

NEET 2016 PHASE – II

91. The label of a herbarium sheet does not carry information on

- 1) Date of collection
- 2) Name of collector
- 3) Local names
- 4) **Height of the plant**

92. Match column I with column II for housefly classification and select the correct option using the codes given below.

	Column – I		Column – II
A.	Family	(i)	Diptera
B.	Order	(ii)	Arthropoda
C.	Class	(iii)	Muscidae
D.	Phylum	(iv)	Insecta

1. **A-(iii), B - (i), C- (iv), D - (ii)**
2. A-(iii), B - (ii), C- (iv), D - (i)
3. A-(iv), B - (iii), C-(ii), D - (i)
4. A-(v),B-(ii), C-(i), D - (iii)

93. Study the four statements (A-D) given below and select the two correct ones out of them.

- A. Definition of biological species was given by Ernst Mayr.
- B. Photoperiod does not affect reproduction in plants.
- C. Binomial nomenclature system was given by R.H. Whittaker.
- D. In unicellular organisms, reproduction is synonymous with growth.

The two correct statements are

- 1) B and C
- 2) C and D
- 3) **A and D**
- 4) A and B

94. Which one of the following is wrong for fungi ?

- 1) They are eukaryotic
- 2) **All fungi possess a purely cellulosic cell wall.**
- 3) They are heterotrophic
- 4) They are both unicellular and multicellular

95. Methanogens belong to

- 1) Eubacteria
- 2) **Archaeobacteria**
- 3) Dinoflagelles
- 4) Slime moulds

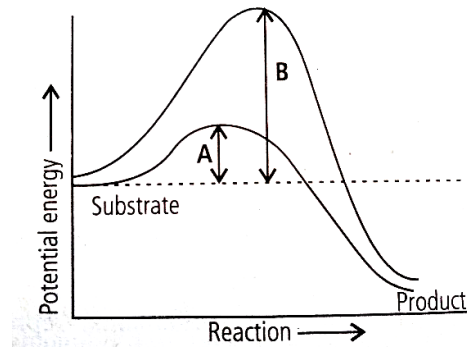
96. Select the wrong statement.
- 1) **The walls of diatoms are easily destructible.**
 - 2) Diatomaceous earth is formed by the cell walls of diatoms
 - 3) Diatoms are chief producers in the oceans.
 - 4) Diatoms are microscopic and float passively in water.
97. Conifers are adapted to tolerate extreme environmental conditions because of
- 1) Broad hardy leaves
 - 2) Superficial stomata
 - 3) **Thick cuticle**
 - 4) Presence of vessels
98. Which one of the following statements is wrong ?
- 1) Algae increase the level of dissolved oxygen in the immediate environment.
 - 2) **Algin is obtained from red algae, and carrageenan from brown algae.**
 - 3) Agar-agar is obtained from gelidium and Gracilaria
 - 4) Laminaria and Sargassum are used as food.
99. Choose the correct statement
- 1) All mammals are viviparous
 - 2) **All cyclostomes do not possess jaws and paired fins.**
 - 3) All reptiles have a three-chambered heart
 - 4) All pisces have gills covered by an operculum
100. The term 'polyadelphous' is related to
- 1) Gynoecium
 - 2) **Androecium**
 - 3) Corolla
 - 4) Calyx
101. How many plants among Indigofera, Sesbania, Salvia, Allium, Aloe, mustard, groundnut, radish, gram and turnip have stamens with different lengths in their flowers ?
- 1) Three
 - 2) **Four**
 - 3) Five
 - 4) Six
102. Radial symmetry is found in the flowers of
- 1) **Brassica**
 - 2) Trifolium
 - 3) Pisum
 - 4) Cassia
103. Free-central placentation is found in
- 1) **Epidermis and stele**
 - 2) Pericycle and endodermis
 - 3) Endodermis and pith
 - 4) Endodermis and vascular bundle

