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1. Which of the following chemicals are responsible for production of photochemical smog;
 - a) Nitrates and sulfates
 - b) **Nitrogen oxides and Hydrocarbons**
 - c) Nitrates and phosphates
 - d) Co₂ & methane
2. The program of releasing individuals into a place where the species no longer occur is called:
 - a) Augmentation
 - b) Restocking
 - c) **Reintroduction**
 - d) None of the above
3. The factor responsible for disruption of mutualism among species is called;
 - a) Habitat degradation
 - b) Climate change
 - c) Overexploitation
 - d) **Invasion of exotic species**
4. Accumulation of deleterious mutations in a population that gradually declines viability of individuals is called _____;
 - a) Founder effect
 - b) **Mutational meltdown**
 - c) Heterosis
 - d) Gene flow
5. Protected areas managed for landscape and seascape conservation, belong to IUCN category;
 - a) **V**
 - b) IV
 - c) III
 - d) VI
6. High levels of ----- cause cultural eutrophication?
 - a) Nitrates and sulfates
 - b) Co₂ & methane
 - c) **Nitrates and phosphates**
 - d) Organochlorine
7. Which of the following factor increases edge effects;
 - a) Habitat destruction
 - b) **Habitat fragmentation**
 - c) Pollution
 - d) Over-exploitation

8. Increased concentration of is responsible for causing Global Warming.
- CO₂**
 - So₂
 - CH₄
 - O₃
9. Ex-situ conservation means?
- Conservation in wild
 - Conservation in natural habitats
 - Conservation in captivity**
 - On-site conservation
10. IUCN category IV of protected area is about the management of _____
- Habitat/species**
 - Natural monument
 - Wilderness area
 - National Park
11. IUCN Red List System was initiated in _____.
- 1980
 - 1963**
 - 1970
 - 1990
12. The Island Biogeographic Model explains;
- Rate of extinction
 - Species-area relationship
 - Population demography
 - Both a & b**
13. The scientific study of repairing disturbed ecosystems through human intervention is called?
- Restoration ecology**
 - Conservation biology
 - Community ecology
 - Management ecology
14. The process of progressive and irreversible degradation of the biological community and soil cover is called;
- Restoration
 - Habitat fragmentation
 - Desertification**
 - Habitat degradation
15. Indirect effects of _____ increase the organisms' susceptibility to cause diseases?
- Edge Effects
 - Species invasion
 - Pollution

- d) **Habitat destruction**
16. Implementation of a restoration design is the _____ step in ecological restoration.
- First
 - Second
 - Third
 - fourth**
17. _____ is the fundamental unit of biodiversity without which no evolutionary change occurs.
- species
 - gene**
 - population
 - ecosystem
18. The species that have extremely high risk of extinction in the wild is called_____.
- Extinct in the wild (EW)
 - Endangered (EN)
 - Vulnerable (VU)
 - Critically endangered (CR)**
19. Areas of natural habitat that provide functional linkages between protected areas are called_____ .
- Geographical barriers
 - Biosphere reserve
 - Corridors**
 - National Parks
20. Protected areas managed to meet requirement for specific species belongs to IUCN category;
- IV**
 - III
 - II
 - VI
21. Returning of a habitat to its historic condition is called;
- Replacement
 - Reclamation
 - Recreation
 - Restoration**
22. The natural areas where strict rules are applied about human activities and settlements are called;
- Biosphere reserves
 - National Parks**
 - Zoos
 - Wild life sanctuaries

23. The program of releasing individuals into a place where the species no longer occur is called;
- a) Augmentation
 - b) Restocking
 - c) **Reintroduction**
 - d) None of the above
24. Use of organisms to add essential materials to a degraded ecosystem is called?
- a) **Augmentation**
 - b) Reclamation
 - c) Biomagnification
 - d) Bioremediation
25. Use of organisms usually Prokaryotes, Fungi or Plants to detoxify polluted ecosystem is called?
- a) Augmentation
 - b) **Bioremediation**
 - c) Bioaccumulation
 - d) Biomagnification
26. Out-breeding in domesticated animals is termed as _____;
- a) **Heterosis**
 - b) Genetic swamping
 - c) Mutational meltdown
 - d) Sexual selection
27. The species are _____ extinct if they persists at such reduced number that its effect on other species is negligible.
- a) Globally
 - b) **Ecologically**
 - c) Locally
 - d) Endemically
28. The ultimate source of genetic variation is;
- a) Founder effect
 - b) Population bottle-neck
 - c) Inbreeding
 - d) **Mutation**
29. Intrinsic value of biodiversity means;
- a) Instrumental value
 - b) Utilitarian value
 - c) Option value
 - d) **Inherent value**

30. Protected areas managed for landscape and seascape conservation, belong to IUCN category;
- a) **V**
 - b) IV
 - c) III
 - d) VI
31. Where were the rates of extinction recorded high?
- a) Mainland
 - b) **Island**
 - c) Oceans
 - d) Rivers
32. The factor responsible for disruption of mutualism among species is called;
- a) Habitat degradation
 - b) climate change
 - c) Overexploitation
 - d) **Invasion of exotic species**
33. Convention on biodiversity was held in;
- a) 1970
 - b) 1967
 - c) **1980**
 - d) 2004
34. Random fluctuation of gene frequencies due to chance alone is called_____;
- a) Inbreeding
 - b) Out- breeding
 - c) Gene flow
 - d) **Genetic drift**
35. Change in habitat configuration and reduction in area is called;
- a) Habitat degradation
 - b) **Habitat fragmentation**
 - c) Restoration
 - d) Habitat destruction
- The inferior hybrid genotypes present in a population decreases _____;
- a) Homozygosity
 - b) Mutation
 - c) **Fitness of population**
 - d) No of individuals

36. The major factor for climate change is?
- a) Habitat destruction
 - b) Habitat fragmentation
 - c) **Habitat degradation**
 - d) Over-exploitation
37. Endangered Species Act enacted by the US congress from the year?
- a) 1970
 - b) **1973**
 - c) 1984
 - d) 2000
38. Which of the following is *In-situ* conservation category?
- a) **Biosphere reserves**
 - b) Zoo
 - c) Aquarium
 - d) Botanical garden
39. The process in which DDT and other organochlorine pesticides become more concentrated as they ascend the food chain is called?
- a) Cultural eutrophication
 - b) Acid Rain
 - c) Bioremediation
 - d) **Biomagnification**
40. According to ESA the species that is likely to become extinct are called_____;
- a) Vulnerable
 - b) Threatened
 - c) **Endangered**
 - d) Near threatened
41. What factor is responsible for Global Warming?
- a) **Increased concentration of Co₂**
 - b) Increased concentration So₂
 - c) Increased concentration CH₄
 - d) Decreased concentration of O₃
42. Decline in fitness of hybrids or out-crossed genotype occurs due to _____:
- a) **Genetic swamping**
 - b) Genetic drift
 - c) Heterosis
 - d) Epistasis

43. Logging, farming and cattle ranching cause _____:
- a) Habitat fragmentation
 - b) Habitat degradation
 - c) Habitat destruction**
 - d) Pollution
44. Exotic species so easily invade and dominate new habitats due to;
- a) Desertification
 - b) Absence of their predators**
 - c) Pollution
 - d) Gene flow
45. Which of the following fundamental factor is responsible for today's biodiversity crisis?
- a) Habitat loss
 - b) Extinction of species**
 - c) Loss of genetic diversity
 - d) Population exclusion
46. _____ is not an ecosystem service
- a) Detoxification
 - b) Decomposition
 - c) Eutrophication**
 - d) Purification
47. The capacity of the planets ecosystem to provide services will be reduced if...
- a) Biodiversity increase
 - b) Habitats increase
 - c) Ecosystem diversity increase
 - d) Biodiversity reduces**
48. What factor increases possibility of microevolution?
- a) Loss of genetic diversity**
 - b) Loss of species diversity
 - c) Loss of ecosystem diversity
 - d) All above
49. Which of the following factor does not influence Effective population size?
- a) Gene flow
 - b) Family size
 - c) Mutation**
 - d) Population fluctuations
50. Which of the following is in-situ conservation method?
- a) Botanical gardens
 - b) Farmlands**
 - c) Field gene banks
 - d) None

51. Which of the following is the key factor that drive extinction vortex?
- a) Habitat loss
 - b) Loss of genetic variations**
 - c) Environmental change
 - d) Inbreeding
52. According to Island Equilibrium model rates of species extinction on Islands depends on what factor/ factors?
- a) Immigration rates
 - b) Size of Island
 - c) Distance of Island from mainland
 - d) All above**
53. The minimum population size at which species can sustain its number and survive is known as_____
- a) Vulnerable population
 - b) Effective population
 - c) Minimum viable population**
 - d) None
54. Humans harvesting of wild organisms at rates exceeding the growth ability of population is called?
- a) Over-exploitation**
 - b) Over harvesting
 - c) Sustainable use
 - d) Extinction
55. When species is lost in one ecosystem but survive in another one the extinction is called?
- a) Global
 - b) Local**
 - c) Ecological
 - d) None
56. Exotic species are also known as _____.
- a) Endemic species
 - b) Non- native species
 - c) Introduced species
 - d) Both b & c**
57. According to IUCN what percentage of nearly 5000 known species of mammals are threatened.
- a) 12%
 - b) 20%**
 - c) 22%
 - d) 25%

58. Identifying a biodiversity hot spot is difficult due to what reason?
- a) Biasness towards saving large organisms
 - b) Biasness toward not saving invertebrates
 - c) **Hot spot for one taxonomic group may not be for others**
 - d) They occur in small fraction of earth land
59. Protected Islands that are surrounded by degraded habitats are called?
- a) Biodiversity Hot spots
 - b) Ecological Corridors
 - c) **Zone reserved**
 - d) Nature reserve
60. What are the surrounding habitats of zone reserved called?
- a) **Buffer zones**
 - b) Conservation areas
 - c) Degraded habitats
 - d) Protected Islands
61. The basic assumption of restoration ecology while restoring a degraded ecosystem is that:
- a) Environmental damage is completely irreversible
 - b) **Environmental damage is partly reversible**
 - c) Ecosystems are infinitely resilient
 - d) Recovery of a habitat or processes is impossible
62. Zone reserve approach develops a _____ around the reserve land?
- a) Social and economic climate
 - b) Creates relatively undisturbed areas
 - c) Areas for economic gains
 - d) **All above**
63. What type of areas provide economic incentives for long term conservation?
- a) Nature reserve
 - b) **Zone reserve**
 - c) Biodiversity hot spots
 - d) Corridors
64. Which of the following is not a process of biological restoration?
- a) Accumulation of heavy metals by organisms
 - b) Detoxification of pollutants from environment
 - c) Addition of nutrients in nutrient poor soil
 - d) **Change in structure of site**
65. Which ethic gave rise the foundation of Conservation Biology discipline?
- a) Biocentrism
 - b) Resource Conservation Ethic
 - c) **Evolutionary Ecological Land Ethic**
 - d) Romantic Transcendental Ethic

66. Small Islands have high rates of extinction due to _____?
- a) Competitive exclusion
 - b) Fewer Resources
 - c) Less diverse habitats
 - d) All above**
67. Which of the following ethic emphasizes on anthropocentric value of nature?
- a) Resource Conservation Ethic**
 - b) Romantic Transcendental ethic
 - c) Evolutionary ecological land ethic
 - d) Biocentrism
68. Who established U.S forest service?
- a) Aldo Leopold
 - b) Jhon Muir
 - c) Gifford Pinchot**
 - d) Diamond
69. Jhon Muir developed _____ ethic:
- a) Resource Conservation Ethic
 - b) Ecocentrism
 - c) Romantic Transcendental ethic**
 - d) Evolutionary ecological land ethic
70. A small area where large number of endangered and threatened species are found among endemic species is called?
- a) Corridor
 - b) Nature reserve
 - c) Zone reserve
 - d) Biodiversity hot spot**
71. Biocentrism focuses on _____.
- a) Humans
 - b) Animals
 - c) Ecosystem
 - d) All life forms**
72. Ex-situ conservation approach is advantageous in what way?
- a) Allows evolutionary and ecological processes to take place
 - b) Allows gene flow and promotes genetic variability
 - c) Serve the purpose for research and ecological restoration
 - d) All above**

73. A protected area with significant, ecological, biological, cultural and scenic value belongs to IUCN category _____
- a) II
 - b) IV
 - c) **V**
 - d) VI
74. Which of the following is not in situ method for conservation?
- a) National Park
 - b) Zone reserve
 - c) Agroecosystem
 - d) **Field gene banks**
75. Utilitarian philosophy of conservation is given in _____ ethic.
- a) **Resource Conservation Ethic**
 - b) Romantic Transcendental Ethic
 - c) Ecocentrism
 - d) Evolutionary ecological land Ethic
76. Which of the following statement is not correct about protected areas?
- a) **About 25% of land is protected now**
 - b) National parks are the part of Protected areas
 - c) Most protected areas are too small to protect species
 - d) Management of Protected areas should be coordinated with surrounding areas
77. Island Biogeographic model predicts about?
- a) Population decline
 - b) Effective population
 - c) **Extinction rates**
 - d) Dispersal of population
78. The concept of Minimum viable population is used in population viability analysis with the objective to:
- a) Predict a population's growth for survival
 - b) Predict about ecosystem stability over a time interval
 - c) Predict a population's chances for survival for unlimited time
 - d) **Predict a population's chances for survival over a time interval**
79. Which of the following statement is correct for survival of a population?
- a) Population with low genetic diversity must survive
 - b) **Population with low genetic diversity can survive**
 - c) Population with low genetic diversity cannot survive
 - d) Population with low genetic diversity never survive
80. Rates of deforestation recorded highest in _____
- a) Pakistan
 - b) Florida

- c) **Indonesia**
 - d) Africa
81. Process of returning a disturbed ecosystem to its natural state is called?
- a) Conservation
 - b) **Restoration**
 - c) Formation
 - d) Fragmentation
82. Which of these elements is required in electron transport in photosynthesis
- a) Calcium
 - b) Copper
 - c) **Iron**
 - d) Cobalt
83. Beggiatoa is a type of bacteria called?
- a) Purple bacteria
 - b) **Chemosynthetic bacteria**
 - c) Pathogenic
 - d) Symbiotic bacteria
84. What percentage of solar flux is reaches to the surface of earth?
- a) 10%
 - b) 33%
 - c) 42%
 - d) **48%**
85. _____ bacteria reduce sulfate into sulfides
- a) Pseudomonas
 - b) Beggiatoa
 - c) **Aerobacter**
 - d) Thiobacillus
86. What percentage of organic carbon is present in earth biosphere?
- a) 10%
 - b) 99%
 - c) **0.1%**
 - d) 1%
87. Organisms that feed on decaying organic matters are called;
- a) Herbivores
 - b) **Detritivores**
 - c) Decomposers
 - d) Omnivores
88. Species that have an extremely high impact on ecosystem relative to its population are called?
- a) Eco-tone species

- b) Dominant species
 - c) **Keystone species**
 - d) Opportunistic species
89. Which element is found in organisms as 49% of their dry body weight?
- a) **Carbon**
 - b) Nitrogen
 - c) Oxygen
 - d) Hydrogen
90. Which part of sunlight is absorbed by photosynthetic organisms?
- a) Ultraviolet
 - b) **Visible spectrum**
 - c) Infra-red
 - d) Gamma Rays
91. What is the nature of infra-red radiations?
- a) **Long wave radiations**
 - b) Magnetic radiations
 - c) Shortwave radiations
 - d) Short- long radiations
92. Slow growing populations that tend to be limited by carrying capacity of environment are called _____?
- a) r-selected populations
 - b) **k-selected populations**
 - c) Opportunistic population
 - d) None of the above answer
93. Major reservoir of sedimentary cycle is:
- a) Troposphere
 - b) Atmosphere
 - c) **Lithosphere**
 - d) Stratosphere
94. Which of the following statement is not true for an ecosystem
- a) Ecosystem has functions.
 - b) Ecosystem is dynamic.
 - c) **Ecosystem does not exist independently**
 - d) Ecosystem components are interdependent
95. What is the 14th most abundant element on this earth?
- a) **Sulfur**
 - b) Phosphorus
 - c) Nitrogen
 - d) Hydrogen
96. Gross production minus plant respiration is called;

- a) Primary productivity
 - b) Gross productivity
 - c) **Net productivity**
 - d) Standing crop
97. What are bacidiomycetes?
- a) **Fungi**
 - b) Bacteria
 - c) Lichens
 - d) Protozoan
98. Which of the following element is not a macronutrient?
- a) Sodium
 - b) Magnesium
 - c) Calcium
 - d) **Manganese**
99. Aquatic animals with limited power of self-locomotion are called;
- a) **Zooplanktons**
 - b) Phytoplanktons
 - c) Nektons
 - d) Benthos
100. The amount of radiant energy crossing through unit area in unit time is called_____?
- a) Albedo
 - b) **Solar influx**
 - c) Insolation
 - d) visible spectrum
101. What type of interaction (-/-) is?
- a) Mutualism
 - b) Commensalism
 - c) Predation
 - d) **Competition**
102. The sum of species use of biotic and abiotic resources in its environment is called?
- a) **Ecological niche**
 - b) Home range
 - c) Predation
 - d) Ecological resilience
103. Weakly weathered rocks are present in which horizon of soil?
- a) Horizon A
 - b) Horizon B
 - c) **Horizon C**
 - d) Horizon D

104. Which of the following element is responsible for energy transfer from ATP to ADP?
- a) Iron
 - b) Magnesium**
 - c) Calcium
 - d) Boron
105. Which property of water maintains constant temperature of a water body?
- a) Specific heat**
 - b) Surface tension
 - c) Density
 - d) Buoyancy
106. What is the largest reservoir of carbon?
- a) Atmosphere
 - b) Ocean water
 - c) Organisms
 - d) Sediments**
107. The process of conversion of ammonia to nitrite or nitrate is called?
- a) Nitrification**
 - b) Ammonification
 - c) Denitrification
 - d) Nitrogen fixation
108. The process of _____ is accomplished by Rhizobium bacteria?
- a) Nitrification
 - b) Ammonification
 - c) Denitrification
 - d) Nitrogen fixation**
109. Phosphorus is utilized by plants in form of _____?
- a) Phosphorus pentoxide
 - b) Phosphorus acid
 - c) organophosphate
 - d) Orthophosphates**
110. The actual place where organisms live is called?
- a) Home range
 - b) Geographical range
 - c) Habitat**
 - d) Niche
111. Linkage of organisms dependent for their very existence on other organisms in the next lower trophic level is called?
- a) Trophic level
 - b) Food chain**
 - c) Food web

- d) d- Niche
112. Nitrogen fixation by bacteria in the root nodules is an example of _____?
- a) Facilitation
 - b) Parasitism
 - c) **Mutualism**
 - d) Commensalism
113. What type of bacteria is responsible for denitrification?
- a) Nitrobacteria
 - b) **Pseudomonas**
 - c) Nitrosomonas
 - d) Azotobacter
114. Which of the following factors characterize a community structure?
- a) **Diversity & trophic structure**
 - b) Diversity and disturbance
 - c) Biogeographic factors
 - d) Community interactions
115. The most prevalent form of sulfur that enters in atmosphere is _____?
- a) H_2SO_4
 - b) SO_3
 - c) H_2S
 - d) **SO_2**
116. Which of the following is not an intra-specific relationship?
- a) Territoriality
 - b) Competition
 - c) Cooperation
 - d) **Symbiosis**
117. Which of the following nutrient is not recycled in nature as gaseous state?
- a) Nitrogen
 - b) Carbon
 - c) **Sulphur**
 - d) Hydrogen
118. Humans population follow _____ survivorship curve?
- a) **Type I**
 - b) Type II
 - c) Type III
 - d) Type IV
119. Which of the following is not a density dependent factor?
- a) Predation
 - b) Parasitism
 - c) Disease

