) Phototaxis
 - (c) Telotaxis
 - (d) Tropotaxis
187. Orientation towards light is called
- (a) Geotaxis
 - (b) Phototaxis
 - (c) Tropotaxis
 - (d) Telotaxis
188. When the stimulus produces only a changes the position of movement or in rate of turning, and this changes the position of animal in relation to the source of that stimulus, it is called
- (a) Tropism
 - (b) Taxis
 - (c) Kinesis
 - (d) Reflexes
189. Reflexes are the simplest innate responses found in
- (a) plants
 - (b) plants and animals both
 - (c) animals having a developed nervous system
 - (d) animals having poorly developed nervous system
190. Honey bees inherit the ability to form wings, to fly towards flowers and to feed on nectars. Such responses are called
- (a) Learning
 - (b) Reflexes
 - (c) Taxis
 - (d) Instinct
191. Imprinting is highly specialized and limited form of
- (a) Learning
 - (b) Reasoning
 - (c) Innate behaviour
 - (d) None
192. Imprinting is observed in
- (a) Lower animals
 - (b) All vertebrates

- (c) Fish and Amphibia (d) Birds and Mammals
193. The ability to combine two or more separate experience to form a new experience is known as
(a) Imprinting (b) Reasoning (c) Taxis (d) Kinesis
194. The colony of honey bee consists of different types of members. These are
(a) Queen and workers (b) Drones and Workers.
(c) Queen and Drones (d) Queen, Drones and Workers
195. True insect societies with organized structure are observed in two orders of the insect. These are
(a) Hymenoptera (the ants, bees, and wasps) and Isoptera (Termites)
(b) Hymenoptera and Coleoptera (Beetles and Weevies)
(c) Isopetera and Diptera (Flies and Mosquitoes)
(d) Hymenoptera and Lepidoptera (Moths and Butterflies)
196. Usually the number of queen in a beehive is
(a) One (b) Two (c) Three (d) Four
197. The majority of the members of a honey bee colony are
(a) Queen (b) Drones (c) Workers (d) None of these
198. About 10,000 species of bees are known, out of them, social behaviour may be observed in about
(a) 50% species (b) 25% species (c) 10% species (d) 5% species
199. About 3500 species of ants are known, social development is found in about
(a) 10% species (b) 25% species (c) 50% species (d) 99% species
200. Parental care is more marked in
(a) Oviparous species (b) Viviparous species
(c) Both (d) None
201. In Marsupial frog, **Gastrotrich marsupiatum**, a pouch is formed for storing the eggs on the back of
(a) Male (b) Female
(c) Male and Female both (d) None
202. In amphibia, parental care may be performed by
(a) Male (b) Female

- (c) Male and Female both (d) None
203. Nests are formed for holding the eggs during incubation and to rear their young in
(a) few birds only (b) most birds
(c) all birds (d) None of these
204. A few birds, such as the parasitic cuckoos (Koel) build
(a) poorly developed nests (b) well developed nests
(c) no nests (d) None of these
205. If nest is prepared
(a) Male and female both may participate in preparation
(b) Only male participates
(c) only female participates
(d) Male or female or both may participate
206. The nest of wood-pecker is made
(a) as a tree hole (b) as a tunnel in earth bank
(c) in mud (d) with grass and leaves
207. The nest of king-fisher is made
(a) as a tree hole (b) as a tunnel in earth bank
(c) in mud (d) with grass and leaves
208. Birds are
(a) Oviparous (b) Viviparous
(c) Oviparous and Viviparous both (d) None
209. In Kiwi, the time of incubation is about
(a) 10 days (b) 20 days (c) 50 days (d) 80 days
210. In small perching birds, the time of incubation is about
(a) 5 days (b) 10 days (c) 50 days (d) 100 days
211. Number of eggs laid varies from species to species. Pigeons lay at a time
(a) 1 egg (b) 1 or 2 eggs (c) 1 to 5 eggs (d) 1 to 10 eggs
212. Koels lay at a time
(a) 1 egg (b) 1 or 2 eggs