104. Cortex is the region found between
- 1) **Epidermis and stele**
 - 2) Pericycle and endodermis
 - 3) Endodermis and pith
 - 4) Endodermis and vascular bundle.
105. The balloon-shaped structures called tyloses
- 1) Originate in the lumen of vessels
 - 2) Characterize the sapwood
 - 3) **Are extensions of xylem parenchyma cells into vessels**
 - 4) Are linked to the ascent of sap through xylem vessels.
106. In male cockroaches, sperms are stores in which part of the reproductive system ?
- 1) **Seminal vesicles**
 - 2) Mushroom glands
 - 3) Testes
 - 4) Vas deferens
107. Smooth muscles are
- 1) **Involuntary, fusiform, non-striated**
 - 2) Voluntary, multinucleate, cylindrical
 - 3) Involuntary, cylindrical, striated
 - 4) Voluntary, spindle-shaped, uninucleate.
108. Select the mismatch.
- 1) Gas vacuoles – Green bacteria
 - 2) **Large central vacuoles – Animal cells**
 - 3) Protists – Eukaryotes
 - 4) Methanogens – Prokaryotes
109. Select the wrong statement.
- 1) Bacterial cell wall is made up of peptidoglycan.
 - 2) **Pili and fimbriae are mainly involved in motility of bacterial cells.**
 - 3) Cyanobacteria lack flagellated cells.
 - 4) Mycoplasma is a wall-less microorganism
110. A cell organelle containing hydrolytic enzymes is
- 1) **Lysozyme**
 - 2) Ribozyme
 - 3) Ligase
 - 4) Deoxyribonuclease.
111. A non-proteinaceous enzyme is
- 1) Isozyme
 - 2) **Ribozyme**
 - 3) Ligase
 - 4) Deoxyribonuclease

112. Which of the following is the least likely to be involved in stabilizing the three-dimensional folding of most proteins ?

- 1) Hydrogen bonds
- 2) Electrostatic interaction
- 3) Hydrophobic interaction
- 4) **Ester bonds**

113. Which of the following describes the given graph correctly ?



- 1) Endothermic reaction with energy A in presence of enzyme and B in absence of enzyme.
- 2) **Exothermic reaction with energy A in presence of enzyme and B in absence of enzyme.**
- 3) Endothermic reaction with energy A in absence of enzyme and B in presence of enzyme.
- 4) Exothermic reaction with energy A in absence of enzyme and B in presence of enzyme.

114. During cell growth, DNA synthesis takes place on

- 1) **S-phase**
- 2) G₁-phase
- 3) G₂-phase
- 4) M phase

115. When cell has stalled DNA replication fork, which checkpoint should be predominantly activated ?

- 1) G₁/S
- 2) **G₂/M**
- 3) M
- 4) Both G₂/M and M

116. Match the stages of meiosis in column I to their characteristic features in column II and select the correct option using the codes given below.

A.	Pachytene	(i)	Pairing of homologous chromosomes
B.	Metaphase I	(ii)	Terminalisation of chiasmata
C.	Diakinesis	(iii)	Crossing-over takes place
D.	Zygotene	(iv)	Chromosomes align at equatorial plate

- (a) **A-(iii), B-(iv), C-(ii), D-(i)**
- (b) A-(i), B – (iv), C-(ii), D-(iii)
- (c) A-(ii), B-(iv), C-(iii), D-(i)
- (d) A-(iv), B-(iii), C-(ii), D-(i)

117. A few drops of sap were collected by cutting across a plant stem by a suitable method. The sap was tested chemically. Which one of the following test results indicates that it is phloem sap ?
- 1) Acidic
 - 2) **Alkaline**
 - 3) Low refractive index
 - 4) Absence of sugar
118. Which is essential for the growth of root tip ?
- 1) Zn
 - 2) Fe
 - 3) **Ca**
 - 4) Mn
119. The process which makes major difference between C_3 and C_4 plants is
- 1) Glycolysis
 - 2) Calvin cycle
 - 3) **Photorespiration**
 - 4) Respiration.
120. Which of the following biomolecules is common to respiration-mediated breakdown of fats, carbohydrates and proteins ?
- 1) Glucose – 6 – phosphate
 - 2) Fructose 1, 6-bisphosphate
 - 3) Pyruvic acid
 - 4) **Acetyl CoA**
121. Oxidative phosphorylation is
- 1) Formation of ATP by transfer of phosphate group from a substrate to ADP
 - 2) Oxidation of phosphate group in ATP
 - 3) Addition of phosphate group to ATP
 - 4) **Formation of ATP by energy released from electrons removed during substrate oxidation.**
122. You are given a tissue with its potential for differentiation in an artificial culture. Which of the following pairs of hormones would you add to the medium to secure shoots as well as roots ?
- 1) IAA and gibberellins
 - 2) **Auxin and cytokinin**
 - 3) Auxin and abscisic acid
 - 4) Gibberellin and abscisic acid
123. Phytochrome is a
- 1) Flavoprotein
 - 2) Glycoprotein
 - 3) Lipoprotein
 - 4) **Chromoprotein**