- d) Drought**
120. Which of the following populations follow logistic growth model?
- a) Populations that increase exponentially
 - b) Populations that follow J-shaped curve
 - c) Populations that grow within limited resources**
 - d) None of the above answer.
121. Which of the following macronutrient is required for normal mitotic division?
- a) Sodium
 - b) Magnesium
 - c) Boron
 - d) Calcium**
122. A species with wide niche breadth is called:
- a) Specialist
 - b) Generalist**
 - c) Predator
 - d) None of the above
123. What %age of CO₂ is present in atmosphere?
- a) 0.1%
 - b) 0.032%**
 - c) 0.3%
 - d) 0.5%
124. Which of the following is not a process of decomposition?
- a) Metabolism
 - b) Leaching
 - c) Fragmentation
 - d) Fixation**
125. _____ is necessary to release seeds from cones of pine and eucalyptus species:
- a) Soil
 - b) Fire**
 - c) Water
 - d) Light
126. Which of the following type of bacteria are responsible for free living nitrogen fixation?
- a) Azotobacter**
 - b) Pseudomonas
 - c) Rhizobium
 - d) Nitrobacter
127. Water striders can adhere on the surface of water due to which property of water?
- a) High power of Ionization
 - b) High density
 - c) Surface tension**

- d) High solvency
128. Which of the following element is responsible for mitotic division and root tip growth in plants?
- a) Magnesium
 - b) Potassium
 - c) Copper
 - d) Calcium**
129. Which of the following bacteria reduce hydrogen sulfide into sulfur in anaerobic conditions
- a) Aerobacter
 - b) Beggiatoa**
 - c) Thiobacillus
 - d) Desulfavibrio
130. Law of toleration was developed by_____.
- a) Blackman
 - b) V.E. Shelford**
 - c) J.V.Liebig
 - d) George Clarke
131. Population size is usually determined on the base of _____
- a) Pattern of dispersion
 - b) Mortality
 - c) Density**
 - d) Structure
132. The density which takes in account area of land or aquatic ecosystem under consideration called_____.
- a) Ecological density**
 - b) Crude density
 - c) Arithmetic density
 - d) Both a & b
133. A population with high number of young individuals as compared to older organisms is called _____.
- a) Retrogressive
 - b) Declining
 - c) Progressive**
 - d) None
134. Population of Hydra follow survivorship curve type _____
- a) I
 - b) II**
 - c) III
 - d) None

135. Population that follow survivorship _____ shows a steady death of individuals per unit time throughout the life
- Type 1
 - Type 2**
 - Type 3
 - None
136. What of these equation explains logistic model?
- $\frac{dN}{Dt} = rN \left(\frac{K-N}{K} \right)$
 - $\frac{dN}{dt} = KN$
 - $\frac{dN}{dt} = RN$
 - $\frac{dN}{dt} = rN$**
137. Species _____ refers to measure which qualifies as to how even species are in terms of their number
- Richness
 - Evenness**
 - Dominance
 - None
138. Which of the following organisms' populations follow J-shaped curves? Humans
- Yeast
 - Insects**
 - Bacteria
 - None
139. What are the two opposing forces that operate growth and development of every population?
- Biotic potential and environmental resistance
 - Rate of natality and mortality
 - Carrying capacity and biotic potential
 - Both a and b**
140. Net reproductive rate coupled with generation time indicate_____.
- Natality
 - Age structure
 - Environmental resistance**
 - None
141. What percentage of Carbon is present as dry body weight in organisms?
- 50%
 - 14%
 - 49 %**
 - 45%
142. Water reach at its maximum density at _____°C

- a) 8
 - b) -2
 - c) -4
 - d) 4**
143. Surface fire burns which part of soil?
- a) A-horizon
 - b) B-horizon
 - c) Litter layer
 - d) O-horizon**
144. Macronutrients that constituents more than 1% each of dry organic weight are _____.
- a) C,N,H,O₂, Na
 - b) C,N,H,P, O₂**
 - c) H,C,N,O, K
 - d) None
145. Herbivores consume 30% of energy in_____.
- a) Reproductive activities
 - b) Metabolic activities**
 - c) Decomposition
 - d) Growth
146. Energy may change in form but not in amount” is the statement of:
- a) 1st law of thermodynamics**
 - b) 2nd law of thermodynamics
 - c) Law of Tolerance
 - d) law of Minimum
147. What percent of total energy of detritus ecosystem comes from root death?
- a) 10%
 - b) 2%
 - c) 12%**
 - d) 0.9%
148. What type of populations follow J-shaped growth curves?
- a) Populations with short life cycle
 - b) Populations that reproduce asexually
 - c) Populations with high reproductive rate
 - d) All above**
149. Denitrification to nitric oxide and nitrous oxide is accomplished by _____?
- a) Nitrobactor
 - b) Nitrosomonas
 - c) Pseudomonas
 - d) Both a & b**

150. Low or no decomposition process takes place in which season?
- a) Summer
 - b) Spring
 - c) **Winter**
 - d) Fall
151. Boron is involved in
- a) Growth
 - b) Cell replacement
 - c) **Translocation of water in Plants**
 - d) Nitrogen fixation
152. About 45 percent of soil consists of _____
- a) Air
 - b) Water
 - c) Organic matter
 - d) **Mineral matter**
153. Which macro nutrients of animal bodies are micronutrients in plants?
- a) Na & Ca
 - b) **Na & Cl**
 - c) Na & K
 - d) Cl & K
154. The process when individuals of populations release a toxic substance in the soil or water that limit the growth of their own type of plants to control crowding of a species at a particular place known as:
- a) **Auto allelopathy**
 - b) Autotoxicity
 - c) Competitive exclusion
 - d) Competition
155. What time is required for the regeneration of renewable resources?
- a) < 1 year
 - b) 1-200 years
 - c) **1-300 years**
 - d) <2 year
156. Liebig's law of minimum was originally applied on _____
- a) Organic nutrients
 - b) **Inorganic nutrients**
 - c) Physical factors
 - d) Population growth
157. At high pH value more Carbon is present in form of _____.
- a) HCO_3
 - b) H_2CO_3

- c) CO₂
 - d) CO⁻³**
158. CO₂ levels near the ground may rise to ____ % at night
- a) 0.01
 - b) 0.05**
 - c) 0.005
 - d) 0.6
159. The major processes involved in hydrological cycle are
- a) Evaporation & Respiration
 - b) Evaporation & Transpiration
 - c) Evaporation & Precipitation**
 - d) Precipitation & Respiration
160. A species with wide tolerance to salinity are called?
- a) Stenohaline
 - b) Euryhaline**
 - c) Stenothermal
 - d) Eurythermal
161. Which of the following organisms' populations follow S-shaped curves?
- a) Yeast
 - b) Insects**
 - c) Bacteria
 - d) None
162. The sum total of all the ecological requisites and activities of a species is called _____.
- a) Competition
 - b) Biotic potential
 - c) Carrying capacity**
 - d) Niche
163. _____ bacteria oxidize sulfide to sulfur and sulfur to sulfate
- a) Beggiatoa
 - b) Thiobacillus
 - c) Methanococcus**
 - d) None
164. Sulfur has strong binding affinity with which element in sediments?
- a) Ca
 - b) Fe**
 - c) O₂
 - d) H₂
165. Which among the following is the mechanism of evolution according to the modern evolutionary thought?
- a) Population

- b) Variations
 - c) Natural selection**
 - d) Genetic drift
166. Which of these naturalists synthesized a concept of natural selection independently of Darwin?
- a) Charles Lyell
 - b) Gregor Mendel
 - c) Alfred Wallace**
 - d) John Henslow
167. The form of natural selection in which both extremes of phenotype range are favored, is..... selection.
- a) Balancing
 - b) Disruptive**
 - c) Directional
 - d) Stabilizing
168. Which of these is the smallest unit upon which natural selection directly acts?
- a) Species
 - b) Population**
 - c) individual
 - d) Ecosystem
169. The movement of alleles among the populations is termed as
- a) Migration
 - b) Speciation
 - c) Drift
 - d) Gene flow**
170. In the inbreeding populations, the level of heterozygosity
- a) Increases
 - b) Decreases**
 - c) Remains unchanged
 - d) None of these
171. Which among the following consist of all those individuals who contribute to the gene pool of the next generation in a population?
- a) Census population
 - b) Effective population**
 - c) Drone population
 - d) Non-effective population
172. Which pattern in the hybrid zone leads to strengthening of reproductive barriers?
- a) Fusion
 - b) Weakening
 - c) Reinforcement**

- d) None of these
173. Which among the following is the terrestrial ancestor of whale?
- a) **Pakicetus**
 - b) Rhodocetus
 - c) Durodon
 - d) Baleena
174. The differential fitness of individuals leads to accumulation of.....traits in population over generations.
- a) **Favorable**
 - b) Undesirable
 - c) Neutral
 - d) None of these
175. Which of these is the smallest unit that natural selection can change?
- a) a species' gene frequency
 - b) **a population's gene frequency**
 - c) an individual's genome
 - d) an individual's genotype
176. The fossil record of _____ served as an evolutionary link between reptiles and birds.
- a) **Archeopterix**
 - b) Eoalulavus
 - c) Dinosaurs
 - d) Durodon
177. Who would have proposed that the boundaries between each stratum mark the occurrence of different localized floods?
- a) Lyell
 - b) **Cuvier**
 - c) Hutton
 - d) Darwin
178. Contribution an individual makes to the gene pool of the next generation is?
- a) Reproduction
 - b) Gene flow
 - c) **Relative fitness**
 - d) Migration
179. If, on average, 46% of the loci in a species' gene pool are heterozygous, then the average homozygosity of the species should be
- a) 23%
 - b) 46%
 - c) **54%**
 - d) 92%

180. Which of these evolutionary agents is most consistent at causing populations to become better suited to their environments over the course of generations?
- a) Mutation
 - b) Non-random mating
 - c) Gene flow
 - d) Natural selection**
181. A trend toward the decrease in the size of plants on the slopes of mountains as altitudes increase is an example of
- a) A cline**
 - b) A bottleneck.
 - c) Relative fitness
 - d) Genetic drift.
182. In a Hardy-Weinberg population with two alleles, A and a , that are in equilibrium, the frequency of the allele a is 0.4. What is the percentage of the population that is homozygous for this allele?
- a) 4
 - b) 16**
 - c) 32
 - d) 36
183. In a Hardy-Weinberg population with two alleles, A and a , that are in equilibrium, the frequency of allele a is 0.1. What is the percentage of the population that is heterozygous for this allele?
- a) 90
 - b) 81
 - c) 49
 - d) 18**
184. In a Hardy-Weinberg population with two alleles, A and a , that are in equilibrium, the frequency of allele a is 0.2. What is the frequency of individuals with Aa genotype?
- a) 0.20
 - b) 0.32**
 - c) 0.42
 - d) 0.80
185. You sample a population of butterflies and find that 42% are heterozygous at a particular locus. What should be the frequency of the recessive allele in this population?
- a) 0.09
 - b) 0.30
 - c) 0.49
 - d) Allele frequency cannot be determined from this information.**
186. Gene flow is a concept best used to describe an exchange between
- a) Species

- b) Males and females
 - c) Populations**
 - d) Individuals
187. Natural selection is most nearly the same as:
- a) Diploidy
 - b) Gene flow
 - c) Genetic drift
 - d) Differential reproductive success**
188. Fossil evidence indicates that horses have gradually increased in size over geologic time. Which of the following terms best describes this?
- a) Artificial selection
 - b) Directional selection**
 - c) Stabilizing selection
 - d) Disruptive selection
189. Which of the following pieces of evidence most strongly supports the common origin of all life on Earth?
- A) All organisms use essentially the same genetic code**
 - B) All organisms reproduce
 - C) All organisms show heritable variation
 - D) All organisms have undergone evolution
190. Heterozygote advantage should be most closely linked to which of the following?
- a) Sexual selection
 - b) Stabilizing selection**
 - c) Random selection
 - d) Directional selection
191. A fruit fly population has a gene with two alleles, *A1* and *A2*. Tests show that 70% of the gametes produced in the population contain the *A1* allele. If the population is in Hardy-Weinberg equilibrium, what proportion of the flies carries both *A1* and *A2*?
- a) 0.7
 - b) 0.49
 - c) 0.21
 - d) 0.42**
192. Natural selection changes allele frequencies in populations because some _____ survive and reproduce more successfully than others.
- a) Alleles
 - b) Loci
 - c) Gene pools
 - d) Individuals**
193. Which of the various species concepts distinguishes two species based on the degree of genetic exchange between their gene pools?

- a) **Phylogenetic**
 - b) Ecological
 - c) Biological
 - d) Morphological
194. Which species concept is currently most popular among most biologists?
- a) Phylogenetic
 - b) Ecological
 - c) **Biological**
 - d) Morphological
195. What was the species concept most used by Linnaeus?
- a) Biological
 - b) **Morphological**
 - c) Ecological
 - d) Phylogenetic
196. The phenotypic characters which vary along a continuum in a population are termed as:
- a) Cline
 - b) **Continuous character**
 - c) Discontinues character
 - d) Morphometric character
197. One species lives only in tree holes; another species lives only in streams. What sort of barrier exists between these two species?
- a) Behavioral
 - b) Gametic
 - c) **Habitat**
 - d) Temporal
198. Females of one species choose mates based on song quality; females of another species choose mates on the basis of size. What sort of barrier exists between these two species?
- a) **Behavioral**
 - b) Gametic
 - c) Habitat
 - d) Temporal
199. Males of one species are too small to perform amplexus (an action that stimulates ovulation) with females of all other species. What sort of barrier exists between these two species?
- a) Behavioral
 - b) Gametic
 - c) Habitat
 - d) **Mechanical**
200. The biological species concept is inadequate for grouping:
- a) Plants

- b) Parasites
 - c) Asexual organisms**
 - d) Animals that migrate
201. The most likely explanation for the recent decline in cichlid species diversity in Lake Victoria is:
- a) Reinforcement
 - b) Fusion**
 - c) Stability
 - d) Geographic isolation
202. The largest unit within which gene flow can readily occur is a
- a) Population**
 - b) Species
 - c) Genus
 - d) Hybrid
203. Natural selection changes allele frequencies because some.....survive and reproduce more successfully than others:
- a) Alleles
 - b) Gene pools
 - c) Individuals**
 - d) Species
204. Among following, which taxon exhibits pronounced level of polyploidy?
- a) Amphibians
 - b) Fishes**
 - c) Rodents
 - d) Primates
205. Which group is composed entirely of individuals who maintained that species are fixed (i.e., unchanging)?
- a) Aristotle, Cuvier, and Lamarck
 - b) Linnaeus, Cuvier, and Lamarck
 - c) Lyell, Linnaeus, and Lamarck
 - d) Aristotle, Linnaeus, and Cuvier**
206. During an individual organism's lifetime, which of these is most likely to help the organism respond properly to changes in its environment?
- A) Microevolution
 - B) Change in allele or gene frequency
 - C) Change in gene expression**
 - D) Change in average heterozygosity
207. Which term is the most suitable to describe a polyploid having its sets of chromosomes derived from different species?
- a) Anueploidy

- b) **Allopolyploidy**
 - c) Autopolyploidy
 - d) Chromosomal aberration
208. Which of Darwin's ideas had the strongest connection to Darwin having read Malthus's
- A) Essay on human population growth?
 - B) Descent with modification
 - C) **Variation among individuals in a population**
 - D) Struggle for existence
209. Which of the following pairs of structures is least likely to represent homology?
- a) **The wings of a bat and the arms of a human**
 - b) The hemoglobin of a baboon and that of a gorilla
 - c) The mitochondria of a plant and those of an animal
 - d) The wings of a bird and those of an insect
210. Which of these evolutionary agents is most consistent at causing populations to become better suited to their environments over the course of generations?
- a) Mutation
 - b) Non-random mating
 - c) Gene flow
 - d) **Natural selection**
211. Which among the following is an example of atavistic structures?
- a) **Appearance of tail in humans**
 - b) Vermiform appendix
 - c) Nictitating membrane
 - d) Tail of tadpole
212. Type of mutation which results in formation of premature stop codon in a coding region of genome is termed as:
- a) Silent mutation
 - b) Missense mutation
 - c) **Nonsense mutation**
 - d) Aberration
213. Which among the following can best describe a mutation occurring in a noncoding region of genome?
- a) **Neutral variation**
 - b) Genetic drift
 - c) Fossil genome
 - d) Pseudogene
214. Sexual selection accruing within a same population may ultimately leads to:
- a) Hybridization
 - b) Allopatric speciation
 - c) **Sympatric speciation**

- d) Polyploidy
215. Evolution that results from relationships between organisms is _____?
- a) Parallel evolution
 - b) Coevolution**
 - c) Convergent evolution
 - d) Divergent evolution
216. According to scientific estimates, the life in the cosmos came into being as earlier as:
- a) 2.5 billion years ago
 - b) 3.5 billion years ago**
 - c) 4.5 billion years ago
 - d) None of these
217. According to the punctuated equilibria model,
- a) Natural selection is unimportant as a mechanism of evolution.
 - b) New species accumulate unique features rapidly as they come into existence, then change little for the rest of their duration**
 - c) Most evolution occurs in sympatric populations.
 - d) Speciation is usually due to a single mutation.
218. Microevolution can best be described as following:
- a) Speciation in microbes
 - b) Gradual accumulation of adaptations
 - c) Presence of vestigial organs
 - d) Change in allele frequency of a population**
219. Which of the following anatomical structures is homologous to bones in wing of a bird?
- a) Cartilage in the dorsal fin of a shark
 - b) Bones in the hind limb of a kangaroo
 - c) Bones in the flipper of a whale**
 - d) Bony rays in the tail fin of a flying fish
220. Paleontology, the study of fossils, was developed by?
- a) George Cuvier**
 - b) James Hutton
 - c) Charles Lyell
 - d) Thomas Malthus
221. Which of the following must exist in a population before natural selection can act upon that population?
- a) Genetic variation among individuals**
 - b) Variation among individuals caused by environmental factors
 - c) Sexual reproduction
 - d) B and C only
222. Group of organisms that have a common ancestor and some of its descendants?
- a) Monophyletic

- b) **Polyphyletic**
 - c) Paraphyletic
 - d) Cladogram
223. Which of the following is true?
- a) **Analogous structures result from convergent evolution**
 - b) Analogous structures result from divergent evolution
 - c) Homologous structures result from convergent evolution
 - d) None of these
224. Structures that evolve from same ancestral form though function may differ?
- a) **Homologous**
 - b) Analogous
 - c) Convergent
 - d) Divergent
225. Pattern of evolution in which two closely related populations gradually become more and more different?
- a) Convergent evolution
 - b) **Divergent evolution**
 - c) Coevolution
 - d) Parallel evolution
226. Which of the following leads to speciation?
- a) Natural selection
 - b) Favorable genotypes
 - c) Adaptation
 - d) **All of these**
227. _____ may add new genetic material to established gene pool of a population?
- a) Emigration
 - b) **Immigration**
 - c) Founder effect
 - d) Genetic drift
228. Evolution of Homo sapiens is an example of?
- a) Microevolution
 - b) **Macroevolution**
 - c) Coevolution
 - d) Parallel evolution
229. Which of the following published his extensive studies of vertebrate fossils?
- a) **George Cuvier**
 - b) James Hutton
 - c) Charles Lyell
 - d) Thomas Malthus
230. Any selective force which pushes population towards median traits?