- (c) 10 eggs (d) 18 to 20 eggs
213. Birds are
(a) Diurnal (b) Nocturnal (c) Diurnal or Nocturnal (d) None
214. Ducks, gulls, shore birds may migrate
(a) at night (b) in the day
(c) at night or in the day (d) None of these
215. Many larger birds, such as crows, swallows, Robins, Hawks, Blue birds, Cranes, Geese etc. fly mainly in
(a) day (b) night (c) day and Night both (d) None
216. Plover flies
(a) 10 miles/hour (b) 20 miles/hour
(c) 50 miles/hour (d) 100 miles/hour
217. Some birds arrive in autumn, mainly from the north, stay throughout the winter in south and again fly northwards in spring. Such migration is called
(a) Partial migration (b) Seasonal migration
(c) Altitudinal migration (d) Longitudinal migration
218. Behavioural activities of animals, which are correlated with a one-day cycle under constant conditions are known as-
(a) Lunar periodicities (b) Seasonal cycles
(c) Circadian, rhythms (d) None of these
219. Most of the organisms exhibiting lunar periodicities are
(a) Terrestrial (b) Fresh-water living
(c) Marine (d) Fresh-water and marine both
220. In certain animals, more commonly in insects, growth and development is suspended or greatly retarded in a particular stage of development. This condition is known as
(a) Decreased reproduction (b) Menopause
(c) Diapause (d) Migration
221. Humming birds are the.....birds
(a) smallest migratory (b) largest migratory

233. Before migration in birds what changes occur?
(a) Food consumption increase (b) Metabolic changes occur
(c) Fat accumulates under the skin tissues (d) All of these
234. Which one of the following endocrine glands is involved in migration of birds?
(a) Pituitary gland (b) Thyroid gland (c) Both (d) None
235. Which one of the following also affects migration in birds?.
(a) Weather (b) Temperature (c) Both (d) None
236. The majority of birds migrate from
(a) Northern breeding areas to southern wintering grounds
(b) Southern breeding areas to northern wintering grounds
(c) Both (d) None of these
237. World migratory bird day is celebrated on
(a) 9 October (b) 11 November (c) 14 December (d) None
238. Which one of the following birds does not migrate?
(a) Plover (b) Swift (c) Vultures (d) Ostrich
239. Migratory birds are generally.....birds
(a) Flying (b) Running (c) Swimming (d) All of these
240. In flying birds, bones are-
(a) Solid (b) Pneumatic (c) Both (d) None
- Biometry**
241. The mean of the data a,a,a,a will be
(a) Zero (b) a (c) 2 (d) None of these
242. The mean of the square deviation about mean is known as
(a) mean (b) median (c) Variance (d) Standard deviation
243. If a sum of 20 values is 300 then mean of the data is-
(a) 15 (b) 20 (c) 30 (d) 300
244. If we add or subtract any value in the original data then this process is known as-
(a) Change of scale (b) Change of origin (c) Both (d) None of these
245. The mean of the 10 values is 20, if we add a value 10 in each observation then mean for the new few will be-
(a) 20 (b) 0 (c) 30 (d) 10

246. When two coins are tossed together then probability of getting no tail is-
(a) 0 (b) $\frac{1}{2}$ (c) $\frac{1}{4}$ (d) 1
247. The mean value or central value or average value of data are
(a) All same value (b) All different value
(c) Always negative (d) None of these
248. When 'n' is an odd number the median is defined as-
(a) Middle value (b) Median of two middle values
(c) Sum of the values (d) Most repeated value
249. For a group data the class interval having maximum frequency is known as
(a) Median Class (b) Mode (c) Medium (d) Model Class
250. The sum of deviation about mean for the data 6,8,10,2 and 4 is always
(a) 1 (b) 0 (c) Negative (d) 30
251. Chi-square test is always used to test
(a) Population mean (b) Population median
(c) Test of association (d) None of these
252. Pulse rate or weight of patient are known as-
(a) Nominal data (b) Continuous data
(c) Discrete data (d) Random Variable
253. If we want to compare two or more groups then we use coefficient of variation (C.V.), the group which has maximum C.V. is known as-
(a) Consistent (b) Non consistent (c) Both (d) All
254. Chi-square test of significance is used, when
(a) Data is continuous (b) Data is categorical
(c) Both (d) None
255. Parameters of Standard normal distribution are-
(a) Mean (b) Standard deviation
(c) Range (d) Mean and Standard deviation
256. What is relationship between SD and variance?
(a) Variance = \sqrt{SD} (b) Variation = SD/n
(c) Variance = $(SD)^2$ (d) None of these