124. Which hormones do stimulate the production of pancreatic juice and bicarbonate ?
- 1) Angiotensin and epinephrine
 - 2) Gastrin and insulin
 - 3) **Cholecystokinin and secretin**
 - 4) Insulin and glucagon
125. The partial pressure of oxygen in the alveoli of the lungs is
- 1) Equal to that in the blood
 - 2) **More than that in the blood**
 - 3) Less than that of blood
 - 4) Less than that of carbon dioxide
126. Lungs do not collapse between breaths and some air always remains in the lungs which can never be expelled because
- 1) There is a negative pressure in the lungs
 - 2) **There is a negative intrapleural pressure pulling at the lung walls**
 - 3) There is a positive intrapleural pressure
 - 4) Pressure in the lungs is higher than the atmosphere pressure
127. Name the blood cells, whose reduction in number can cause clotting disorder, leading to excessive loss of blood from the body.
- 1) Erythrocytes
 - 2) Leucocytes
 - 3) Neutrophils
 - 4) **Thrombocytes**
128. Serum differs from blood in
- 1) Lacking globulins
 - 2) Lacking albumins
 - 3) **Lacking clotting factors**
 - 4) Lacking antibodies.
129. The part of nephron involved in active reabsorption of sodium is
- 1) Distal convoluted tubule
 - 2) **Proximal convoluted tubule**
 - 3) Bowman's capsule
 - 4) Descending limb of Henle's loop.
130. Name the ion responsible for unmasking of active sites for myosin for cross-bridge activity during muscle contraction.
- 1) **Calcium**
 - 2) Magnesium
 - 3) Sodium
 - 4) Potassium

131. Osteoporosis, an age-related disease of skeletal system, may occur due to
1. Immune disorder affecting neuromuscular junction leading to fatigue
 2. High concentration of Ca^{++} and Na^+
 3. **Decreased level of estrogen**
 4. Accumulation of uric acid leading to inflammation of joints.
132. Choose the correct statement.
- 1) Nociceptors respond to changes in pressure
 - 2) Meissner's corpuscles are thermoreceptors
 - 3) **Photoreceptors in the human eye are depolarized during darkness and become hyperpolarized in response o the light stimulus.**
 - 4) Receptors do not produce graded potentials.
133. Graves' disease is caused due to
- 1) Hyposecretion of thyroid gland
 - 2) **Hypersecretion of thyroid gland**
 - 3) Hyposecretion of adrenal gland
 - 4) Hypersecretion of adrenal gland
134. Name a peptide hormone which acts mainly on hepatocytes, adipocytes and enhances cellular glucose uptake and utilization.
- 1) **Insulin**
 - 2) Glucagon
 - 3) Secretin
 - 4) Gastrin
135. The posterior pituitary gland is not a 'true' endocrine gland because
- 1) It is provided with a duct
 - 2) **It only stress and releases hormones**
 - 3) It is under the regulation of hypothalamus
 - 4) It secretes enzymes.
136. Which one of the following statements is now correct ?
- 1) Offspring produced by the asexual reproduction are called clone.
 - 2) Microscopic, motile, asexual reproductive structures are called zoospores.
 - 3) **In potato, banana and ginger, the plantlets arise from the internodes present in the modified stem.**
 - 4) Water hyacinth, growing in the standing water, drains oxygen from water that leads to the death of fishes.
137. Which one of the following generates new genetic combinations leading to variation ?
- 1) Vegetative reproduction
 - 2) Parthenogenesis
 - 3) **Sexual reproduction**
 - 4) Nucellar polyembryony

138. Match column I with column II and select the correct option using the codes given below.

	Column – I		Column – II
A	Pistils fused together	(i)	Gametogenesis
B	Formation of gametes	(ii)	Pistillate
C	Hyphae of higher Ascomycetes	(iii)	Syncarpous
D	Unisexual female flower	(iv)	Dikaryotic

- a) A-(iv), B-(iii), C-(i), D-(ii)
 b) A-(ii), B-(i), C-(iv), D-(iii)
 c) A-(i), B-(ii), C-(iv), D-(iii)
 d) **A-(iii), B-(i), C-(iv), D-(ii)**

139. In majority of angiosperms

- 1) Egg has a filiform apparatus
 2) There are numerous antipodal cells
 3) **Reduction division occurs in the megaspore mother cells**
 4) A small central cell is present in that embryo sac.