- a) **Stabilizing selection**
 - b) Directional selection
 - c) Disruptive selection
 - d) Frequency-dependent selection
231. Form of selection that appears when males compete for territories?
- a) Stabilizing selection
 - b) Directional selection
 - c) Disruptive selection
 - d) **Sexual selection**
232. Species which is naturally found only in a particular geographical area?
- a) Exotic
 - b) **Endemic**
 - c) Introduced
 - d) Keystone
233. Type of reproductive isolation when species breed during different time of a day or seasons?
- a) Habitat isolation
 - b) **Temporal isolation**
 - c) Behavioral isolation
 - d) Mechanical isolation
234. Reduced hybrid viability occurs when?
- a) Genes of different parents do not interact in any way
 - b) **Genes of different parents interact in different ways**
 - c) Genes of different parents interact in same way
 - d) Genes of same parents do no interact
235. _____ relies on body shape of a species and other structural features?
- a) Biological species concept
 - b) Ecological species concept
 - c) **Morphological species concept**
 - d) Phylogenetic species concept
236. Modern horses have evolved changes in which of the following?
- a) Body size
 - b) Reduction in toes
 - c) Tooth size and shape
 - d) **All of these**
237. Example of vestigial trait in human is?
- a) Tail
 - b) Appendix
 - c) Wisdom teeth
 - d) **All of these**

238. Which of these provide important data for constructing life histories?
- a) Rocks
 - b) Fossils**
 - c) Strata
 - d) Layers
239. Process of gradualism was proposed by?
- a) George Cuvier
 - b) James Hutton**
 - c) Charles Lyell
 - d) Thomas Malthus
240. When a population is in Hardy-Weinberg equilibrium, which of the following is true?
- a) Individuals migrate randomly
 - b) Population size to be limited
 - c) Mating is random**
 - d) Continuous natural selection
241. The role that humans play in artificial selection is to?
- a) Create the genetic variants, which nature then selects
 - b) Choose which organisms breed, and which do not**
 - c) Train organisms to breed more successfully
 - d) Perform artificial insemination
242. The equation for Hardy-Weinberg equilibrium is?
- a) $P^2 + 2pq + q^2 = 0$
 - b) $P^2 + 2pq + q^2 = 1$**
 - c) $P + 2pq + q = 0$
 - d) $P + 2pq + q = 1$
243. Biological species concept depends upon _____ for determining species boundaries?
- a) Geographic isolation
 - b) Gene flow**
 - c) Morphological similarities
 - d) Molecular similarities
244. A population forms a new species while geographically isolated from its parent population?
- a) Allopatric**
 - b) Sympatric
 - c) Peripatric
 - d) Parapatric
245. Sympatric speciation can occur if gene flow is reduced by?
- a) Polyploidy
 - b) Habitat differentiation
 - c) Sexual reproduction

- d) **All of these**
246. Autopolyploid individuals have _____?
- a) Two sets of chromosomes from single species
 - b) Two sets of chromosomes from different species
 - c) **More than two sets of chromosomes from single species**
 - d) More than two sets of chromosomes from different species
247. When few individuals separate from large population and establish a new population?
- a) Gene flow
 - b) **Founder effect**
 - c) Bottleneck
 - d) Mutation
248. When prezygotic barriers do not exist and hybrid zygote fail to develop, the condition is?
- a) Gametic isolation
 - b) **Hybrid inviability**
 - c) Hybrid sterility
 - d) Hybrid breakdown
249. Sudden change in population that drastically reduce its size is _____?
- a) Mutation
 - b) Emigration
 - c) **Bottleneck effect**
 - d) Genetic drift
250. The study of animal behaviour is called as _____
- a) Psychology
 - b) Endocrinology
 - c) **Ethology**
 - d) Ichthyology
251. Relationship between behaviour of a species and its environment is called as _____.
- a) Ethogenetics
 - b) **Ecoethology**
 - c) Human ethology
 - d) Ethoendocrinology
252. Prenatal development of behaviour pattern are studied in _____
- a) Neuroethology
 - b) **Behavioural embryology**
 - c) Human ethology
 - d) Ethogenetics
253. The study of evolution of social behaviour is called as _____
- a) Sociology
 - b) **Socio-biology**

- c) Social evolution
 - d) Social behaviour
254. Study of human behaviour is called as _____
- a) Ecoethology
 - b) Ethoendocrinology
 - c) Ethogenetics
 - d) **Human ethology**
255. The study of ecological effects of animal behaviour is called as
- a) **Behavioral ecology**
 - b) Ethology
 - c) Comparative psychology
 - d) Socio-biology
256. The evolution of social behaviour in animals called
- a) Ethology
 - b) **Socio-biology**
 - c) Behavioural biology
 - d) Comparative psychology
257. A gradual decrease in behavioural responsiveness which occurs when a stimulus is repeated frequently with neither reward nor punishment is called as _____
- a) Latent learning
 - b) **Habituation**
 - c) Insight learning
 - d) Imprinting
258. Cause of mimicry is _____
- a) **Concealment**
 - b) Attack
 - c) Symbiosis
 - d) Aggression
259. When an animal attacks on another animal, this behaviour pattern is called _____
- a) **Aggression**
 - b) Threat
 - c) Appeasement
 - d) Avoidance
260. Social behaviour in animals are of _____
- a) Territorial rights
 - b) Dominance and subordinate relationship
 - c) Leadership
 - d) **All of these**
261. Concept of imprinting was proposed by _____
- a) Desmond Morris

- b) **Konrad Lorenz**
 - c) Hamilton
 - d) Wilson
262. Similarities due to convergent evolution is called as _____
- a) Homology
 - b) Homoplasy
 - c) Analogy
 - d) **Both b and c**
263. An area selected and protected by an individual for home, courtship and mating is called _____
- a) **Territory**
 - b) Niche
 - c) Range
 - d) Locality
264. The attempt of two or more organisms to utilize the same resource
- a) Kinesis
 - b) Taxis
 - c) **Competition**
 - d) Contiguity
265. Natural selection molds and that often match organism to environment so exquisitely, this is termed as _____
- a) **Adaptions**
 - b) Taxis
 - c) Fitness consequences
 - d) Heritability
266. Searching for food is termed as _____
- a) **Foraging**
 - b) Kinesis
 - c) Courtship
 - d) Preening
267. A system in which members of an organization or society are ranked according to relative status or authority is called as _____
- a) Social status
 - b) **Hierarchy**
 - c) Social organization
 - d) None of these
268. The movement of organism in response to a stimulus and animal's body is not oriented in relation to stimuli refers to _____
- a) **Kinesis**
 - b) Telotaxis

- c) Temporal fixation
 - d) Orientation
269. Increase in behavioural response following repeated stimuli is known as _____
- a) Habituation
 - b) Conditioning
 - c) Latent learning
 - d) **Sensitization**
270. A form of learning in which very young animal fixes its attention on first object with which it has visual, auditory or tactile experience and thereafter follows that object shows _____
- a) Habituation
 - b) **Imprinting**
 - c) Operant learning
 - d) Latent learning
271. Learning is change in behaviour as a result of _____
- a) Imprinting
 - b) Altruism
 - c) Instinct
 - d) **Experience**
272. Some animals establish ranking among themselves by confrontations; This determines their _____
- a) **Dominance hierarchy**
 - b) Eugenics
 - c) Sociality
 - d) Kinship
273. A process in which an animal sacrifices its reproductive potential for the benefit of another organism is called
- a) Mutualism
 - b) Cooperation
 - c) **Altruism**
 - d) Autism
274. An animal that sacrifices itself for its relatives is exhibiting:
- a) Operant conditioning
 - b) **Kin selection**
 - c) Imprinting
 - d) Habituation
275. The attribution of human behaviour or characteristics to God, objects or animals is known as:
- a) Behavioural ecology
 - b) **Anthropomorphism**

- c) Comparative psychology
 - d) Socio-biology
276. Some behavioural patterns appear only after a specific developmental stage or time. This stage or time is called:
- a) Imprinting
 - b) **Maturation**
 - c) Learning
 - d) Instinct
277. The inherited behaviour is called:
- a) Imprinting
 - b) Learning
 - c) Maturation
 - d) **Instinct**
278. Innate behaviour is all but:
- a) Heritable
 - b) Intrinsic
 - c) Stereotypic
 - d) **Flexible**
279. The change of behaviour by life experiences is called:
- a) Instinct
 - b) Maturation
 - c) **Learning**
 - d) Imprinting
280. The use of cognitive or mental processes to associate experiences and solve problems are called:
- a) Instinct
 - b) Maturation
 - c) Habituation
 - d) **Insight**
281. The behaviour in which one animal is aggressive or attacks another animal, the other responds by returning the aggression or submitting is called:
- a) **Agnostic**
 - b) Territory
 - c) Hierarchy
 - d) Altruism
282. Heritable, intrinsic, stereotypic, inflexible and consummate, the behavior will be:
- a) Instinctive
 - b) Innate
 - c) Shaping
 - d) **Both a and b**

283. The trial and error learning is called
- a) Habituation
 - b) Maturation
 - c) Classic conditioning
 - d) **Instrumental conditioning**
284. Humans ignoring night sounds while asleep:
- a) Classical Conditioning
 - b) Habituation
 - c) **Operant Conditioning**
 - d) Imprinting
285. Catalogue of behaviour or actions exhibited by animal used in ethology:
- a) Picogram
 - b) Microgram
 - c) Milligram
 - d) **Ethogram**
286. Transfer of information from individual to individual through social learning within and between generations of animals called as _____
- a) Social Hierarchy
 - b) **Cultural transmission**
 - c) Insight learning
 - d) None of these
287. The type of cultural transmission in which young animals get information from the adult than parents is called as _____
- a) Vertical
 - b) **Oblique**
 - c) Horizontal
 - d) Straight
288. The process by which young animals learn the characteristics of their opposite-sexed siblings and parent is called:
- a) Filial imprinting
 - b) Familial imprinting
 - c) Asexual imprinting
 - d) **Sexual imprinting**
289. A key stimulus results in a fixed action pattern through a(n):
- a) Configurational key stimulus
 - b) Interactive gap sequence
 - c) Interoceptor
 - d) **Innate releasing mechanism**
290. In behaviour nervous system act as
- a) Machine

- b) Robot
 - c) **Stimulus filter**
 - d) Respondent
291. The mutual sharing of information between two organisms is called
- a) Sharing
 - b) **Communication**
 - c) Discussion
 - d) Learning
292. A change due to experience in the behaviour of an organism is called
- a) **Learning**
 - b) Maturation
 - c) Imprinting
 - d) Social behaviour
293. Causation in animal behaviour that occurs on an evolutionary time scale is a/an _____ cause.
- a) Proximate
 - b) **Ultimate**
 - c) Ethological
 - d) Anthropomorphic
294. Male red deer can show rutting pattern _____
- a) Through administration of testosterone
 - b) **In breeding season**
 - c) By interacting with other members of forest
 - d) Depends upon genotype
295. The mating system where the male has access to more than one female is known as _____.
- a) Monogamy
 - b) **Polygyny**
 - c) Polyandry
 - d) None of these
296. Receptivity in females refers to the
- a) Female's stimulus
 - b) Reaction of female to the sperm
 - c) **Female's consummatory response**
 - d) All of these
297. _____-are used when audible and visual signals are not successful
- a) Aggression behaviour
 - b) **Pheromones**
 - c) Tactile signals
 - d) Infra sound communication

298. Orientation flight in the bees means
- Flight from nest to environment**
 - Flight from nest to female bees
 - Flight for escaping
 - All of these
299. Queen honeybee is adapted for_____.
- Controlling other bees
 - Laying eggs**
 - Rearing the young's
 - Preparing honey
300. _____are able to sleep with one eyes open.
- Tiger
 - Honeybee
 - All forager animals
 - None of these**
301. The unihemispheric shows_____ in those animals who sleep with one eye open.
- Slow wave sleep cycle**
 - Fast wave sleep cycle
 - Random wave sleep cycle
 - Deep waves sleep cycle
302. Sleep waves cycles can be estimated through_____.
- ECG
 - ECC
 - Option
 - EEG**
303. The body size of type 1 male as compared to type 2 male in plainfin midshipman
- Greater**
 - Smaller
 - Same in size
 - Can vary according to foraging
304. _____neurons in type 1 male fish fires at higher percentage as compared to type 2 male fish in midshipman
- Pacemaker**
 - Sensory
 - Motor
 - Mixed
305. Copulatory behaviour can be restored in pig through
- Injection blood from newly parturient
 - Increasing the activity of pudendal nerve
 - Different correlational methods

- d) **None of these**
306. Parental care behaviours are selected because they _____
- a) Reduce the fighting among the young
 - b) **Increase the frequency of parent's genes in the next generation**
 - c) Ensure the survival of parents
 - d) To increase the social behaviour
307. Maternal behaviour in a virgin female can be induced through
- a) Interaction with other individuals
 - b) Seasonal variations
 - c) Administration of FSH and LH
 - d) **Blood transfusion from newly parturient**
308. Nervous control of behaviour is called as _____
- a) Ecoethology
 - b) Ethogenetics
 - c) Behavioural embryology
 - d) **Neuroethology**
309. Study of hormonal influence on behaviour is called as _____
- a) Ecoethology
 - b) **Ethoendocrinology**
 - c) Human ethology
 - d) Ethogenetics
310. Anger hormones are _____
- a) Adrenaline and Thyroxine
 - b) Noradrenaline and Calcitonin
 - c) **Adrenaline and Noradrenaline**
 - d) Thyroxine and relaxin
311. High androgen levels in blood causes _____
- a) Femininity
 - b) Appeasement
 - c) **Aggression**
 - d) None of these
312. Behaviour of aggression is controlled by
- a) **Pituitary hormones**
 - b) Gonadal hormones
 - c) Pituitary adrenal hormones
 - d) None of these
313. Dominance hierarchy in animals is controlled by _____
- a) Progesterone
 - b) **Testosterone**
 - c) Adrenaline

- d) Thyroxine
314. Which hormone promotes anger
- a) Thyroid
 - b) Parathyroid
 - c) Calcitonin
 - d) **Testosterone**
315. _____ are primarily responsible for maintenance of male reproductive functions
- a) Protein based hormones
 - b) Behavioural hormones
 - c) **Steroid hormones**
 - d) Adrenal hormone
316. The function of melanin production is controlled by hormones of
- a) Thyroid
 - b) Testes
 - c) Ovary
 - d) **None of these**
317. Aromatization is related to
- a) Sexual excitement in female
 - b) **Conversion of androgens to estrogens**
 - c) Sexual decrement
 - d) All of these
318. Growth of muscles in female rat is linked with
- a) High levels of testosterone
 - b) Oestrogen
 - c) Progestin
 - d) **Somatotropin**
319. Female can be masculinized through
- a) Endogenous estradiol benzoate
 - b) Endogenous estradiol
 - c) **Exogenous testosterone**
 - d) High levels of progestin
320. Portal system of hypothalamus in male Guiana pig may control
- a) Level of hormones in hypothalamus
 - b) Transportation of releasing factors to posterior pituitary gland
 - c) Hormones of median lobe of master gland
 - d) **Secretion of anterior pituitary part**
321. Hormones of ovary are controlled by
- a) Testis
 - b) **Pituitary gland**

- c) Adrenal gland
 - d) Thyroid gland
322. The hormones of pituitary are controlled through
- a) Positive feedback system
 - b) **Negative feedback system**
 - c) Environmental fluctuation
 - d) According to body requirement
323. Administration of hormones may show huge sexual responses _____
- a) During non-seasonal mating
 - b) **In experiences partners**
 - c) In castrated male members
 - d) All of these
324. _____ maintain the sexual responses in castrated male rats
- a) Dihydrotestosterone
 - b) Endogenous testosterone propionate
 - c) All androgens
 - d) **None of these**
325. During non-mating days _____ can elicit the female to initiate estrus cycle
- a) Injecting progestin
 - b) **Estradiol benzoate**
 - c) Castration and replacement
 - d) Seasonal fluctuation
326. The pattern of fluctuation in orgasm of human female is related with level of _____ during menstrual phase
- a) FSH
 - b) LH
 - c) Progestin
 - d) **Estrogen**
327. Menstrual cycle can be completed through feedback of _____
- a) FSH
 - b) LH
 - c) Estrogen
 - d) **None of these**
328. _____ may cause reduction in the levels of nor epinephrine in hypothalamus
- a) **Estrogen**
 - b) Progesterone
 - c) Dihydrotestosterone
 - d) Androgens
329. Steroids bind primarily to:
- a) The cell surface

- b) Other steroids
 - c) The endoplasmic reticulum
 - d) **The cell nucleus**
330. The area of brain that monitors hunger and thirst is located in
- a) Thalamus
 - b) **Hypothalamus**
 - c) Cerebrum
 - d) Medulla
331. Reflex action is controlled by _____
- a) Brain
 - b) **Spinal Cord**
 - c) Peripheral nervous system
 - d) Autonomic nervous system
332. Which part of brain is involved in spatial memory and navigation? _____
- a) Hypothalamus
 - b) Amygdala
 - c) **Hippocampus**
 - d) Limbic system
333. The nerves leading to the central nervous system are called _____
- a) Efferent
 - b) **Afferent**
 - c) Cerebrum
 - d) None
334. The part of nerve cell that conveys information towards the cell body is called as _____
- a) Soma
 - b) Axon
 - c) **Dendrite**
 - d) Neurilemma

336. Large numbers of ribosomes are present in cells that specialize in producing which of the following molecules?

- a. Lipids
- b. Starches
- c. Proteins**
- d. Steroids

337. Which type of organelle is primarily involved in the synthesis of oils, phospholipids, and steroids?

- a. Ribosome
- b. Lysosome
- c. Smooth endoplasmic reticulum**
- A) Mitochondrion

338. Which structure is the site of the synthesis of proteins that may be exported from the cell?

- a. Rough endoplasmic reticulum**
- b. Lysosomes
- c. Plasmodesmata
- d. Golgi vesicles

339. Which cellular organelle must be involved in Tay-Sachs that results in cells accumulating and becoming clogged with very large and complex lipids?

- a. Endoplasmic reticulum
- b. Golgi apparatus
- c. Lysosome**
- d. Mitochondria

340. The liver is involved in detoxification of many poisons and drugs. Which of the following structures is primarily involved in this process and therefore abundant in liver cells?
- Rough endoplasmic reticulum
 - Smooth endoplasmic reticulum**
 - Golgi apparatus
 - Nuclear envelope
341. Which of the following contains its own DNA and ribosomes?
- Lysosome
 - Vacuole
 - Mitochondrion**
 - Golgi apparatus
342. Which of the following contains enzymes that transfer hydrogen from various substrates to oxygen?
- Lysosome
 - Vacuole
 - Mitochondrion
 - Peroxisome**
343. Motor proteins provide for molecular motion in cells by interacting with what types of Cellular structures?
- Membrane proteins
 - Ribosomes
 - Cytoskeleton**
 - Cellulose fibers in the cell wall
344. Which of the following contain the 9 + 2 arrangement of microtubules?
- Cilia
 - Centrioles
 - Flagella
 - A and C only**
345. Which of the following possesses a microtubular structure similar to a basal body?
- Centriole**
 - Lysosome
 - Nucleolus
 - Peroxisome
346. Microfilaments are well known for their role in which of the following?
- Ameboid movement
 - Formation of cleavage furrows
 - Contracting of muscle cells
 - A and B only**
347. The following is thought to participate in the regulation of animal cell behavior by communicating information from the outside to the inside of the cell.

- a. Gap junctions
 - b. Nucleus
 - c. Integrins**
 - d. Plasmodesmata
348. Ions can travel directly from the cytoplasm of one animal cell to the cytoplasm of an adjacent cell through
- a. Plasmodesmata
 - b. Tight junctions.
 - c. Desmosomes
 - d. Gap junctions**
349. Of the following molecules of the ECM, which is capable of transmitting signals between the ECM and the cytoskeleton?
- a. Fibronectin
 - b. Proteoglycans
 - c. Integrins**
 - d. Collagen
 - e. Middle lamella
350. Which of the following is present in a prokaryotic cell?
- a. Mitochondrion
 - b. Ribosome**
 - c. Nuclear envelope
 - d. Chloroplast
351. Which cell would be best for studying lysosomes?
- a. Muscle cell
 - b. Nerve cell
 - c. Phagocytic white blood cell**
 - d. Leaf cell of a plant
352. Who proposed that membranes are a phospholipid bilayer between two layers of hydrophilic proteins?
- a. H. Davson and J. Danielli
 - b. Shlieden and Schwann
 - c. S. Singer and G. Nicolson
 - d. E. Gorter and F. Grendel**
353. In order for a protein to be an integral membrane protein it would have to be which of the following?
- a. Hydrophilic
 - b. Hydrophobic
 - c. Amphipathic**
 - d. Completely covered with phospholipids
354. Which of these are not embedded in the lipid bilayer at all?