257. First step in calculating median is
(a) Calculate data (b) Arrange data
(c) Count the data (d) None of these
258. What is true for descriptive statistics?
(a) Organization & displaying of data
(b) Drawing inferences for population
(c) Hypothesis testing
(d) Calculation of P-value
259. The sum of the absolute deviation about mean is always-
(a) Positive (b) Negative (c) Zero (d) Zero and negative both at a time
260. Which of the measures of variability is not dependent on the exact values of every measurement?
(a) Mean deviation (b) Variance (c) Range (d) Standard deviation
261. t-test is always used to test the population mean whether population variance is known or unknown sample size where n (number) should be-
(a) Less than 30 (b) Greater than 30
(c) Any one (d) None of these
262. Large standard deviations suggest that
(a) Scores are probably widely scattered
(b) There is very little difference among scores
(c) Mean, median and mode are the same
(d) The scores not normally distributed
263. Which one of the following is obtained by summing up all the observations and dividing the total by the number of observations?
(a) Mean (b) Median (c) Mode (d) Median and mode
264. When all the observation of a variable are arranged in either ascending or descending order, the middle observation is known as
(a) Mean (b) Median (c) Mode (d) Median and mode
265. Seven figures are arranged in ascending order - 4, 5, 5, 6, 6, 7, 8. The middle (4th) observation is 6 and it is
(a) Mean (b) Median (c) Mode (d) None of these
266. If n is the number of observations, the formula $\frac{n+1}{2}$ gives

- (a) Mean (b) Median (c) Mode (d) None of these
267. Mean ± 1 SD limit, includes
 (a) 50% of all observations (b) 60% of all observations
 (c) 68% of all observations (d) 95% of all observations
268. Mean ± 2 SD limit, includes
 (a) 60% of all observations (b) 68% of all observations
 (c) 95% of all observations (d) 99% of all observations
269. Mean ± 3 SD limit, includes
 (a) 68% of all observations (b) 95% of all observations
 (c) 95% of all observations (d) 99% of all observations
270. Individuals, in similar environment, differ when compared as regards sex, age and other attributes. Such a variability is called
 (a) Biological variability (b) Real variability
 (c) Experimental variability (d) None
271. When the differences between two observations or samples is more than the defined limits in universe, it is said to be
 (a) Biological variability (b) Real variability
 (c) Experimental variability (d) All of these
272. If variation is due to materials and methods employed in the study or defects in the techniques involved in the experiment, it is said to be.
 (a) Biological variability (b) Real variability
 (c) Experimental variability (d) None of these
273. Observed error may be
 (a) Subjective (b) Objective (c) Subjective or Objective (d) None
274. Whatever be the sampling procedure or the care taken during sample selection, the sample estimates will differ from population parameters because of chance or biological variability. Such a difference between sample and population values is measured by
 (a) Experimental error (b) Sampling error or mistake
 (c) Sampling error or standard error (d) All of these
275. Standard error of mean is calculated by the following formula:
 (a) $SE = \frac{SD}{n}$ (b) $SE = \sqrt{\text{Variance}}$
 (c) $SE = \sqrt{\frac{n}{SD}}$ (d) $SE = \frac{SD}{\sqrt{n}}$