140. Pollination in water hyacinth and water lily is brought about by the agency of

- 1) Water
 2) **Insects or wind**
 3) Birds
 4) Bats.

141. The ovule of an angiosperm is technically equivalent to

- 1) **Megasporangium**
 2) Megasporophyll
 3) Megaspore mother cell
 4) Megaspore

142. Which of the following depicts the correct pathway of transport of sperms ?

- 1) **Rete testis → Efferent ductules → Epididymis → Vas deferens**
 2) Rete testis → Epididymis → Efferent ductules → Vas deferens
 3) Rete testis → Vas deferens → Efferent ductules → Epididymis
 4) Efferent ductules → Rete testis → Vas deferens → Epididymis

143. Match column I with column II and select the correct option using the codes given below:

	Column – I		Column – II
A	Mons pubis	(i)	Embryo formation
B	Antrum	(ii)	Sperm
C	Trophectoderm	(iii)	Female External genitalia
D	Nebenkern	(iv)	Graafian follicle

- a) A-(iii), B-(iv), C-(ii), D-(i)
 b) **A-(iii), B-(iv), C-(i), D – (ii)**
 c) A-(iii), B-(i), C-(iv), D-(ii)
 d) A-(i), B-(iv), C-(iii), D-(ii)

144. Several Hormones like hCG, hPL, estrogen, progesterone are produced by
- 1) Ovary
 - 2) **Placenta**
 - 3) Fallopian tube
 - 4) Pituitary
145. Which of the following is hormone-releasing IUD ?
- 1) **LNG – 20**
 - 2) Multiload 375
 - 3) Lippes loop
 - 4) Cu7
146. Which of the following is incorrect regarding vasectomy ?
- 1) No sperm occurs in seminal fluid
 - 2) **No sperm occurs in epididymis**
 - 3) Vasa deferentia is cut and tied
 - 4) Irreversible sterility
147. Embryo with more than 16 blastomeres formed due to in vitro fertilization is transferred into
- 1) **Uterus**
 - 2) Fallopian tube
 - 3) Fimbriae
 - 4) Cervix
148. The mechanism that causes a gene to move from one linkage group to another is called
- 1) Inversion
 - 2) Duplication
 - 3) **Translocation**
 - 4) Crossing-over
149. If a colour-blind man marries a woman who is homozygous for normal colour vision, the probability of their son being colour-blind is
- 1) **0**
 - 2) 0.5
 - 3) 0.75
 - 4) 1.
150. Taylor conducted the experiments to prove semi-conservative mode of chromosome replication on
- 1) Vinca rosea
 - 2) **Vicia faba**
 - 3) Drosophila melanogaster
 - 4) E.coli
151. The equivalent of a structural gene is
- 1) Mutton
 - 2) **Cistron**
 - 3) Operon
 - 4) Recon.

152. Which of the following rRNAs acts as structural RNA as well as ribozyme in bacteria ?
- 1) 5SrRNA
 - 2) 18S rRNA
 - 3) **23SrRNA**
 - 4) 5.8S rRNA
153. A molecule that can act as a genetic material must fulfill the traits given below, except
- 1) It should be able to express itself in the form of 'Mendelian characters'
 - 2) It should be able to generate its replica
 - 3) **It should be unstable structurally and chemically**
 - 4) It should provide the scope for slow changes that are required for evolution.
154. DNA-dependent RNA polymerase catalyses transcription on one strand of the DNA which is called the
- 1) **Template strand**
 - 2) Coding strand
 - 3) Alpha strand
 - 4) Antistrand.
155. Genetic drift operates in
- 1) **Small isolated population**
 - 2) Large isolated population
 - 3) Non-reproductive population
 - 4) Slow reproductive population
156. In Hardy-Weinberg equation, the frequency of heterozygous individual is represented by
- 1) P^2
 - 2) **$2Pq$**
 - 3) Pq
 - 4) q^2
157. The chronological order of human evolution from early to the recent is
- 1) Australopithecus → Ramapithecus → Homo habilis → Homo erectus
 - 2) **Ramapithecus → Australopithecus → Homo habilis → Homo erectus**
 - 3) Ramapithecus → Homo habilis → Australopithecus → Homo erectus
 - 4) Australopithecus → Homo habilis → Ramapithecus → Homo erectus
158. Which of the following is the correct sequence of events in the origin of life ?
- I. Formation of protobionts
 - II. Synthesis of organic monomers
 - III. Synthesis of organic polymers
 - IV. Formation of DNA-based genetic systems
- a) I, II, III, IV
 - b) I, III, II, IV
 - c) **II, III, I, IV**
 - d) II, III, IV, I