- a) **Peripheral proteins**
 - b) Transmembrane proteins
 - c) Integral proteins
 - d) Integrins
355. Which of these are attached to the extracellular matrix?
- a) Transmembrane proteins
 - b) **Integrins**
 - c) Integral proteins
 - d) Peripheral proteins
356. Which of these often serve as receptors or cell recognition molecules on cell surfaces?
- a) Integral proteins
 - b) Peripheral proteins
 - c) Integrins
 - d) **Glycoproteins**
357. What kinds of molecules pass through a cell membrane most easily?
- a) Large and hydrophobic
 - b) **Small and hydrophobic**
 - c) Large polar
 - d) Ionic
358. What are the membrane structures that function in active transport?
- a) Peripheral proteins
 - b) **Carbohydrates**
 - c) Cholesterol
 - d) Cytoskeleton filaments
359. Cellular structures on which movement of vesicles within the cell depends?
- a) **Microtubules and motor proteins**
 - b) Actin filaments and microtubules
 - c) Centrioles and motor proteins
 - d) Actin filaments and motor proteins
360. The sodium-potassium pump is called an electrogenic pump because it
- a) Pumps equal quantities of Na⁺ and K⁺ across the membrane.
 - b) **Contributes to the membrane potential.**
 - c) Ionizes sodium and potassium atoms.
 - d) is used to drive the transport of other molecules against a concentration gradient.
361. White blood cells engulf bacteria through what process?
- a) Exocytosis
 - b) **Phagocytosis**
 - c) Pinocytosis
 - d) Osmosis

362. The general name for an enzyme that transfers phosphate groups from ATP to a protein is:
- a) Phosphorylase
 - b) Phosphatase
 - c) **Protein kinase**
 - d) Protease.
363. Which term describes two centrosomes arranged at opposite poles of the cell?
- a) Telophase
 - b) Anaphase
 - c) **Prometaphase**
 - d) Metaphase
364. Which term describes centrioles beginning to move apart in animal cells?
- a) Anaphase
 - b) Prometaphase
 - c) Metaphase
 - d) **Prophase**
365. Which among the following is the longest of the mitotic stages?
- a) Telophase
 - b) Anaphase
 - c) Prometaphase
 - d) **Metaphase**
366. Which term describes centromeres uncoupling, sister s separating, and the two new chromosomes moving to opposite poles of the cell?
- a) Telophase
 - b) **Anaphase**
 - c) Prometaphase
 - d) Metaphase
367. If cells in the process of dividing are subjected to colchicine, a drug that interferes with the functioning of the spindle apparatus, at which stage will mitosis be arrested?
- a) Anaphase
 - b) Prophase
 - c) Telophase
 - d) **Metaphase**
368. A cell containing 92 chromatids at metaphase of mitosis would, at its completion, produce two nuclei each containing how many chromosomes?
- a) 12
 - b) 23
 - c) **46**
 - d) 92

369. If there are 20 centromeres in a cell at anaphase, how many chromosomes are there in each daughter cell following cytokinesis?

- a) 10
- b) 20**
- c) 40
- d) 80

370. If there are 20 chromatids in a cell at metaphase, how many chromosomes are there in each daughter cell following cytokinesis?

- a) 10**
- b) 20
- c) 30
- d) 40

371. Where do the microtubules of the spindle originate during mitosis in both plant and animal cells?

- a) Centromere
- b) Centrosome**
- c) Centriole
- d) Kinetochore

372. Cells that are in a nondividing/resting state are in which phase?

- a) G₀**
- b) G₂
- c) G₁
- d) S

373. Which of the following is released by platelets in the vicinity of an injury?

- a) PDGF**
- b) MPF
- c) Cyclin
- d) Cdk

374. Fibroblasts have receptors for this substance on their plasma membranes:

- a) PDGF**
- b) MPF
- c) protein kinase
- d) Cdk

375. Which of the following is a protein maintained at constant levels throughout the cell cycle that requires cyclin to become catalytically active?

- a) PDGF
- b) MPF
- c) Cyclin**
- d) Cdk

376. Which of the following triggers the cell's passage past the G₂ checkpoint into mitosis?

- a) PDGF
 - b) MPF**
 - c) protein kinase
 - d) cyclin
377. This is the shortest part of the cell cycle:
- a) G₀
 - b) S
 - c) G₂
 - d) M**
378. Nerve and muscle cells are in which among the following phase?
- a) G₀**
 - b) G₁
 - c) S
 - d) M
379. The cyclin component of MPF is destroyed toward the end of this phase:
- a) G₀
 - b) G₁
 - c) G₂
 - d) M**
380. An enzyme that attaches a phosphate group to another molecule is called a
- a) Phosphatase.
 - b) Phosphorylase.
 - c) Kinase**
 - d) ATPase.
381. Proteins that are involved in the regulation of the cell cycle, and that show fluctuations in concentration during the cell cycle, are called
- a) ATPases.
 - b) Kinetochores.
 - c) Centrioles.
 - d) Cyclins**
382. The decline of MPF activity at the end of mitosis is due to
- a) The destruction of the protein kinase Cdk
 - b) Decreased synthesis of cyclin
 - c) The degradation of cyclin**
 - d) Synthesis of DNA
383. Which among the following is not a part of endomembrane system?
- a) Mitochondria
 - b) Endoplasmic Reticulum
 - c) Peroxisome**
 - d) Golgi complex

384. All of the following are part of a prokaryotic cell *except*
- a) DNA
 - b) Plasma Membrane
 - c) Ribosomes
 - d) Endoplasmic reticulum**
385. Which of the following type of proteins form the intermediate filaments?
- a) Tubulin
 - b) Keratin**
 - c) Actin
 - d) Myosin
386. Which of the following would likely move through the lipid bilayer of a plasma membrane most rapidly?
- a) CO₂**
 - b) Glucose
 - c) K⁺
 - d) Amino acid
387. Attached structures on the surface of some prokaryotic cells?
- a) Fimbriae**
 - b) Flagella
 - c) Cilia
 - d) None of these
388. Nucleoid is a region in _____ where DNA is concentrated?
- a) Prokaryotic cell**
 - b) Eukaryotic cell
 - c) Haploid cell
 - d) All of these
389. Jelly-like outer coating of prokaryotes?
- a) Fimbriae
 - b) Capsule**
 - c) Flagella
 - d) Cilia
390. Projections that increase the surface area of cell?
- a) Cilia
 - b) Flagella
 - c) Microvilli**
 - d) Microtubules
391. Cytoplasmic channels through cell walls that connect the cytoplasm of adjacent cells
- a) Nuclear envelope
 - b) Plasmodesmata**
 - c) Microtubules

- d) Filaments
392. The purpose of cell fractionation is to?
- a) Differentiate cells on the basis of their size
 - b) Determine size of cellular organelles
 - c) **Separate the organelles to determine their functions**
 - d) To observe the structure of cells
393. Which of the following is a mismatch pair?
- a) Ribosomes: protein factory
 - b) Nuclear lamina: maintain shape
 - c) Peroxisomes: metabolic functions
 - d) **Chloroplast: site of respiration**
394. Which of the following have hydrolytic materials?
- a) Vacuoles
 - b) Peroxisomes
 - c) **Lysosomes**
 - d) Vesicles
395. To study the internal ultracellular structure, biologists use?
- a) Light microscope
 - b) Scanning electron microscope
 - c) **Transmission electron microscope**
 - d) Both B and C
396. Which of the following organelles is involved in synthesis of oils, phospholipids and steroids?
- a) Ribosomes
 - b) Contractile vacuole
 - c) **Smooth endoplasmic reticulum**
 - d) Rough endoplasmic reticulum
397. Which of the following is false about mitochondria?
- a) Mitochondria have their own DNA
 - b) Mitochondria have more than one membrane
 - c) Mitochondria are involved in energy metabolism
 - d) **Mitochondria contain ribosomes in the intermembrane space**
398. Basal bodies are most closely associated with?
- a) Mitochondria
 - b) Golgi apparatus
 - c) **Cilia**
 - d) Central vacuole
399. _____ attaches extracellular matrix to integrins embedded in plasma membrane?
- a) **Fibronectin**
 - b) Collagen fibers

- c) Middle lamellae
 - d) Proteoglycans
400. _____ support cell shape and fix organelles in place?
- a) Microfilaments
 - b) Intermediate filaments**
 - c) Microtubules
 - d) Cilia and flagella
401. Plant cells have which of the following?
- a) Plasmodesmata**
 - b) Tight junctions
 - c) Desmosomes
 - d) Gap junctions
402. Plasmolysis is a condition in which?
- a) Plant cell becomes flaccid and dies
 - b) Plant cell becomes wilt and dies**
 - c) Animal cell becomes flaccid and dies
 - d) Animal cell becomes wilt and dies
403. _____ are proteins embedded in lipid bilayer?
- a) Peripheral
 - b) Integral**
 - c) Glycoproteins
 - d) Transport
404. Ions can have a concentration gradient called _____ which determines net direction of ionic movement?
- a) Electrical gradient
 - b) Physical gradient
 - c) Electrochemical gradient**
 - d) Potential gradient
405. Condition is called _____ when solution outside has a higher solute concentration
- a) Osmosis
 - b) Hypertonic**
 - c) Hypotonic
 - d) Facilitated diffusion
406. A structure of proteins associated with specific sections of chromosomal DNA at each centromere?
- a) Centriole
 - b) Centromere
 - c) Kinetochore**
 - d) Centrosome
407. Chromosomes become visible at cell stage

- a) Prophase
 - b) Prometaphase**
 - c) Anaphase
 - d) Telophase
408. In which of organisms does the nuclear envelope remain intact during mitosis?
- a) Bacteria
 - b) Dinoflagellates**
 - c) Most of eukaryotes
 - d) All of these
409. The process that converts a normal cell to a cancer cell is called?
- a) Proliferation
 - b) Transformation**
 - c) Transduction
 - d) Variation
410. Particular cell has half as much DNA as some other cells in a mitotically active tissue. The cell in question is most likely in:
- a) Prophase
 - b) Anaphase
 - c) G1**
 - d) G2
411. One difference between cancer cells and normal cells is that cancer cells:
- a) Unable to synthesize DNA
 - b) Arrested at the S phase of the cell cycle
 - c) Continue to divide even when they are tightly packed together**
 - d) Cannot function properly because they are affected by density-dependent inhibition
412. Which of the following is a characteristic feature of a carrier protein in a plasma membrane?
- a) Having specificity for a particular type of molecule**
 - b) Needs expenditure of cellular energy to function
 - c) Works against diffusion
 - d) It has few, if any, hydrophobic amino acids
413. Which of the following processes includes all others?
- a) Osmosis
 - b) Diffusion of a solute across a membrane
 - c) Facilitated diffusion
 - d) Passive transport**
414. What is the voltage across a membrane called?
- a) Chemical gradient
 - b) Membrane potential**
 - c) Osmotic potential

- d) Electrochemical gradient
415. An organism with a cell wall would most likely be unable to take in materials through
- Diffusion
 - Osmosis
 - Active transport
 - Phagocytosis**
416. Main function of polysaccharides attached with glycoproteins and glycolipids of cell membranes is?
- To maintain the integrity of a fluid mosaic membrane
 - To maintain membrane fluidity at low temperatures
 - To mediate cell-to-cell recognition**
 - All of these
417. Which of the following have been adapted by cell membranes of Antarctic ice fish?
- Very long chain fatty acids
 - High percentage of polyunsaturated fatty acids**
 - Higher percentage of trans-fatty acids
 - No cholesterol
418. _____ modifies the produced polysaccharides for secretion?
- Lysosome
 - Peroxisomes
 - Mitochondrion
 - Golgi apparatus**
419. During which phase of mitosis do the chromatids become chromosomes?
- Telophase**
 - Anaphase
 - Metaphase
 - Cytokinesis
420. _____ is abundant in liver due to its detoxification of poisons and drugs?
- SER**
 - RER
 - Golgi bodies
 - Lysosomes
421. Tissues are composed of cells, and tissues functioning together make up
- Organs.**
 - Membranes.
 - Organ systems.
 - Organelles.
422. An exchange surface is in direct contact with the external environment in the
- Lungs.**
 - Skeletal muscles.

- c) Liver.
 - d) Heart.
423. An example of a connective tissue is the
- a) Skin.
 - b) Nerves.
 - c) **Blood.**
 - d) Smooth muscles.
424. The fibers responsible for the elastic resistance properties of tendons are
- a) Elastin fibers.
 - b) Fibrin fibers.
 - c) **Collagenous fibers.**
 - d) Reticular fibers.
425. If you gently twist your ear lobe it does not remain distorted because it contains
- a) Collagenous fibers.
 - b) **Elastin fibers.**
 - c) Reticular fibers.
 - d) Adipose tissue.
426. Fibroblasts secrete
- a) **Proteins for connective fibers.**
 - b) Chondroitin sulfate.
 - c) Interstitial fluids.
 - d) Calcium phosphate for bone.
427. Muscles are joined to bones by
- a) Ligaments.
 - b) **Tendons.**
 - c) Loose connective tissue.
 - d) Haversian systems.
428. The type of muscle tissue associated with internal organs, other than the heart, is
- a) **Smooth muscle.**
 - b) Cardiac muscle.
 - c) Striated muscle.
 - d) Intercalated cells
429. Food moves along the digestive tract as the result of contractions by
- a) Cardiac muscles.
 - b) **Smooth muscles.**
 - c) Voluntary muscles.
 - d) Striated muscles.
430. The body's automatic tendency to maintain a constant internal environment is termed
- a) Balanced equilibrium.

- b) Physiological chance.
 - c) **Homeostasis.**
 - d) Estivation.
431. The temperature-regulating center of vertebrate animals is located in the
- a) Medulla oblongata.
 - b) Thyroid gland.
 - c) **Hypothalamus.**
 - d) Subcutaneous layer of the skin.
432. In mammals, this response is known as fever, but it is known to raise body temperature in other bacterially infected animals, including lizards, fishes, and cockroaches:
- a) Growth of hair
 - b) Reduced metabolic rate
 - c) Sweating
 - d) **A change in thermostat “set-point”**
433. Hibernation and estivation are both examples of
- a) Acclimatization.
 - b) **Torpor.**
 - c) Evaporative cooling.
 - d) Non-shivering thermogenesis.
434. Compared with a smaller cell, a larger cell of the same shape has
- a) Less surface area.
 - b) **Less surface area per unit of volume.**
 - c) The same surface-to-volume ratio.
 - d) A smaller average distance between its mitochondria and the external source of oxygen.
435. Some nutrients are considered “essential” in the diets of certain animals because
- a) Only those animals use the nutrients.
 - b) They are subunits of important polymers.
 - c) **They cannot be manufactured by the organism.**
 - d) They are necessary coenzymes.
436. Which of the following is a fat-soluble vitamin?
- a) **Vitamin A**
 - b) Vitamin B12
 - c) Vitamin C
 - d) Iodine
437. With which of the following is excessive iron absorption most likely to be associated?
- a) Blood loss due to severe injury
 - b) Liver abnormality that results in decreased number of red blood cells
 - c) Various forms of inherited or acquired anemia

d) Genetic disorders such as hemochromatosis

438. Intracellular digestion of peptides is usually immediately preceded by which process?

- a) Hydrolysis
- b) Endocytosis**
- c) Absorption
- d) Elimination

439. Foods eaten by animals are most often composed largely of macromolecules. This requires the animals to have methods for which of the following?

- a) Elimination
- b) Dehydration synthesis
- c) Enzymatic hydrolysis**
- d) Regurgitation

440. What is the substrate of salivary amylase?

- a) Protein
- b) Starch**
- c) Sucrose
- d) Glucose

441. What part(s) of the digestive system have secretions with a pH of 2?

- a) Small intestine
- b) Stomach**
- c) Pancreas
- d) Liver

442. Which of the following enzymes has the lowest pH optimum?

- a) Amylase
- b) Pepsin**
- c) Lipase
- d) Trypsin

443. The pH of the gastric juice of the stomach is about 2 due to the formation of HCl. Where does this formation of HCl occur?

- a) In the chief cells of the stomach
- b) In the parietal cells of the stomach
- c) In the transformation of pepsinogen to pepsin
- d) In the lumen of the stomach**

444. In which group of animals would you expect to find a relatively long cecum?

- a) Carnivores
- b) Herbivores**
- c) Autotrophs
- d) Omnivores

445. Which of the following are adaptations to a carnivorous diet?

- a) Broad, flat molars
- b) A rumen
- c) Ingestion of feces
- d) Bile salts**

446. Microbial symbionts are especially important for nutritional support in which of the following?

- a) Herbivores and carnivores
- b) Herbivores and omnivores**
- c) Carnivores and omnivores
- d) Animals with large stomach and short intestines

447. The symbiotic microbes that help nourish a ruminant live mainly in specialized regions of the

- a) Large intestine.
- b) Liver.
- c) Small intestine.
- d) Stomach.**

448. Organisms in which a circulating body fluid is distinct from the fluid that directly surrounds the body's cells are likely to have which of the following?

- a) An open circulatory system
- b) A closed circulatory system**
- c) A gastrovascular cavity
- d) Branched tracheae

449. In which animal does blood flow from the pulmocutaneous circulation to the heart before circulating through the rest of the body?

- a) Annelid
- b) Mollusc
- c) Fish
- d) Frog**

450. Average blood pressure is lowest in which structure(s)?

- a) The aorta
- b) Arteries
- c) Venae cavae**
- d) Capillaries

451. A blood vessel has the following characteristics: outer layer of connective tissue, a thick layer of smooth muscle with elastic fibers, no valves. It is which of the following?