276. Standard error of difference is calculated by the following formula

(a) $SE(\bar{X}_1 - \bar{X}_2) = \sqrt{\frac{SD}{n}}$ (b) $SE(\bar{X}_1 - \bar{X}_2) = \sqrt{\left(\frac{SD_1}{\sqrt{n_1}}\right)^2 + \left(\frac{SD_2}{\sqrt{n_2}}\right)^2}$

(c) $SE(\bar{X}_1 - \bar{X}_2) = \left(\frac{SD_1}{\sqrt{n_1}}\right)^2 + \left(\frac{SD_2}{\sqrt{n_2}}\right)^2$ (d) None

277. The value of Z is calculated, if

- (a) Mean is known (b) SD is known
(c) SE is known (d) None of these

278. The formula of Z may be

(a) $Z = \frac{X_1 - X_2}{SE(\bar{X}_1 - \bar{X}_2)}$ (b) $Z = \frac{\bar{X}_1 - \bar{X}_2}{SE(\bar{X}_1 - \bar{X}_2)}$

(c) $Z = \frac{SD}{\sqrt{n}}$ (d) $Z = \frac{SD}{\sqrt{n-1}}$

279. t-test is applied in

- (a) larger samples (b) smaller samples (c) both (d) None

280. If n is the number of observations then degree of freedom (d.f.) is

- (a) \sqrt{n} (b) $\sqrt{n-1}$ (c) $\sqrt{n-2}$ (d) n - 1

281. Chi-square test was developed by

- (a) Robertson (b) W.S. Gossett (c) Karl Pearson (d) L. Davidson

282. Standard deviation expressed as percentage of mean is called

- (a) Coefficient of variation (b) Mean deviation
(c) Standard error (d) None of these

283. There arecommon types of averages

- (a) 2 (b) 3 (c) 4 (d) 5

284. Most frequently occurring observation in a series is.....

- (a) Mean (b) Median (c) Mode (d) None of these

285. t-test is also known as-

- (a) Teacher's t-test (b) Student's t-test
(c) Scientific t-test (d) None of these

286. t-test was designed by-

- (a) A.C. Taylor (b) W.S. Gossett. (c) L. Davidson (d) None of these

287. Degrees of freedom (d.f.) is-

- (a) Independent number of observations (b) 10 Observations

- (c) 20 Observations (d) 30 Observations
288. The term "statistic" in German means
(a) Calculation (b) Government (c) Maths (d) Classification
289. The application of statistical methods in biology is called
(a) Statistics in biology (b) Statistics in vivo
(c) Biostatistics (d) All of these
290. Biostatistics is also called
(a) Statistics in biology (b) bioneumerology
(c) Biometry (d) both a and b
291. Who is regarded as the father of Biostatistics?
(a) Fischer (b) Karl Pearson (c) Francis Galton (d) Francis Bason
292. The term "biometry" was coined by
(a) Fischer (b) Karl Pearson (c) Francis Galton (d) Walter Weldon
293. The branch of biostatistics that deals with methods of collection, organization and presentation of data is called as
(a) Inferential biostatistics (b) Descriptive biostatistics
(c) Both a and b (d) Comparative biostatistics
294. The branch of biostatistics that deals with testing of hypothesis, making predictions using data collected is called as
(a) Inferential biostatistics (b) Descriptive biostatistics
(c) Both a and b (d) Comparative biostatistics
295. In biostatistics, group of individuals taken for study is called as-
(a) Block (b) Population (c) Group (d) Flock
296. The characteristics or quantity that may vary from one individual to another is called-
(a) Static group (b) Variable
(c) Dynamic group (d) Dynamism
297. Variables whose values can be expressed numerically are called
(a) Quantitative variables (b) Qualitative variables
(c) Absolute variables (d) Continuous variables
298. Height of students in a class is
(a) Quantitative variables (b) Discrete Variables

- (c) Absolute variables (d) Continuous variables
299. Quantitative variables that can have any numerical values are called-
- (a) Quantitative variables (b) Discrete Variables
- (c) Continuous variables (d) None of these
300. Number of fruits in a tree is
- (a) Quantitative variables (b) Discrete Variables
- (c) Absolute variables (d) Continuous variables