- a) A vein
- b) A venule
- c) An artery**
- d) A capillary

452. Which of these speeds up heart rate?

- a) Low-density lipoproteins

- b) Immunoglobulins
- c) Erythropoietin
- d) Epinephrine**

453. Which of these stimulate the production of red blood cells?

- a) Low-density lipoproteins
- b) Immunoglobulins
- c) Erythropoietin**
- d) Epinephrine

454. Which of these are involved in the early stages of blood clotting?

- a) Low-density lipoproteins
- b) Platelets**
- c) Erythropoietin
- d) Epinephrine

455. Countercurrent exchange in the fish gill helps to maximize which of the following?

- a) Endocytosis
- b) Blood pressure
- c) Diffusion**
- d) Active transport

456. Blood returning to the mammalian heart in a pulmonary vein drains first into the

- a) Vena cava.
- b) Left atrium.**
- c) Right atrium.
- d) Left ventricle

457. Pulse is a direct measure of

- a) Blood pressure.
- b) Stroke volume.
- c) Cardiac output.
- d) Heart rate.**

458. The body's automatic tendency to maintain a constant internal environment is termed as

- a) Balanced equilibrium
- b) Physiological chance
- c) Homeostasis**
- d) Estivation

459. To leave the digestive tract, a substance must cross a cell membrane. During which stage of food processing does this take place

- a) Ingestion
- b) Digestion
- c) Hydrolysis
- d) Absorption**

460. A common feature; streamlined body, found in fast swimmers of different phyla is a result of an evolutionary process called
- a) Divergent evolution
 - b) Convergent evolution**
 - c) Parallel evolution
 - d) Co-evolution
461. The rates of exchange for nutrients, waste products, and gases are proportional to
- a) Size of the molecule
 - b) Cell volume
 - c) Membrane surface area**
 - d) Numbers of cells in the body
462. The water-soluble vitamin which is required by the production of connective tissue
- a) Vitamin K
 - b) Vitamin C**
 - c) Vitamin A
 - d) Vitamin D
463. A diet deficient in one or more nutrients, or one that consistently provides less chemical energy than the body requirements, leads to
- a) Malnutrition**
 - b) Undernutrition
 - c) Overnutrition
 - d) Neuromuscular disorders
464. Which fish is used in china for soap making
- a) Shark**
 - b) Tilapia
 - c) Grass carp
 - d) Silver carp
465. The three chambered heart with incomplete septum is a characteristic of
- a) Amphibians
 - b) Most of reptiles**
 - c) Birds
 - d) Mammals
466. Arteries, veins, and capillaries are the three main types of blood vessels. Within each type, blood flows in only one direction. The vessels which carry blood away from the heart
- a) Arteries**
 - b) Arterioles
 - c) Veins
 - d) Capillaries
467. Excretory tubes, mini kidneys, in each segment of annelids which collect fluid directly from the coelom

- a) Protonephridia
 - b) Metanephridia**
 - c) Malpighian tubules
 - d) Excretory cells
468. The distal tubule of human kidney plays a key role in regulating
- a) Water balance
 - b) Secretions
 - c) Organic materials
 - d) Salts**
469. White matter consists of?
- a) Myelin sheaths**
 - b) Dendrites
 - c) Unmyelinated axons
 - d) Neuron cell bodies
470. _____ are immune cells that protect against pathogens?
- a) Schwann cells
 - b) Oligodendrocytes
 - c) Microglia**
 - d) Ependymal cells
471. The fluid which is present between the intracellular spaces in many animals is called
- a) Intracellular fluid
 - b) Lymphatic fluid
 - c) Extracellular matrix
 - d) Interstitial fluid**
472. The large, brick-shaped cells of intestines which are responsible for secretion and active absorption are called as
- a) Cuboidal epithelium
 - b) Simple columnar epithelium**
 - c) Simple squamous epithelium
 - d) Pseudostratified columnar epithelium
473. Many birds have a specialized organ used for storing food
- a) Stomach
 - b) Crop**
 - c) Gizzard
 - d) Intestine
474. Food is pushed along the alimentary canal by a mechanism of alternating waves of contraction and relaxation in the smooth muscles lining the canal
- a) Muscular activity
 - b) Wave action
 - c) Peristalsis**

- d) Sphincters
475. The volume of blood each ventricle pumps per minute is
- a) Heart rate
 - b) Cardiac cycle
 - c) Stroke volume
 - d) **Cardiac output**
476. A single layer of flattened epithelial cells which lined the lumen of blood vessels is
- a) **Endothelium**
 - b) Ectothelium
 - c) Mesothelium
 - d) Epithelium
477. Cup-shaped structure of the nephron of a kidney which encloses the glomerulus and where filtration takes place
- a) Loop of Henle
 - b) **Bowman's capsule**
 - c) Glomerulus
 - d) Collecting duct
478. Hormone secreted by the posterior pituitary gland and also by nerve endings in the hypothalamus in response to water and salt imbalance
- a) Aldosterone
 - b) **Antidiuretic hormone**
 - c) Arterial Natriuretic Peptide
 - d) Angiotensin II
479. An organism that lacks integration centers
- a) Cannot receive stimuli
 - b) Will not have a nervous system
 - c) **Will not be able to interpret stimuli**
 - d) Can be expected to lack myelinated neurons
480. The cerebrospinal fluid is
- a) **A filtrate of the blood**
 - b) A secretion of glial cells
 - c) Cytosol secreted from ependymal cells
 - d) Secreted by the hypothalamus
481. The extracellular matrix generally consists of a web of fibers embedded in a liquid, jellylike, or solid foundation. Within the matrix are numerous cells called fibroblasts, which
- a) **Secrete fiber proteins**
 - b) Engulf foreign particles
 - c) Provide strength and flexibility
 - d) Join connective tissue to adjacent tissues
482. An animal whose body temperature varies with its environment is called a

- a) Ectotherms
 - b) Endotherms
 - c) **Poikilotherm**
 - d) Homeotherm
483. The longest part of the alimentary canal where most chemical digestion takes place
- a) Large intestine
 - b) **Small intestine**
 - c) Stomach
 - d) Salivary glands
484. Enzyme found in saliva that breaks the chemical bonds in starches
- a) Protease
 - b) Pepsin
 - c) Lipase
 - d) **Amylase**
485. The hollow muscular organ located behind the sternum and between the lungs
- a) Lungs
 - b) Pancreases
 - c) Gall bladder
 - d) **Heart**
486. The physiological response of an organisms which cause decrease in the diameter of blood vessels
- a) Vasodilation
 - b) **Vasoconstriction**
 - c) Systolic pressure
 - d) Atherosclerosis
487. Process by which fluid from the blood filters into Bowman's capsule in the kidneys
- a) Reabsorption
 - b) **Filtration**
 - c) Reabsorption
 - d) Osmoregulation
488. Anhydrobiosis refers to tolerate
- a) **Dehydration**
 - b) Hydration
 - c) Anhydration
 - d) Rehydration
489. Which of the following is not a part of forebrain?
- a) Cerebrum
 - b) Diencephalon
 - c) **Pons**
 - d) Hypothalamus

490. _____ plays a key role in recognizing and recalling a number of emotions?
- a) **Amygdala**
 - b) Thalamus
 - c) Pons
 - d) Diencephalon
491. The direct transfer of heat between molecules of objects in contact with each other is called
- a) Convection
 - b) **Conduction**
 - c) Evaporation
 - d) Radiation
492. The gradual process by which an animal physiologically adjusts to a change in an environmental factor
- a) Shivering thermogenesis
 - b) Non-shivering thermogenesis
 - c) **Acclimatization**
 - d) Torpor
493. Specialized cells which secretes “pepsin” into the lumen
- a) Parietal cells
 - b) **Chief cells**
 - c) Gastric cells
 - d) Mucus cells
494. After surgical removal of an infected gallbladder, a person must be especially careful to restrict dietary intake of
- a) Starch
 - b) Protein
 - c) **Fats**
 - d) Sugar
495. Pacemaker of heart is
- a) Sino-Ventricle Node
 - b) **Sino-Atrial Node**
 - c) Artio-Ventricle Node
 - d) Artio-Sinal Node
496. When you hold your breath, which of the following blood gas changes first leads to the urge to breathe?
- a) Rising O₂
 - b) Falling CO₂
 - c) Falling O₂
 - d) **Rising CO₂ and falling O₂**
497. The excretory product that require minimum water for its elimination is
- a) Urea

- b) Ammonia
- c) Uric Acid**
- d) Urine

498. The disorder result from mutations that leads to prevention of ADH production by inactivating ADH receptor gene

- a) Diabetes mellitus
- b) Diabetes insipidus**
- c) Renal failure
- d) Leukemia

499. Bipolar disorder differs from schizophrenia in that

- a) Schizophrenia results in both manic and depressive states
- b) Schizophrenia results in hallucinations**
- c) Schizophrenia results in decreased dopamine
- d) Bipolar disorder involves both genes and environment

500. Short-term memory information processing usually causes changes in the

- a) Brainstem
- b) Medulla
- c) Hypothalamus
- d) Hippocampus**

501. A physiological state that permits survival during long periods of elevated temperature in summer characterized by slow metabolism and inactivity is called

- a) Torpor
- b) Homeostasis
- c) Hibernation
- d) Estivation**

502. Which of the following is not a major activity of the stomach?

- a) Mechanical digestion
- b) Enzyme secretion
- c) HCl secretion
- d) Nutrient absorption**

503. An amphipathic molecule secreted by cells in the alveoli that reduces surface tension on the inside of the alveolar walls. This prevents the alveoli from collapsing upon exhale and sticking together, thus reducing the effort required for inspiration

- a) Surfactant**
- b) Hemoglobin
- c) Diaphragm
- d) Bronchioles

504. Which process in the nephron is least selective?

- a) Filtration**
- b) Reabsorption

- c) Active transport
- d) Secretion

505. The establishment and expression of emotions involves the:

- a) Frontal lobes and limbic system**
- b) Frontal lobes and parietal lobes
- c) Parietal lobes and limbic system
- d) Frontal and occipital lobes

506. Which organ is used for Isinglass

- a) Fins
- b) Skin
- c) scales
- d) Swim bladder**

507. 1,000 times less soluble in water excreted by land snails, insects, birds, and many reptiles in a paste-like form with very little loss of water

- a) Uric acid**
- b) Ammonia
- c) Urea
- d) Potassium

508. In Baluchistan how many wildlife sanctuaries are present _____.

- a) 14
- b) 15**
- c) 18
- d) 20

509. In federal territory how much hectare is covered _____.

- a) 3000 ha
- b) 5000 ha
- c) 7000ha**
- d) 1000 ha

510. Which area of Pak Naltar is situated with hectare _____?

- a) 15452 ha
- b) 24156 ha
- c) 26265 ha
- d) 27195 ha**

511. In which province TAUNSA BARRAGE is present with hectare _____?

- a) Sindh 5431
- b) NWFP 4515
- c) Punjab 6566**
- d) Baluchistan 1159

512. TAKKAR is situated in Sindh with hectare _____.

- a) 43513 ha**

- b) 7095 ha
 - c) 42413 ha
 - d) 35615 ha
513. In Shorkot plantation the hectare area is covered _____.
- a) 3962ha
 - b) 4079 ha**
 - c) 4175 ha
 - d) 4215 ha
514. In Sindh with factor 324 which Sanctuaries is located _____.
- a) Takkar
 - b) Lakhat
 - c) Khadi
 - d) Hilaya**
515. How many wetlands in PAK have been designated as land of international importance _____?
- a) 11**
 - b) 14
 - c) 16
 - d) 10
516. What sort of lands are breeding sites of Waterfowl's _____?
- a) Dry lands
 - b) Wetlands**
 - c) Mountains
 - d) Rivers
517. Hunting & shooting of wild animals is not allowed in _____.
- a) Wildlife Sanctuaries
 - b) National Parks
 - c) a & b both
 - d) Game reserves**
518. The height of greater flamingo is _____.
- a) 150 cm
 - b) 149 cm
 - c) 155 cm**
 - d) 160 cm
519. The legs and feet color of *Netta rufina* is _____.
- a) Dark brown
 - b) Reddish orange**
 - c) Black
 - d) Dark green
520. Brahiminy duck are _____ in its feeding habit.

- a) Carnivores
- b) Herbivores
- c) Omnivores**
- d) Scavengers

521. The iris of common cranes is _____ in color.

- a) Lemon yellow**
- b) Dark brown
- c) Pinkish white
- d) Bismark brown

522. The length of black stork is _____.

- a) 95 to 100cm**
- b) 75 to 90cm
- c) 75 to 80cm
- d) 80 to 90cm

523. The bill of white pelican is _____ in center.

- a) Brown
- b) Grey
- c) Green
- d) Blue**

524. The marsh crocodile has _____ toes.

- a) Four**
- b) Five
- c) Two
- d) Three

525. The gavial has _____ teeth in upper jaws.

- a) 25
- b) 28**
- c) 29
- d) 26

526. Male nose is very much swollen in _____.

- a) Crocodile
- b) Alligator
- c) Gavial**
- d) Tortoise

527. The common teal has _____ belly.

- a) White**
- b) Brown
- c) Reddish
- d) Pinkish

528. An area owned by the Govt. and set aside for protection and preservation of its outstanding scenery, flora and fauna in natural stat and it is accessible to the public for recreation, education and research activities is called_____.
- a) Country park
 - b) National park**
 - c) Public park
 - d) Recreation Park
529. How many National parks are there in Pakistan_____?
- a) 10
 - b) 12
 - c) 14**
 - d) 16
530. In which province of Pakistan Lal Sohanra National Park and Chinji National park, are located _____?
- a) Punjab**
 - b) Sindh
 - c) N.W.F.P
 - d) Baluchistan
531. Kirthar National Park is located in _____.
- a) Sindh**
 - b) Punjab
 - c) Azad Kashmir
 - d) N.W.F.P
532. Kirthar National in which Province of Pakistan Park was established in_____?
- a) 1970**
 - b) 1971
 - c) 1972
 - d) 1973
533. Overgrazing is serious factor afflicting
- a) Pastures
 - b) Forests
 - c) Mountains
 - d) All of these**
534. This National Park is situated in the Salt Range about 30 km from Talagang (District Chakwal) _____?
- a) Chinji National Park**
 - b) Lal Suhanra National Park
 - c) Hazarganji Chiltan National Park
 - d) Chitral-Gol National Park.
535. Hazarganji Chiltan National Park was established in_____?

- a) 1975
- b) 1976
- c) 1977
- d) 1978**

536. Which National Park is situated in Abbottabad District (NWFP)?

- a) Khunjerab National Park
- b) Dharune-Hingol National Park
- c) Ayubia National Park**
- d) Margalla hill National Park

537. An area owned by Govt. and set aside by notification in official gazette, as an undisturbed breeding ground for protection of wildlife and public access to this area is prohibited is called as _____.

- a) National park
- b) Wildlife Sanctuary**
- c) Both a & b
- d) None

538. The environmental problems are generally classified into _____ categories.

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

539. Biological resources are also called as _____.

- a) Renewable**
- b) Nonrenewable resources
- c) Unaltered resources
- d) None of these

540. Physical resources are _____.

- a) Renewable resources
- b) Nonrenewable**
- c) Unaltered
- d) None

541. Resources used outside body, gathering of which leaves them _____.

- a) Renewable
- b) Nonrenewable
- c) Unaltered**
- d) None

542. The term conservation is largely used for _____.

- a) Mammals
- b) Birds
- c) Reptiles

d) All of these

543. A group of organisms local or native to a given area _____.

a) Endemic

b) Exotic

c) Extinct

d) Feral

544. Any plant or animal introduced from a foreign country _____.

a) Endemic

b) Exotic

c) Extinct

d) Feral

545. An animal or plant not in existence today _____.

a) Endemic

b) Exotic

c) Extinct

d) Feral

546. Domestic organisms which have escaped accidentally, now live wild under natural conditions are called _____.

a) Endemic

b) Exotic

c) Extinct

d) Feral

547. Group of population of plants and animals living together in a given area is called ____.

a) Community

b) Ecosystem

c) Biosphere

d) None of these

548. A group of individuals of single species living together in a given area _____.

a) Community

b) Ecosystem

c) Biosphere

d) Population

549. Taxonomic subdivision of genus is _____.

a) Species

b) Family

c) Order

d) Genera

550. An area where hunting and shooting of wild animals is regulated under special permit

a) Safari park

b) Sanctuary

- c) **Game reserve**
- d) Zoological Garden

551. A big park where animals are kept in open for visitors to see from their cars

- a) **Safari park**
- b) Sanctuary
- c) Game reserve
- d) Zoological Garden

552. A place where wild indigenous animals are kept in protection, they breed and preserved

- a) Safari park
- b) **Sanctuary**
- c) Game reserve
- d) Zoological Garden

553. Institutions that are popularly known as zoos are _____.

- a) **Zoological Garden**
- b) Zoological Museum
- c) Zoological Park
- d) Ramsar site

554. A place where dead animals are displayed with some preservatives is called _____.

- a) Zoological Garden
- b) **Zoological Museum**
- c) Zoological Park
- d) Ramsar site

555. A place where wild animals are kept in conditions, keeping in view their natural habitats

- a) Zoological Garden
- b) Zoological Museum
- c) **Zoological Park**
- d) Ramsar site

556. A wetland of international importance declared as conservation site _____.

- a) Zoological Garden
- b) Zoological Museum
- c) Zoological Park
- d) **Ramsar site**

557. An area in which an animal travels and gathers food is called _____.

- a) Territory
- b) **Home range**
- c) Habitat
- d) None of these

558. Area occupied by an animal or group of animals, defended against members of same species

- _____.
- a) **Territory**

- b) Home range
- c) Habitat
- d) None of these

559. Causes of depletion of wildlife are _____.

- a) Persecution by human beings
- b) Loss of habitats
- c) Pollution
- d) All of these**

560. Modes of wildlife conservations are _____.

- a) Persecution by human beings
- b) Loss of habitats
- c) Preservation of habitat**
- d) All

561. In wildlife _____ strict laws should be enforced for wildlife protection.

- a) Legislation**
- b) Census
- c) Research
- d) Awards

562. In wildlife _____ accurate idea about population density of various species is essential.

- a) Legislation
- b) Census**
- c) Research
- d) Awards

563. Basic scientific data is a prerequisite for all kinds of management program, including wildlife during _____.

- a) Legislation
- b) Census
- c) Research**
- d) Awards

564. Plants and the animal species which are in danger of extinct on are called

- a) Endangered species**
- b) Critically endangered
- c) Vulnerable
- d) Rare

565. Those species that cannot survive without human interventions

- a) Endangered species
- b) Critically endangered**
- c) Vulnerable
- d) Rare

566. Those species which are abundant in parts of their range but gradually declining in total numbers
- a) Endangered species
 - b) Critically endangered
 - c) Threatened
 - d) **Both a & b**
567. Those species which relatively exist in low numbers but are not in immediate danger of extinction _____.
- a) Endangered species
 - b) Rare
 - c) Vulnerable
 - d) **Both b & c**
568. Species living on _____ are more vulnerable to extinction than living on _____.
- a) **Island, Continent**
 - b) Continent, Island
 - c) Estuarine, freshwater
 - d) None of these
569. Large animals have _____ reproductive rate
- a) **Low**
 - b) High
 - c) Intermediate
 - d) Extremely high
570. Category 1 of protected area includes
- a) Strict nature reserves
 - b) Wilderness area
 - c) Area of land or sea
 - d) **Both a and b**
571. In _____ protected areas are managed mainly for the ecosystem protection and recreation.
- a) Strict nature reserves
 - b) Wilderness area
 - c) Area of land or sea
 - d) **National Park**
572. Protected areas managed mainly for conservation of specific natural features in
- a) Strict nature reserves
 - b) Wilderness area
 - c) Area of land or sea
 - d) **Natural monument**
573. Protected area managed mainly for conservation through management intervention
- a) Strict nature reserves
 - b) Wilderness area

- c) Area of sea
- d) Habitat/species management**

574. In Pakistan, there are only ----- categories of protected area

- a) 3**
- b) 4
- c) 5
- d) 6

575. Various categories of protected areas are defined by

- a) IUCN**
- b) WWF
- c) WWFP
- d) IWC

576. The commission to avoid the extinction of whales is

- a) IUCN
- b) WWF
- c) WWFP
- d) IWC**

577. Protected area managed mainly for wilderness is

- a) Strict nature reserves
- b) Wilderness area**
- c) Area of sea
- d) Habitat/specie management

578. Protected area managed mainly for science is

- a) Strict nature reserves**
- b) Wilderness area
- c) Area of sea
- d) Habitat/specie management

579. Pakistan is bounded on ----- and ----- by Afghanistan

- a) South and Southeast
- b) North and Northwest**
- c) South and Northwest
- d) None of these

580. Pakistan is situated in transition zone between

- a) Palearctic, Oriental**
- b) Neotropical, Oriental
- c) Nearctic, Oriental
- d) Ethiopian, Oriental

581. Reasons for rapid decline in wildlife are

- a) Pollution
- b) Deforestation

c) Drainage of wetland areas

d) All of these

582. Only anteater found in Pakistan is

a) Rhesus monkey

b) Common grey Langur

c) Pangolin

d) Fox

583. Wild dogs are members of family

a) Canidae

b) Hominidae

c) Carnivora

d) Primate

584. Hyaenas are large sized ----- carnivores

a) Black bear

b) Fox

c) Monkey

d) Dog

585. Big cats include

a) Common Leopard

b) Snow Leopard

c) Dogs

d) Both a and b

586. Kithar national park is situated in

a) Sindh

b) Punjab

c) Baluchistan

d) Kashmir

587. Largest and 1st of Pakistan's various National Park is

a) Kithar

b) Ayubi

c) Deosai

d) Chinji

588. A place where organism or population naturally occurs is

a) Feral

b) Habitat

c) Community

d) Homeland

589. A free-living animal that actually catches and kills individual of other species is

a) Predator

b) Prey

- c) Producer
 - d) Detritivores
590. Variability among living organisms is
- a) Eco fauna
 - b) Eco flora
 - c) **Biodiversity**
 - d) None of these
591. An animal that eats only plant matter is
- a) Producers
 - b) **Herbivore**
 - c) Omnivore
 - d) Carnivores
592. An animal that is killed and eaten by another is
- a) Predator
 - b) **Prey**
 - c) Producer
 - d) Detritivores
593. Wildlife generally refers to all species of
- a) Mammals
 - b) Birds
 - c) Reptiles
 - d) **All of the above**
594. Symbol of WWF is
- a) Anaconda
 - b) Elephant
 - c) **Panda**
 - d) None of these
595. Major human activity which destroys wildlife is
- a) Pollution of environment
 - b) Hunting
 - c) Poaching
 - d) **all of the above**
596. Red data book is concerned with
- a) **Endangered plants and animals**
 - b) Red coloured animals
 - c) Red coloured plants
 - d) None of these
597. Preservation of diminishing wildlife species can be preserved by
- a) **Gene Bank**
 - b) Gene library
 - c) Gene pool

- d) Herbarium
598. Cutting down of important plantations is known
- a) Reforestation
 - b) short plants
 - c) Long plants
 - d) None of these**
599. Maximum biodiversity can be found at
- a) Taiga
 - b) Temperate rain forests
 - c) Mangroves
 - d) Coral reefs**
600. Hot spots are considered as
- a) Critically less number of species
 - b) Rare species of animals
 - c) rich endemism**
 - d) None of these
601. Australian region is included in
- a) Arid-desert
 - b) Tropical forests**
 - c) Coniferous forests
 - d) Drought
602. Continental drift describes
- a) Formation of large habitat
 - b) Destruction of large habitat into smaller fragments**
 - c) Aging of wildlife
 - d) None of these
603. Scientific name of neem tree is
- a) *Ficus bengalensis*
 - b) *Terminalia arjuna*
 - c) *Dalbergia sissoo*
 - d) *Azadirachta indica***
604. Rodent infestation and damage signs comprise
- a) Foot prints
 - b) Urine droppings
 - c) Fecal droppings
 - d) All of the above**
605. Effective rodent management includes
- a) Sanitization of environment**
 - b) Wet conditions
 - c) Dry habitats

- d) None of these
606. Scientific name of house sparrow is
- a) *Corvus splendens*
 - b) *Passer machrorhynchous*
 - c) ***Passer domesticus***
 - d) None of the above
607. Psittacosis is the disease transmitted by
- a) **Parakeets**
 - b) Sparrows
 - c) Monkeys
 - d) Lions
608. HVPS is abbreviated as
- a) High Virus Pulmonary Station
 - b) **Hanta-virus pulmonary syndrome**
 - c) Hacks Visual Pelvic syndrome
 - d) Hacketts' Viral Pulmonary Syndrome
609. Managing vertebrate pests with other animals is called as
- a) Chemical control
 - b) Mechanical control
 - c) Smooth control
 - d) **Biological control**
610. Ship rat over the years is also known as
- a) *Rattus norvegicus*
 - b) *Mus musculus*
 - c) ***Rattus rattus***
 - d) *Millardia meltada*
611. Most seriously affected crops by vertebrate pests include
- a) Wheat
 - b) Maize
 - c) Rice
 - d) **All of these**
612. Habitats of wild boar are ideally located at
- a) **Aquatic environment**
 - b) Dry environment
 - c) Both aquatic and dry environment
 - d) None of these
613. Porcupine resides preferably within
- a) **Trees and shrubs**
 - b) Water
 - c) Saline habitats

- d) Fish farms
614. Bay is considered as
- a) Outflow water of stream
 - b) Outflow water of river
 - c) Outflow water of small water channel
 - d) None of these**
615. IPM and EPM are considered important _____ of pest management
- a) Pillars**
 - b) Corners
 - c) Destructive agents
 - d) None of these
616. Scientifically common myna is called as
- a) *Mus musculus*
 - b) *Bandicota bengalensis*
 - c) *Acridotheres tristis***
 - d) None of these
617. Generally, the wildlife is considered as
- a) Natural heritage of any country**
 - b) Destructive populations of any habitat
 - c) Alarming areas in any environment
 - d) None of these
618. Of the pesticides, the pyrethroids are considered
- a) Highly toxic
 - b) Moderately toxic**
 - c) Harmless
 - d) None of these
619. Wild boar seems to be destructive to crops in
- a) Diurnal conditions
 - b) Nocturnal conditions
 - c) Aquatic conditions
 - d) Both diurnal and nocturnal**
620. Wild boar can excavate the rhizomes of crops by
- a) Strong nibbling effects**
 - b) Weaker dentition patterns
 - c) Diving into the soil
 - d) None of these
621. Negative values of wildlife comprise
- a) Attacks on humans
 - b) Attacks on crops
 - c) Attacks on buildings and property

- d) All of the above**
622. Anacondas are _____ in Pakistan
- a) **Rare**
 - b) Common
 - c) Frequent
 - d) Not present
623. Lal Sohanra National Park is situated in
- a) **Bahawalpur**
 - b) Lahore
 - c) Rahim Yar Khan
 - d) Rawalpindi
624. NCS stands for
- a) National Conservation Society
 - b) National Conservation Social
 - c) **National Conservation Strategy**
 - d) National Conservation Status
625. Montreal Protocol regarding environment and wildlife conservation was promulgated in
- a) 1988
 - b) 1990
 - c) 1995
 - d) **1987**
626. Mangrove forests in Pakistan are mostly present in
- a) KPK Province
 - b) Punjab province
 - c) **Sind province**
 - d) Balochistan province
627. Poikilotherms are considered as
- a) **Cold blooded**
 - b) Warm blooded
 - c) Strictly aquatic
 - d) Nocturnal
628. Cobras' scientific name is
- a) *Naja neja*
 - b) *Neja neja*
 - c) ***Naja naja***
 - d) None of these
629. Symbol of New Zealand is also wild bird called
- a) Panda
 - b) Kowi
 - c) Kangaroo

- d) None of these**
630. Higher diversity of wildlife represents
- a) Better environment
 - b) Healthy environment
 - c) Sustainable environment
 - d) All of the above**
631. Several wild animals possess good degree of
- a) Scuffles
 - b) Least adaptations
 - c) Extinction habits
 - d) Better adaptations
632. Biodiversity study can be divided into three types
- a) Alpha, beta, asterisk
 - b) Alpha, Charlie, bombshell
 - c) Alpha, beta, gamma
 - d) None of these
633. Speed of panther on average is
- a) 50 km
 - b) 55 km
 - c) 40 km
 - d) 70 km**
634. Wildlife migration to other habitats can be considered
- a) Temporary
 - b) Permanent
 - c) Both a and b**
 - d) Not able to migrate to other places
635. Scientific name of Salmalia tree is
- a) *Salmalia malabarica***
 - b) *Ficus bengalensis*
 - c) *Eugenea cumini*
 - d) None of these
636. Communal roosts are structures which enable
- a) Birds to stay in diurnal conditions
 - b) Birds remain safe at night**
 - c) Birds are threatened
 - d) Birds are easily detected by predators
637. Heterogeneity in wildlife implies that
- a) Wild animals live in organized manner
 - b) Wild animals are jittery**
 - c) Wild animals can fight with others

- d) None of these
638. Eury-haline animals are considered to be
- a) Broad range of tolerance
 - b) Narrow range of tolerance**
 - c) Medium range of tolerance
 - d) None of these
639. Baboons and chimpanzees indicate specific behaviour to enable them to pass through thick forests and known as
- a) Leaping
 - b) Swimming
 - c) Brachiation**
 - d) Sleeping
640. Organo-chlorides were first discovered as
- a) Acute poisons**
 - b) Phosphatases
 - c) Chronic poisons
 - d) None of these
641. Zinc phosphide is largely considered as
- a) Single dose poison**
 - b) Double dose poison
 - c) Multiple dose poison
 - d) None of these
642. Cholecalciferol is included in
- a) Chronic poisons**
 - b) Acute poisons
 - c) Pyrethroids
 - d) None of these
643. Invertebrates account for _____ of known animal species
- a) 75%
 - b) 80%
 - c) 90%
 - d) 95%**
644. _____ lack true tissues and organs level organization
- a) Sponges**
 - b) Jellyfish
 - c) Hydra
 - d) Tapeworm
645. _____ are the flagellated collar cells, generate a water current through the sponge and ingest suspended food
- a) Pinacocytes

- b) Amoebocytes
 - c) **Choanocytes**
 - d) None of these
646. Animals belonging to phylum Cnidaria have cavity known as _____
- a) Spongocoel
 - b) **Gastrovascular cavity**
 - c) Psuedocoelom
 - d) coelom
647. Corals are the members of phylum _____
- a) Porifera
 - b) **Cnidaria**
 - c) Platyhelminthes
 - d) Arthropods
648. Cnidarians have a unique feature of presence of specialized organelles that eject a stinging thread called _____
- a) **Nematocysts**
 - b) Cnidocytes
 - c) Choanocytes
 - d) Both b and c
649. _____, a freshwater cnidarian, exists only in polyp form and reproduces asexually by budding
- a) **hydra**
 - b) jellyfish
 - c) sea anemone
 - d) none of these
650. Class _____ includes box jellies and sea wasps in which the medusa is box-shaped and has complex eyes
- a) Hydrozoa
 - b) **Cubazoa**
 - c) Scyphozoa
 - d) Anthozoa
651. The clade Lophotrochozoa includes _____
- a) flatworms
 - b) brachiopods
 - c) molluscs, and annelids
 - d) **All of these**
652. _____ are flattened dorsoventrally and have a gastrovascular cavity with one opening
- a) Cnidarians
 - b) Molluscans
 - c) **Flatworms**

- d) Roundworms
653. Important parasitic rhabditophorans include_____
- a) Trematodes
 - b) Tapeworms
 - c) **Both of these**
 - d) None of these
654. Proglottids that contain sex organs and form a ribbon behind the scolex is a characteristic of__
- a) **tapeworms**
 - b) planaria
 - c) liverfluke
 - d) trematodes
655. _____ are smaller than many protists but are truly multicellular and have specialized organ systems
- a) jellyfish
 - b) **rotifers**
 - c) branchiopods
 - d) earthworm
656. _____(also called bryozoans) are sessile colonial animals that superficially resemble plants
- a) Branchiopods
 - b) **Ectoprocts**
 - c) Rotifers
 - d) All of these
657. Mantle cavity and radula is a characteristic of_____
- a) flatworms
 - b) Cnidarians
 - c) Molluscs
 - d) Annelids
658. The life cycle of many molluscs includes a ciliated larval stage called a
- a) **trochophore**
 - b) tadpole
 - c) instar
 - d) none of these
659. Snail and slugs are included in_____ class of phylum mollusca
- a) bivalvia
 - b) Cephalopoda
 - c) **Gastropoda**
 - d) polyclacophora
660. _____ have a closed circulatory system, well-developed sense organs, and a complex brain.

a) **octopus**

b) snails

c) slugs

d) mussels

661. _____ eat through soil, extracting nutrients as the soil moves through the alimentary canal

a) Tapeworms

b) **Earthworms**

c) roundworms

d) All of these

662. Gas exchange in spiders occurs in respiratory organs called _____

a) Book gills

b) **Book lungs**

c) skin

d) Gills

663. Insect and plant diversity declined during the Cretaceous extinction, but then after has been increasing in last in _____ million years

a) 100

b) 75

c) 70

d) **65**

664. _____ constitute the clade Deuterostomia

a) Echinoderms

b) Chordates

c) **Both of these**

d) None of these

665. Unique water vascular system is present in _____

a) **Echinoderms**

b) Chordates

c) Molluscs

d) Rotifers

666. _____ lack spines, have a very reduced endoskeleton, and do not look much like other echinoderms

a) **Sea cucumber**

b) Sea urchin

c) Brittle star

d) Star fish

667. _____ share many features of embryonic development with echinoderms, but have evolved separately for at least 500 million years

a) Invertebrates

b) Vertebrates

- c) **Chordates**
 - d) Arthropods
668. _____ have a cartilaginous skull and axial rod of cartilage derived from the notochord, but lack jaws and vertebrae.
- a) Sharks
 - b) Rays
 - c) **hagfishes**
 - d) none of these
669. Ray-finned fishes originated during the _____ period (444 to 416 million years ago)
- a) **Silurian**
 - b) Jurassic
 - c) Cambrian
 - d) Devonian
670. Class Amphibia contains about _____ species
- a) 5000
 - b) 5,150
 - c) 6000
 - d) **6,150**
671. Which of the following order of amphibians include salamander
- a) **Urodela**
 - b) Anura
 - c) Apoda
 - d) none of these
672. Which of the following groups of tetrapods exhibit amniotic eggs
- a) Fishes
 - b) amphibians
 - c) **reptiles**
 - d) both a and c
673. Most _____ are ectothermic, absorbing external heat as the main source of body heat
- a) Birds
 - b) **reptiles**
 - c) mammals
 - d) both a and c
674. Birds belong to _____ lineage of reptiles which has undergone modification in their adaptation to flight
- a) Synapsid
 - b) diapsid
 - c) **Archosaur**
 - d) none of these
675. The feathers of birds are composed of _____

- a) Chitin
 - b) calcium carbonate
 - c) **keratin**
 - d) collagen
676. Only one ovary is present in ____
- a) Reptiles
 - b) amphibians
 - c) mammals
 - d) **birds**
677. There are approximately _____ species of mammals
- a) 5,100
 - b) 5,200
 - c) **5,300**
 - d) 5,400
678. ____ are called egg laying mammals
- a) **Monotremes**
 - b) marsupials
 - c) placentals
 - d) All of these
679. A fully opposable thumb is present in _____
- a) Monkeys
 - b) apes
 - c) **both of these**
 - d) none of these
680. There are _____ main groups of living primates
- a) Two
 - b) **three**
 - c) four
 - d) five
681. Which of the following is a marsupial mammal
- a) Echidna
 - b) **kangaroo**
 - c) monkey
 - d) elephant
682. The species *Homo sapiens* is about _____ years old
- a) **200,000**
 - b) 300,000
 - c) 400,000
 - d) 500,000
683. Humans have 99% identical genome with _____

- a) Monkeys
- b) gorillas
- c) apes
- d) **chimpanzees**

684. Hominins originated in Africa about _____million years ago

- a) **6-7**
- b) 7-8
- c) 8-9
- d) 9-10

685. *Homo neanderthalensis*, lived in _____ and the Near East from 350,000 to 28,000 years ago

- a) Asia
- b) **Europe**
- c) Africa
- d) Australia

686. *Homo sapiens* appeared in Africa by _____years ago

- a) **195,000**
- b) 200,000
- c) 395,000
- d) 400,000

687. Humans first arrived in the New World sometime before ____ years ago

- a) 10,000
- b) **15,000**
- c) 20,000
- d) none of these

688. The oldest fossils of *Homo sapiens* outside Africa date back about 115,000 years and are from the

- a) **Middle east**
- b) America
- c) Germany
- d) Spain

689. Scientists have identified _____ million living species of animals

- a) **1.3**
- b) 1.4
- c) 1.5
- d) 1.6

690. Cleavage leads to formation of a multicellular, hollow _____

- a) **blastula**
- b) gastrula
- c) none of these
- d) both of these

691. The common ancestor of living animals may have lived between -----million years ago
- a) 345-625
 - b) 620-700
 - c) **675 - 800**
 - d) 600-900
692. Animals began to make an impact on land by ____ million years ago
- a) 260
 - b) 360
 - c) **460**
 - d) 560
693. Vertebrates made the transition to land around ____ million years ago
- a) 260
 - b) **360**
 - c) 460
 - d) 560
694. During the Mesozoic era, _____ were the dominant terrestrial vertebrates
- a) mammals
 - b) birds
 - c) archeopteryx
 - d) **Dinosaurs**
695. _____ increased in size and exploited vacated ecological niches in cenozoic era
- a) Amphibians
 - b) Reptiles
 - c) birds
 - d) **Mammals**
696. ____ animals are often sessile or planktonic (drifting or weakly swimming)
- a) Bilateral
 - b) **Radial**
 - c) both of these
 - d) none of these
697. ____ animals often move actively and have a central nervous system
- a) Radial
 - b) **Bilateral**
 - c) acoelomates
 - d) coelomates
698. Endoderm is the innermost germ layer and lines the developing _____, called the archenteron
- a) Neural tube
 - b) coelom cavity
 - c) **digestive tube**

- d) none of these
699. In protostome development, cleavage is spiral and _____
- a) **determinate**
 - b) indeterminate
 - c) radial
 - d) both b and c
700. In deuterostome development, cleavage is -----and indeterminate
- a) spiral
 - b) **Radial**
 - c) both of these
 - d) none of these
701. The _____ forms during gastrulation and connects the archenteron to the exterior of the gastrula
- a) blastocoel
 - b) **blastopore**
 - c) neural tube
 - d) digestive tube
702. In _____ development, the blastopore becomes the mouth
- a) **protostome**
 - b) Deuterostome
 - c) both of these
 - d) coelomates
703. In deuterostome development, the blastopore becomes the _____
- a) mouth
 - b) **Anus**
 - c) dorsal nerve chord
 - d) ventral nerve chord
704. Zoologists recognize about _____ dozen animal phyla
- a) one
 - b) two
 - c) **three**
 - d) four
705. Phylogenies now comprises of _____ data
- a) morphological
 - b) molecular
 - c) c) fossil
 - d) **All of these**
706. _____ and some other phyla belong to the clade Deuterostomia
- a) invertebrates
 - b) vertebrates

- c) **chordates**
- d) All of these

707. Recent molecular studies indicate which of the bilaterian clades:

- a) Deuterostomia
- b) Ecdysozoa
- c) Lophotrochozoa
- d) **all of these**

708. _____ refers to the diversity within a particular area or ecosystem, and is usually expressed by the number of species

- a) **Alpha diversity**
- b) beta diversity
- c) Gamma diversity
- d) none of these

709. Diversity between two ecosystems is _____

- a) Alpha diversity
- b) **beta diversity**
- c) Gamma diversity
- d) none of these

710. _____ is a measure of the overall diversity for the different ecosystems within a region

- a) Alpha diversity
- b) beta diversity
- c) **Gamma diversity**
- d) none of these

711. India and southeast Asia are included in _____ zoogeographical region

- a) **Oriental**
- b) Nearctic
- c) palearctic
- d) Ethiopian

712. The second largest ocean in the world is _____

- a) **Atlantic ocean**
- b) Pacific ocean
- c) Arctic ocean
- d) none of these

713. Coniferous or boreal forest, located in a band across northern North America, Europe and Asia

- a) tundra
- b) savannah
- c) **taiga**
- d) Rain forests

714. Organisms having more than one female as a mate at one time are called

- a) monogamous
- b) **Polyandrous**
- c) Polygynandrous
- d) none of these

715. _____ are wetland areas often dominated by grasses and reeds

- a) Swamps
- b) **marshes**
- c) Esturine
- d) Mangrooves

716. ____Refers to a burrowing life-style or behavior, specialized for digging or burrowing.

- a) Scansorial
- b) Cursorial
- c) saltatorial
- d) **Fossorial**

717. An animal that mainly eats leaves is called _____

- a) Frugivore
- b) **Folivores**
- c) granivores
- d) herbivore

718. When Sexes are somehow different in appearance

- a) Sexual polymorphism
- b) **Sexual dimorphism**
- c) hermaphrodite
- d) none of these

719. ____ refers to species in danger of extinction

- a) Vulnerable species
- b) **Endangered Species**
- c) threatened species
- d) none of these

720. Which of the following periods is known as golden age of Trilobites?

- a) Devonian period
- b) Silurian period
- c) Permian period
- d) **Cambrian period**

721. Which land bridge was supposed to connect South America to Australia?

- a) Lemuria
- b) South Atlantic bridge
- c) **Antarctica**
- d) Both a and c

722. Pre-Cambrian time covers the whole geological time by percentage

- a) 10%
- b) 50%
- c) **87%**
- d) 2%

723. Honey bees are group of----- colonial insects

- a) Monomorphic
- b) Dimorphic
- c) Trimorphic
- d) **Polymorphic**

724. Studies on the biology, behavior, lifecycle and development of honey bees was conducted in the early part of

- a) **19th Century**
- b) 18th Century
- c) 20th Century
- d) 17th Century

725. The length of *Apis dorsata* (Rock bee) is about

- a) 2.5 cm
- b) **2cm**
- c) 1.5cm
- d) 2.1cm

726. Largest of all bees with small legs and weak wings are

- a) Drone
- b) **Queen**
- c) Workers
- d) A and B

727. The rate of eggs lying by the Queen honey bee under favorable condition per day may be

- a) 1900
- b) 1500
- c) **2000**
- d) 1800

728. Fertilization of honey bee Queen for whole life is required

- a) **Single**
- b) Double
- c) Multiple
- d) Triple

729. The wax gland in builder honey bee are preceded with in their abdominal segment.

- a) 5 to 7th
- b) 5 to 8th
- c) 4 to 8th
- d) **4 to 7th**

730. Total Adult life span of male honey bee ranges from
- a) 6-7 Week
 - b) 7-8 Week**
 - c) 7-9 Week
 - d) 6-8 Week
731. The Process of leaving off the colony by the honey bee Queen is termed as
- a) Supersedure
 - b) Absconding
 - c) Swarming**
 - d) Nuptial Flight
732. The composition water % is present in honey
- a) 15
 - b) 16
 - c) 17**
 - d) 18
733. The density of honey is
- a) 1.1
 - b) 1.2**
 - c) 1.3
 - d) 1.35
734. The nature of Silk secreted by certain lepidopteron moths is
- a) Waste
 - b) Carbohydrates
 - c) Fats
 - d) Protein**
735. On the basis of quality and luster of silk fibers silk are of types
- a) 4**
 - b) 3
 - c) 5
 - d) 6
736. In silk moth the pairs of legs are
- a) 2
 - b) 3**
 - c) 4
 - d) 1
737. The optimum temperature at which eggs of silk moth hatches is
- a) 60-70F^o
 - b) 65-70 F^o
 - c) 65-75F^o**
 - d) 65-80F^o

738. Total life cycle of silk moth is completed in about
- a) 30-40 Days
 - b) 30-45Days
 - c) 40-50 Days
 - d) 35-50Days**
739. To produced 250 lbs of silk-----egg must be hatched and reared.
- a) 0.50 lb
 - b) 0.75 lb
 - c) 1 lb**
 - d) 1.5 lb
740. The Process of killing the Silk moth inside the cocoon is called
- a) Processing
 - b) Spinning
 - c) Stifling**
 - d) Reeling
741. To produced 1 lb of raw silk about-----cocoon of silk are required
- a) 2300-2600**
 - b) 2300-2700
 - c) 2400-26000
 - d) 2400-2700
742. The formula of fibroin protein is
- a) $C_{15}H_{21}N_5O_6$
 - b) $C_{15}H_{22}N_5O_6$**
 - c) $C_{15}H_{22}N_4O_6$
 - d) $C_{14}H_{22}N_4O_6$
743. The rearing of oysters usually is done in
- a) Cages**
 - b) Tanks
 - c) Encounters
 - d) Pens
744. A good quality Pearl comprises the percentage of water
- a) 2.1%
 - b) 2.2%
 - c) 2.3%
 - d) 2.4%**
745. Pearl are harvested from the oyster mussel during the month of
- a) December to march
 - b) August to September
 - c) January to February
 - d) December to February**

746. Pearl comprises calcium carbonate

- a) 86%
- b) 88%
- c) **90%**
- d) 92%

747. Pearl comprises organic matter

- a) 30-60%
- b) 3.5-3.9%
- c) **3.5-5.9%**
- d) 5.3-5.7%

748. Now a days to check insersion of nucleus in oyster which technique is used

- a) **X-rays**
- b) γ -rays
- c) β -rays
- d) α -rays

749. The diameter of Pearl is about

- a) 100 dm
- b) 100 m
- c) **100mm**
- d) 100cm

750. Origin of silk industry is from the

- a) China
- b) India
- c) **India & China**
- d) None of these

751. Queen is supposed to the mother of

- a) Drones
- b) Workers
- c) Queens
- d) **All of these**

752. Royal Jelly fed larvae of honey bee develops into

- a) Drone
- b) Worker
- c) **Queen**
- d) None of these

753. The duties of nurse bees are to

- a) **Produce Royal jelly**
- b) Repair the comb
- c) Cleaning the comb
- d) None of these

754. To maintain the temperature of honey bee hive, -----performs their duties

- a) Queens
- b) Drones
- c) **Workers**
- d) None of these

755. Honey comprises-----of ash contents

- a) 0.05%
- b) 0.75%
- c) %
- d) 2.00 %

756. The use of honey in dysentery is effective with in

- a) **50-hr**
- b) 55-hr
- c) 60-hr
- d) 70-hr

757. The female of silk moth have life span of

- a) 2-4 days
- b) **2-3 days**
- c) 2-5 days
- d) 3-4 days

758. Pearl is produced by mollusc

- a) Monovalve
- b) **Bivalve**
- c) Trivalve
- d) None of these

759. In Japan a trained girl can operate oyster muscle to insert the nucleus

- a) 10-20 per hour
- b) 20-25 per hour
- c) **25-40** per hour
- d) 30-50 per hour

760. A comb of Rock bee can produced honey about

- a) 5-10 kg
- b) 10-15 kg
- c) **20-25 kg**
- d) 40-45 kg

761. The life span of an ostrich is

- a) **30-70 years**
- b) 30-75 years
- c) 40-70 years
- d) None of these

762. The grey Partridge has evolved in the-----grassland ecosystems

- a) Tropical
- b) Temperate**
- c) Both a & b
- d) None of these

763. The life span of adult weevil is

- a) 1-2month
- b) 2-3month
- c) 2-5month
- d) 4-5month**

764. The generation of lesser grain borer per year are

- a) 5-6**
- b) 5-7
- c) 5-8
- d) 6-8

765. Fish liver oil is a main source of

- a) Vitamin A
- b) Vitamin B
- c) Vitamin D
- d) Vitamin A & D**

766. One female of *Trogoderma granarium* lays about-----eggs

- a) 100
- b) 115
- c) 125
- d) 130

767. The optimum moisture requirements of *Cadra cautella* are

- a) 10%
- b) 12%
- c) 14%
- d) 16%

768. Sodium Fluoroacetate is also some time referred as

- a) 1080**
- b) 1081
- c) 1082
- d) 1079

769. Khapra eggs lose their viability at oxygen contents of

- a) 16.2%
- b) 16.3%
- c) 16.4%
- d) 16.8%**

770. Less toxic fumigant to the insects is

- a) **Carbon Tetrachloride**
- b) Methyl bromide
- c) Pyrethrum
- d) None of these

771. There are hundreds of storage pests but some-----of them cause serious damage

- a) 40
- b) **50**
- c) 20
- d) 35

772. Scientific name of Rice Weevil is

- a) *Sitophilus granarium*
- b) ***Sitophilus oryzae***
- c) *Cadra cautella*
- d) None of these

773. The muscles that support fins are devoid of

- a) **Coelom**
- b) Ectoderm
- c) Endoderm
- d) None

774. The fins that act as stabilizers are

- a) Median
- b) Dorsal and Ventral
- c) None
- d) **All**

775. Isocercal tail is present in

- a) **Eels**
- b) Gold fish
- c) Mori
- d) Zebra

776. Wallago atto is

- a) Soul
- b) Dola
- c) **Malli**
- d) Sanghari

777. The national fish of Pakistan is

- a) Tor tor
- b) Mahasheer
- c) Trout
- d) **Both a and b**

778. Salmo fario is

- a) **Brown Trout**
- b) Simple Trout
- c) Rainbow
- d) Golden trout

779. The organ that acts as amplifier is

- a) Gill
- b) Fin
- c) **Air Bladder**
- d) Rays

780. The stomach is strong and thick in

- a) **Carnivorous fishes**
- b) Omnivorous
- c) Herbivorous
- d) All

781. The true parts of heart are

- a) Atrium
- b) Ventricle
- c) Both
- d) None

782. _____ collects deoxygenated blood

- a) **Sinus venosus**
- b) Ventral aorta
- c) Atrium
- d) Ventricle

783. There are ----- proteins in fish blood

- a) 2
- b) **3**
- c) 10
- d) 7

784. The main haemopoietic tissue in fish is

- a) Liver
- b) Fin
- c) Gill
- d) **Kidney**

785. The system containing 5 main streams is

- a) Arterial System
- b) **Venous**
- c) Bothe
- d) None

786. The trunk kidney is

- a) Pronephric
- b) **Protonephric**
- c) Mesonephric
- d) Prenephric

787. The collecting duct of kidney consists of

- a) Mitochondria
- b) Ciliated cells
- c) **Goblet cells**
- d) None

788. The fresh water fishes are

- a) Hyposmotic
- b) **Hyperosmotic**
- c) Hypotonic
- d) None

789. Fresh water fishes produce-----urine/body wt.

- a) 6-12%
- b) 4-12%
- c) **5-12%**
- d) 11%

790. The tunica albuginea is present in

- a) Sperm
- b) **Egg**
- c) Both
- d) None

791. The stock room is

- a) Ovocoel
- b) Ovary cavity
- c) **All**
- d) None

792. The sense organs in CNS of fish are called

- a) **Neuromast**
- b) Neuromast
- c) Neural Crest
- d) Neural mast

793. Basal ends of hair receptors have----- axonic fibers

- a) **VII-IX**
- b) VII-X
- c) VIII-X
- d) VX

794. Ampullae of Lorenzini is closely associated to

- a) Touch
- b) Density
- c) Pressure
- d) Temp.**

795. The liquid medium in internal ear is called

- a) Perilymph
- b) Endolymph**
- c) Both
- d) None

796. _____ pond breeder

- a. Tilapia**
- b. Rohu
- c. Mori
- d. Thaila

797. In osteichthyes, _____ are well developed and function as a lungs .

- a. Opercular chambers
- b. Skin
- c. Swim bladder**
- d. Pharyngeal diverticulum

798. _____ helps marine animals, such as seals and whales to maintain a body temperature of around 36 to 38°C

- a. Brown fat
- b. Ammonia
- c. Blubber**
- d. Flippers

799. Warm water fishes grow best at temperature between _____

- a. 20 to 25°C
- b. 14 to 45°C
- c. 25 to 32°C**
- d. 18 to 45°C

800. In fish farming, nutrition is critical because feed represents _____ of production cost.

- a. 40-50%**
- b. 20-30%
- c. 15- 25%
- d. 30- 40%

801. Fishes that live in extremely cold water have _____ material in their blood

- a. Antifreeze**
- b. Coagulants
- c. Peptides

- d. Minerals
802. Bodies of standing water occupying basin and lacking continuity with sea are called ____
- a. River
 - b. Lakes**
 - c. Wetlands
 - d. Estuaries
803. Fishes that live in extremely cold water have _____ material in their blood
- a. Antifreeze**
 - b. Coagulants
 - c. Peptides
 - d. Minerals
804. _____ is a pond breeder
- a. Rohu
 - b. Mori
 - c. Thaila
 - d. Tilapia**
805. *Catla catla* is ____ feeder
- a. Column
 - b. Surface**
 - c. Bottom
 - d. none of these
806. *Labeo rohita* is _____ feeder
- a. Column**
 - b. Surface
 - c. Bottom
 - d. none of these
807. *Cirrhina mrigala* is _____ feeder
- a. Column
 - b. Surface
 - c. Bottom**
 - d. none of these
808. A water which is the exclusive property of any person and landlocked by its own survey numbers called
- a. Public water
 - b. irrigation water
 - c. community water
 - d. private water**
809. The otoliths are found in the _____ of the fish and helps in balancing the body
- a. Lateral line
 - b. Vertebral column

- c. **Internal ear**
- d. none of these

810. Delivery of needed substances (Oxygen, nutrients, sugars, lipids, proteins, minerals, hormones, etc.) for metabolism to tissues where needed is part of _____

- a. Excretory system
- b. **Circulatory system**
- c. Lateral line system
- d. Digestive system

811. _____ the mechanical process of putting gas exchange structures in contact with the exchange medium

- a. **Ventilation**
- b. Respiration
- c. Swim bladder
- d. Lungs

812. Icing or chilling does not alter physical state of fish for _____ but shelf life is only few days or weeks .

- a. One week
- b. 3 week
- c. 2 weeks
- d. **One month**

813. Basic respiratory structures of most fishes is

- a. **Gills**
- b. Lungs
- c. Skin
- d. Swim bladder

814. Microbial growth and proliferation can be inhibited by a technique called

- a. Icing
- b. Cooling
- c. Drying
- d. **Bio preservation**

815. _____ is key to oxygen extraction efficiency in aquatic respiration where there is a continuous diffusion gradient of arterial pressures that exceed expired pressure

- a. **counter-current flow**
- b. co-current flow
- c. double pump
- d. ram ventilation

816. _____ fishes adjust volume by gulping or spitting air, are mostly shallow water species, gas-spitting and gulp air at surface

- a. **Physostomous**
- b. Physoclistous

- c. Lung fishes
 - d. Ram ventilation
817. Regulation of buoyancy allowed by swim bladder is to control depth in water without utilization of muscles this depth regulation is required for:
- a. Food
 - b. Predator
 - c. Light, temperature, etc.
 - d. All above**
818. For regulating buoyancy reduction of mass of heavy tissue, lipids accumulation, and presence of swim bladder are considered as--- strategy
- a. Active**
 - b. **Static**
 - c. Passive
 - d. Neutral
819. Generation of lift with the help of fins, etc requires high energy, and found in
- a. **Bottom dwellers**
 - b. Pelagic swimmers
 - c. Nest builders
 - d. All above
820. The disadvantage of storage of lipids as a strategy to reduce weight for buoyancy is:
- a. **linked with metabolism**
 - b. restricts swimming ability
 - c. only solution for bottom dwellers
 - d. only for small fishes
821. In ocean pressure increases 1 atm for every
- a. **10 m**
 - b. 1 m
 - c. 5 m
 - d. 20 m
822. The physoclistous swim bladder is attached to the—with pneumatic duct
- a. **Oesophagus**
 - b. Liver
 - c. Heart
 - d. Gills
823. In _____ flow the equilibrium is never reached thus this allows for constant diffusion
- a) Co current
 - b) Counter current**
 - c) Root effect
 - d) Salting out
824. _____ maintaining steady state equilibrium in the internal environment of an organisms

- a. **Homeostasis**
 - b. Osmoregulator
 - c. Osmoconformer
 - d. All above
825. Euryhaline animals cantolerate a wide range of salinities in external environment - fresh to saline:
- a. **0 – 35**
 - b. 12 – 14
 - c. 25 – 30
 - d. 0 – 5
826. Fecundity i.e., the number of eggs ----with body size
- a. **increase geometrically**
 - b. decrease geometrically
 - c. Has no effect
 - d. Reduced
827. The functions that include homeostasis, pineal organ (gland), light sensitive and endocrine functions (hypothalamus) are controlled by
- a. **Diencephalon**
 - b. Telencephalon
 - c. Mesencephalon
 - d. Metencephalon
828. Amphidromous fishes migrate from fresh to marine and marine to fresh for _____
- a. **Feeding**
 - b. Spawning
 - c. Both
 - d. None
829. Aquarium was first invented in
- a. Europe
 - b. Australia
 - c. **Japan**
 - d. USA
830. Stomach is generally thick walled and sac like in _____ fishes
- a. **Carnivorous**
 - b. Herbivorous
 - c. Grazers
 - d. Primitive
831. _____ reaches pond water as a product of fish metabolism and decomposition of organic matter by bacteria
- a. **Ammonia**
 - b. Aluminium

- c. Chromium
- d. Silver

832. The scientific name of Silver carp is _____

- a. ***Hypothalmichthys molitrix***
- b. *Ctenopharyngodin idella*
- c. *Cirrhinus mrigala*
- d. *Tor pituitora*

833. The scientific name of Grass carp is _____

- a. *Hypothalmichthys molitrix*
- b. ***Ctenopharyngodin idella***
- c. *Cirrhinus mrigala*
- d. *Tor pituitora*

834. The peak fishing season in Pakistan is _____

- a. **Winter**
- b. Fall
- c. Summer
- d. Spring

835. Aflatoxins are naturally occurring toxin that are produced by many species of

- a. **Fungus**
- b. Bacteria
- c. fish toxin
- d. none of these

836. Fish is mainly composed of

- a. **Protein**
- b. Carbohydrates
- c. Fiber
- d. Minerals

837. Which country is the leading aquaculture production in the world

- a. India
- b. Pakistan
- c. **China**
- d. Nepal

838. HACCP is a standardized, formalized system of preventive _____ control

- a. Drug
- b. Pest
- c. **Food**
- d. Fertilizers

839. The scientific name of silver carp is

- a. ***Hypophthalmichthys molitrix***
- b. *Ctenopharyngodon idella*

- c. *Cyprinus carpio*
- d. *Aristichthys nobilis*

840. Excess use of organic manure in freshwater fish farming may cause a disease like

- a. Lymphocystis
- b. White spot
- c. **Gill rots**
- d. Fish tuberculosis

841. Young fish consume feed up to _____ of body weight / day

- a. **50%**
- b. 70%
- c. 85%
- d. 90%

842. Proper liming can improve _____ availability and greatly enhance pond productivity.

- a. **Phosphorus**
- b. Nitrogen
- c. Calcium
- d. Magnesium

843. The major organ involved in fish osmoregulation is

- a. **Gill**
- b. Kidney
- c. Swim bladder
- d. All of the above

844. The fishes whose migration is confined to freshwater are known as

- a. Amphidramous
- b. Catadramous
- c. **Potamodramous**
- d. Anadromous

845. Which of the following fish is omnivorous in nature?

- a. **Gulfam**
- b. Tilapia
- c. Rohu
- d. All of these

846. The level of oxygen must not be less than

- a) 6ppm
- b) **5ppm**
- c) 10ppm
- d) 12ppm

847. 2CuSo_4 is called

- a) **Gypsu**
- b) Slaked lime

- c) Quick lime
- d) Marble powder

848. Gypsum is used to

- a) Decrease pH**
- b) Increase pH
- c) Both
- d) None

849. _____moisture is allowed in prepared pellets

- a) 20%
- b) 16%**
- c) 12%
- d) 10%

850. 135-145C temperature is required for

- a) Extrusion**
- b) Pelleting
- c) Both
- d) None

851. Net protein value in fish meat is

- a) 80%
- b) 6%**
- c) 79%
- d) 81%

852. Lean fat content in fish is

- a) 8%
- b) 7%
- c) 2%
- d) 1%**

853. The highest %age of fat in which organ of fish

- a) Brain**
- b) Skeleton
- c) Heart
- d) Vessels

854. The %age of N and P in fish manure is

- a) 5-7%**
- b) 5-9%
- c) 8%
- d) 10%

855. The eggs of following fish is floating

- a) Rohu
- b) Gulfam**
- c) Trout
- d) None of these

856. The eggs of following fish is sinking

- a) Rohu**
- b) Gulfam
- c) Trout
- d) None of these

857. This is the pond breeder fish

- a) Common carp**
- b) Rohu
- c) Grass carp
- d) None of these

858. Running water is required for breeding of

- a) Common carp
- b) Tilapia
- c) Grass carp**
- d) None of these

859. Important mammalian enemy to fish is

- a) Otter**
- b) Buffalo
- c) Marmot
- d) Red Fox

860. Important insect enemy to fish is

- a) Ant
- b) Termite
- c) Dragonfly**
- d) Housefly

861. Important bird enemy to fish is

- a) Crow
- b) Parrot
- c) Quail
- d) King fisher**

862. Fish feed: Required percentage of mineral/ vitamin premix

- a) 2-3%
- b) 7-8%
- c) 10-15%
- d) 20-30%

863. Fish feed: Important ingredient for fat source

- a) Wheat flour
- b) Fish meal
- c) Blood meal
- d) **Vegetable oil**

864. Fish feed: Important ingredient for protein source

- a) Wheat flour
- b) **Fish meal**
- c) Blood meal
- d) Starch

865. This type of fat are mostly present in fish meat

- a) **Unsaturated fats**
- b) Saturated fats
- c) Trans fats
- d) Cholesterol

866. Number of intramuscular bones in herbivore fish are

- a) Less than carnivore
- b) **More than carnivore**
- c) Equal to carnivore
- d) No comparison

867. This is a sea water fish

- a) **Surmai**
- b) Sole
- c) Trout
- d) Mrigile

868. This is a cold water fish

- a) Gulfam
- b) Tilapia
- c) Rohu
- d) **Trout**

869. Optimum dissolved oxygen required for carp culture is

- a) 2-3 ppm
- b) 5-7 ppm
- c) **6-8 ppm**
- d) 10-12 ppm

870. Maximum per capita fish consumption is reported in

- a) Pakistan
- b) India

- c) **China**
- d) USA

871. In World's total aquaculture production No. 2 fish group is

- a) Carps
- b) **Tilapia**
- c) Trout
- d) Salmon

872. In World's total aquaculture production No. 1 fish group is

- a) **Carps**
- b) Tilapia
- c) Trout
- d) Salmon

873. Optimal temperature for Trout fish culture is

- a) **5-10°C**
- b) 15-20 °C
- c) 25-30 °C
- d) 35-40 °C

874. Optimal temperature for carp culture is

- a) 10-15°C
- b) 15-20 °C
- c) **25-30 °C**
- d) 35-40 °C

875. In a typical fish number of lateral line

- a) **One**
- b) Three
- c) Five
- d) Four

876. Caudal fin is fish categorized as

- a) Double fin
- b) **Median fin**
- c) Paired fin
- d) None of these

877. Dorsal fin is fish categorized as

- a) Double fin
- b) **Median fin**
- c) Paired fin
- d) None of these

878. Pelvic fin is fish categorized as

- a) Single fin
- b) Median fin
- c) **Paired fin**
- d) Un paired fin

879. Pectoral fin is fish categorized as

- a) Single fin
- b) Median fin
- c) **Paired fin**
- d) Un paired fin

880. Body shape of a typical fish is

- a) Elongated
- b) **Fusiformed**
- c) Compressed
- d) Round

881. Generalized fish body exhibited

- a) Radial summitry
- b) Unilateral summitry
- c) **Bilateral summitry**
- d) Noe of these

882. Trout fishes belongs to taxonomic family

- a) Cyprinidae
- b) Bagiridae
- c) Siluridae
- d) **Salmonidae**

883. Carp fishes belongs to taxonomic family

- a) **Cyprinidae**
- b) Bagiridae
- c) Siluridae
- d) Chanadae

884. In Pakistan approximate number of freshwater fish species is

- a) 100
- b) **200**
- c) 20
- d) 50

885. Fish liver oil is a main source of

- a) Vitamin A
- b) Vitamin E
- c) Vitamin K
- d) **Vitamin A & D**

886. Scientific name of 'Dumbra' fish is

- a) *Catla catla*
- b) *Walago attu*
- c) *Rita rita*
- d) ***Labeo rohita***

887. Fish maintains its position in water with the help of

- a) Gills
- b) Vertebrae
- c) **Swim Bladder**
- d) None of these

888. *Catla catla* gets its feed from

- a) **Surface of water**
- b) Column of water
- c) Bottom
- d) None of these

889. Scientific name of 'Mulli' fish is

- a) *Labeo rohita*
- b) *Catla catla*
- c) ***Walago attu***
- d) *Nile tilapia*

890. Scientific name of 'Khagga' fish is

- a) *Labeo rohita*
- b) *Catla catla*
- c) *Cyprinus carpio*
- d) ***Rita rita***

891. Scientific name of 'Rainbow Trout' is

- a) *Cyprinus carpio*
- b) *Labeo rohita*
- c) *Rita rita*
- d) ***Oncorhyncus mykiss***

892. 'Rohu' fish is

- a) Carnivore
- b) **Herbivore**
- c) Omnivore
- d) None of these

893. 'Rohu' fish gets its feed from

- a) Surface of water,
- b) Bottom of pond
- c) **Column of pond**

d) From air

894. Soil type suitable for construction of fish pond

- a) Sandy
- b) Muddy
- c) **Clay**
- d) None of these

895. ----- is a carnivore fish

- a) **Khagga**
- b) Rohu
- c) Mori
- d) Thela

896. ----- is a herbivore fish

- a) Mulli
- b) Khagga
- c) Trout
- d) **Grass carp**

897. ----- is an omnivore fish

- a) Rohu
- b) **Gulfam**
- c) Trout
- d) Dola

898. Scientific name of 'Sole' fish is

- a) *Catla catla*
- b) *Rita rita*
- c) ***Chana marulius***
- d) *Cyprinus carpio*

899. To enhance the fish growth, we add in pond

- a) Feed
- b) Fertilizer
- c) Carnivore fish
- d) **Both A & B**

900. Urea fertilizer contains % nitrogen

- a) 20 %
- b) 36 %
- c) **46 %**
- d) 50 %

901. Semi-intensive fish culture means

- a) Catching of fish from sea
- b) Culture of fish in sea
- c) Catching of fish from pond
- d) Culture of fish in ponds**

902. Intensive fish culture means

- a) Catching of fish from river
- b) Culture of fish in sea
- c) Culture of fish in controlled conditions**
- d) Catching of fish from sea

903. An exotic culturable fish species

- a) Gulfam**
- b) Rohu
- c) Thela
- d) None of these

904. Fish meat contains % of protein

- a) Up to 10%
- b) Up to 30%
- c) Up to 40%
- d) Up to 60%**

905. They are considered as beginners of fish culture

- a) Japanese
- b) Indians
- c) Chinese**
- d) Greeks

906. *Hypophthalmichthys molitrix* is the scientific name of

- a) Grass carp
- b) Silver carp**
- c) Rohu
- d) Thela

907. Country of origin of grass carp is

- a) India
- b) Turkey
- c) China**
- d) UK

908. Trout is living/ cultured in

- a) Sea
- b) Brackish water
- c) Cold water**
- d) None of these

909. Primary purpose of pond fertilization is
- to increase water level
 - to enhance fish health
 - to increase primary productivity**
 - none of these
910. ----- is a food type that occur naturally in a water body
- Urea
 - Plankton**
 - 30% CP feed
 - None of these
911. The optimal size of fish production pond is
- 200 m²
 - one hectare**
 - 10 acres
 - 50 acres
912. Breeding season of carps is
- January to March
 - September to December
 - November to February
 - May to August**
913. With reference to breeding, Common Carp is
- pond breeder**
 - cold water breeder
 - running water breeder
 - none of these
914. With reference to breeding, 'Major Carps' are
- pond breeders
 - stagnant water breeders
 - running water breeders**
 - none of these
915. Origin of Tilapia fish is
- USA
 - Africa**
 - India
 - Pakistan
916. Commonly used hormones for induced spawning in fish is
- Heparin
 - Ovaprim**
 - Thyroxin

d) Adrenalin

917. With the increase in pond water temperature the dissolved oxygen concentration will

- a) **decrease**
- b) increase
- c) stabilize
- d) none of these

918. Major cause of diseases in fish pond is

- a) **poor environmental/management conditions**
- b) Lack of human resource
- c) Day length
- d) None of these

919. Dietary diseases in fish are considered under disease category

- a) Infectious diseases
- b) **Non- infectious diseases**
- c) Both of these
- d) None of these

920. Hypoxia (oxygen deficiency) disease in fish is considered under disease category

- a) Infectious diseases
- b) **Non- infectious diseases**
- c) Both of these
- d) None of these

921. Viral diseases in fish are considered under disease category

- a) **Infectious diseases**
- b) Non- infectious diseases
- c) Both of these
- d) None of these

922. Bacterial diseases in fish are considered under disease category

- a) **Infectious diseases**
- b) Non- infectious diseases
- c) Both of these
- d) None of these

923. 'Learnia' is an ----- parasite of fish

- a) internal
- b) **external**
- c) intestinal
- d) microbial

924. Abnormal swollen belly of fish is the sign of fish disease

- a) hypoxia
- b) apoxia
- c) **dropsy**
- d) fin rot

925. Gas bubble disease in fish is a

- a) Dietary diseases
- b) Infectious diseases
- c) **Non- infectious diseases**
- d) None of these

926. Systemic treatment method of fish diseases means

- a) Treatment by water
- b) **Treatment via diet**
- c) Treatment by man
- d) None of these

927. Parenteral treatment method of fish diseases means

- a) Treatment by KMnO_4
- b) Treatment by hand
- c) **Treatment through injection**
- d) None of these

928. Fish gears; this is an individual fish capture method

- a) Use of poison
- b) **Angling**
- c) Trawl net
- d) Fyke net

929. Fish gears; this is an indiscriminate fish capture method

- a) Digging
- b) Use of hoop net
- c) **Poisoning**
- d) None of these

930. In fish pond mostly used fish gear is

- a) Poisoning
- b) **Drag net**
- c) Harpoons
- d) Natural drawdown

931. First thing after harvesting fish from a water body for quality control of meat it is recommended

- a) Dip it in the water
- b) **De-gut the fish**
- c) Spread it in oil

- d) None of these
932. For long term storage of fish meat we use the technique
- a) Keep it in water
 - b) Icing
 - c) **Canning**
 - d) None of these
933. This is a conventional post-harvest technique for fish
- a) Canning
 - b) Freezing
 - c) **Smoking**
 - d) Icing
934. Chances of fossilization are less in
- a) Organisms inhabiting sea water
 - b) **Organisms present on land**
 - c) Organism having both habitat
 - d) None of these
935. Cretaceous extinction marked the end of
- a) Paleozoic Era
 - b) Cenozoic Era
 - c) **Mesozoic Era**
 - d) Proterozoic Era
936. Cretaceous extinction happened
- a) 01 million years from now
 - b) 30 million years from now
 - c) 50 million years from now
 - d) **70 million years from now**
937. Dinosaurs extinct during
- a) **Cretaceous extinction**
 - b) Permian extinction
 - c) Archeozoic era
 - d) Proterozoic era
938. Permian extinction marked the end of
- a) Archeozoic Era
 - b) Cenozoic Era
 - c) Mesozoic Era
 - d) **Paleozoic Era**
939. Permian mass extinction happened
- a) 280 million years from now

- b) 01 million years from now
- c) 225 million years from now
- d) 155 million years from now**

940. The largest mass extinction is named as

- a) Cretaceous extinction
- b) Permian extinction**
- c) Jurassic extinction
- d) None of these

941. Remains or relics of any organism declared as fossils if they lived before

- a) 15000 years ago**
- b) 1000 year ago
- c) 01 million year ago
- d) 01 billion year ago

942. Human evolved during Epoch

- a) Recent
- b) Pleistocene**
- c) Pliocene
- d) Miocene

943. Human evolved during Period

- a) Quaternary**
- b) Tertiary
- c) Cretaceous
- d) Permian

944. Human evolved during Era

- a) Proterozoic
- b) Mesozoic
- c) Archeozoic
- d) Cenozoic**

945. Complexity of life forms appeared during geological time

- a) At the time of Big Bang
- b) Prior to Cambrian
- c) After the Cambrian**
- d) None of these

946. Cenozoic Era is subdivided into the following number of periods

- a) 07
- b) 03
- c) 02**
- d) 05

947. Mesozoic Era is subdivided into the following number of periods

- a) 07
- b) 03**
- c) 02
- d) 05

948. Paleozoic Era is subdivided in to following number of periods

- a) 07**
- b) 03
- c) 02
- d) 05

949. Plate tectonic theory was presented by

- a) Alfred Russel Wallace
- b) J. T. Wilson**
- c) P. L. Scotler
- d) Darwin

950. Plate tectonic theory was presented in

- a) 1876
- b) 1900
- c) 1966**
- d) 1970

951. Oceanic Islands: St. Helan Islands lie in

- a) Indian Ocean
- b) Pacific Ocean
- c) Atlantic Ocean**
- d) None of these

952. Oceanic Islands: Galapagos Islands lie in

- a) Indian Ocean
- b) Pacific Ocean**
- c) Atlantic Ocean
- d) None of these

953. Continental Islands: Formosa is located near

- a) Africa
- b) USA
- c) China**
- d) Europe

954. Wallace Line separates following faunal region

- a) Oriental and Palearctic
- b) Ethiopian and Nearctic
- c) Oriental and Australian
- d) None of these**

955. Wallace Line was drawn in year
- a) 1957
 - b) 1863**
 - c) 1800
 - d) 1600
956. Major characteristics of 'Tundra' biome is
- a) Grass lands
 - b) Absence of birds
 - c) Barren Lands**
 - d) Ice cover
957. Zoogeography: Bathymetric distribution means
- a) Vertical distribution of animals in space**
 - b) Vertical distribution of animals in time
 - c) Distribution of animals in water
 - d) Terrestrial distribution in past
958. Dispersal of animal without assistance of any factor is called as
- a) Passive Dispersal
 - b) Active Dispersal**
 - c) Bi-polar Dispersal
 - d) None of these
959. Dispersal of animal assisted by an abiotic factor is called as
- a) Passive Dispersal**
 - b) Active Dispersal
 - c) Bi-polar Dispersal
 - d) None of these
960. Dispersal of animal assisted by a biotic factor is called as
- a) Passive Dispersal**
 - b) Active Dispersal
 - c) Bi-polar Dispersal
 - d) None of these
961. According to basic principle of biogeography, a species of an organisms originate
- a) Many times
 - b) After 1 million years
 - c) After 1 billion years
 - d) Once**
962. Plate tectonic theory: the lithosphere is composed following numbers of plates
- a) Five
 - b) Three

- c) **Seven**
- d) Eight

963. All living organisms of a region is called its

- a) Fauna
- b) **Biota**
- c) Community
- d) none of these

964. Distribution in which animal enjoyed universal distribution is called

- a) Endemic distribution
- b) Discontinues distribution
- c) **Cosmopolitan distribution**
- d) none of these

965. Rats exhibit the zoogeographical distribution

- a) Discontinues distribution
- b) **Cosmopolitan**
- c) Endemic
- d) none of these

966. Giraffe exhibit the zoogeographical distribution

- a) Discontinues distribution
- b) Cosmopolitan
- c) **Endemic**
- d) none of these

967. Animals have the ability to disperse as compare to plants

- a) Lesser ability
- b) **More ability**
- c) Equal ability
- d) no comparison

968. External factors that limit the dispersal of an organism are technically called

- a) Hurdles
- b) **Barriers**
- c) Masses
- d) none of these

969. Zoogeography: 'Lemuria' is the name of

- a) Oceanic island
- b) Barrier
- c) **Land bridge**
- d) Region

970. First attempt to divide the earth on the basis of animal distribution was made by

- a) **Dr. P L Sclater**
- b) Newton
- c) Al-Barony
- d) Lamarck

971. Wallace divided the earth in to faunal region on the basis of

- a) Latitudes
- b) Geography
- c) **Mammalian fauna**
- d) Aquatic fauna

972. Wallace divides earth in to how many animal regions

- a) Two
- b) Three
- c) Five
- d) **Six**

973. Pakistan is fall under zoogeographical region

- a) Nearctic
- b) Palearctic
- c) Oriental
- d) **Both B & C**

974. Europe is included in faunal region

- a) Nearctic
- b) **Palearctic**
- c) Oriental
- d) Ethiopian

975. Palearctic faunal region is separated from Ethiopian region by

- a) **Sahara Desert**
- b) Rain forests
- c) Pacific Ocean
- d) None of these

976. Oriental faunal region has land connection with

- a) Nearctic region
- b) Neotropical region
- c) **Palearctic region**
- d) None of these

977. Faunal region that has no land connection with any other region is

- a) **Australian region**
- b) Neotropical
- c) Oriental
- d) Palearctic

978. The particular place where a species originated is called
- Center of gravity
 - Center of origin**
 - Equator
 - Prime meridian
979. Islands that has been connected with the nearby mainland at one time in the past are called
- Coastal islands
 - Oceanic Island
 - Continental Islands**
 - None of these
980. Islands that has never been connected with the mainland at any time are called
- Coastal islands
 - Oceanic Island**
 - Continental Islands
 - None of these
981. Maximum number of endemic families of animals are present in
- Australian region
 - Oriental region
 - Ethiopian region
 - Neotropical region**
982. The term 'Fossil' was first coined by
- Aristotle
 - Huxley
 - G . Agricola**
 - Wallace
983. Theory of permanence of continents was presented by
- Aristotle
 - Dr. Lyell**
 - G . Agricola
 - Wallace
130. The number of land bridges proposed in the theory of land bridges is
- One
 - Ten
 - Three**
 - Eighteen
984. Proposed land bridges in the theory of land bridges was sunk during
- Cenozoic era**
 - Archezoic era

- c) Formation of earth
- d) None of these

985. Continental drift theory was presented by

- a) Carl Linnaeus
- b) Newton
- c) **Alfred Wegner**
- d) Gorge Agricola

986. According to continental drift theory, the single great land mass is named as

- a) **Pangea**
- b) Continent
- c) Earth
- d) Sphere

987. According to continental drift theory, the great ocean that surrounds the land mass is named as

- a) Pacific
- b) Indian
- c) **Panthalassa**
- d) None of these

988. According to continental drift theory, the two super continents were

- a) Asia & Europe
- b) **Laurasia & Gondwanaland**
- c) Eurasia & Africa
- d) None of these

989. The outer most layer of earth is called

- a) **Crust**
- b) Mental
- c) Core
- d) None of these

990. The inner most layer of earth is called

- a) Crust
- b) Mental
- c) **Core**
- d) None of these

991. Lithosphere, a physical shell of earth constitutes

- a) All the life on earth
- b) Layer of gasses around the earth
- c) **The earth's surface**
- d) None of these

992. Hydrosphere, a physical shell of earth constitutes

- a) The earth's surface
- b) All the life on earth
- c) **All the water on earth**
- d) Ancient islands

993. Pre-Cambrian time covers the whole geological time by percentage

- a) 10 %
- b) 50 %
- c) **87 %**
- d) 2 %

994. Post-Cambrian time covers the whole geological time by percentage

- a) 1 %
- b) 50 %
- c) **13 %**
- d) 2 %

995. The bigger unit in geological time scale is

- a) **Eon**
- b) Period
- c) Epoch
- d) None of these

996. Trace fossils; mold means

- a) Whole body fossil
- b) Foot prints
- c) Hard parts
- d) **Impression of organism in surrounding material**

997. Trace fossils; cast means

- a) Soft part of fossils
- b) **Inside filling of hollow cavity**
- c) Foot prints
- d) None of these

998. Micro fossils means

- a) Fossils of insects,
- b) **Fossils of micro organisms**
- c) Soft part fossils
- d) Trace fossils

999. Size of micro fossil ranged between

- a) **0.05-2 mm**
- b) 5-10 mm
- c) 1-2 cm

d) 1-100 nm

1000. Study of microfossils is known as

- a) Paleontology
- b) Taphonomy
- c) **Micro Paleontology**
- d) Zoogeography

1001. Conditions favour fossilization

- a) Large and huge size
- b) Maximum soft parts and water
- c) High temperature and humidity
- d) **Small size and abundance**

1002. Index fossils means

- a) Fossil of marine organisms
- b) Fossils of amphibians
- c) **Fossils used as reference for time scaling**
- d) None of these

1003. Suitable medium for fossilization

- a) **Sea water**
- b) Mountains
- c) Desert
- d) Shady place

1004. Geochronometry means

- a) Study of micro fossils
- b) **Quantitative measurement of time on basis of radioactive decay**
- c) Study of continental drift theory
- d) Study of earth formation

1005. Connecting link between reptiles and birds

- a) Dodo
- b) **Archaeopteryx**
- c) Dimetridone
- d) Sphenodon

1006. Considering the geologic time scale which era is latest?

- a) Mesozoic
- b) Azoic
- c) **Cenozoic**
- d) Paleozoic

1007. The era/ period of dominance of reptile is

- a) Archeozoic

- b) Ordovicians
- c) **Jurassic**
- d) Azoic

1008. The closest relative of man is considered to be

- a) Orangutan
- b) Gibbon
- c) **Chimpanzee**
- d) Gorilla

1009. The process of fossil formation is known as

- a) Evolution
- b) Stratification
- c) Preservation
- d) **Fossilization**

1010. The total time period of geological scale is about

- a) **4.6 billion years**
- b) 20 million years
- c) 1.6 billion years
- d) one million years

1011. The theory of continental drift was given by

- a) Aristotle
- b) Wallace
- c) **Wegner**
- d) Huxley

1012. Word meaning of fossil is

- a) Ancient
- b) Dead body
- c) **Dug up**
- d) Rock