159. Which of the following sets of diseases is caused by bacteria ?
- 1) **Cholera and tetanus**
 - 2) Typhoid and smallpox
 - 3) Tetanus and mumps
 - 4) Herpes and influenza
160. Which of the following is correct regarding AIDS causative agent HIV ?
- 1) HIV is enveloped virus containing one molecule of single-stranded RNA and one molecule of reverse transcriptase.
 - 2) **HIV is enveloped virus that contains two identical molecules of single-stranded RNA And two molecules of reverse transcriptase.**
 - 3) HIV is unenveloped retrovirus.
 - 4) **IV does not escape but attacks the acquired immune response.**
161. A true breeding plant is
- 1) one that is able to breed on its own
 - 2) produced due to cross-pollination among unrelated plants.
 - 3) **near homozygous and** produces offspring of its own kind
 - 4) always homozygous recessive in its genetic constitution.
162. Interspecific hybridisation is the mating of
- 1) animals within same breed without having common ancestors
 - 2) **two different related species**
 - 3) superior males and females of different breeds
 - 4) more closely related individuals within same breed for 4-6 generations.
163. Among the following edible fishes, which one is a marine fish having rich source of omega-3 fatty acids?
- 1) Mystus
 - 2) Mangur
 - 3) Mrigala
 - 4) **Mackerel**
164. Match column I with column II and select the correct option using the codes given below.

	Column-I		Column-II
A	Citric acid	(i)	Trichoderma
B	Cyclosporin A	(ii)	Clostridium
C	Statins	(iii)	Aspergillus
D	Butyric acid	(iv)	Monascus

- 1) A-(iii), B-(i), C-(ii), D-(iv)
- 2) **A-(iii), B-(i), C-(iv), D-(ii)**
- 3) A-(i), B-(iv), C-(ii), D-(iii)
- 4) A-(iii), B-(iv), C-(i), D-(ii)

165. Stirred-tank bioreactors have been designed for
- 1) Purification of product
 - 2) Addition of preservatives to the product
 - 3) **Availability of oxygen throughout the process**
 - 4) Ensuring anaerobic conditions in the culture vessel.
166. A foreign DNA and plasmid cut by the same restriction endonuclease can be joined to form a recombinant plasmid using
- 1) *EcoRI*
 - 2) *Taq* polymerase
 - 3) Polymerase III
 - 4) **Ligase.**
167. Which of the following is not a component of downstream processing ?
- 1) Separation
 - 2) Purification
 - 3) Preservation
 - 4) **Expression**
168. Which of the following restriction enzymes produces blunt ends ?
- 1) *SalI*
 - 2) ***EcoRV***
 - 3) *XhoI*
 - 4) *HindIII*
169. Which kind of therapy was given in 1990 to a four-year old girl with adenosine deaminase (ADA) deficiency ?
- 1) **Gene therapy**
 - 2) Chemotherapy
 - 3) Immunotherapy
 - 4) Radiation therapy
170. Which of the following is correct for r-selected species ?
- 1) **Large number of progeny with small size**
 - 2) Large number of progeny with large size
 - 3) Small number of progeny with small size
 - 4) Small number of progeny with large size
171. If ‘+’ sign is assigned to beneficial interaction, ‘-’ sign to detrimental and ‘O’ sign to neutral interaction, then the population interaction represented by ‘+’ ‘-’ refers to
- 1) Mutualism
 - 2) Amensalism
 - 3) Commensalism
 - 4) **Parasitism.**

172. The principle of competitive exclusion was stated by
- 1) C. Darwin
 - 2) **G.F. Gause**
 - 3) MacArthur
 - 4) Verhulst and Pearl.
173. The primary producers of the deep-sea hydrothermal vent ecosystem are
- 1) Green algae
 - 2) **Chemosynthetic bacteria**
 - 3) Blue-green algae
 - 4) Coral reefs
174. How many hotspots of biodiversity in the world have been identified till date by Norman Myers?
- 1) 17
 - 2) 25
 - 3) **34**
 - 4) 43
175. Which of the following is correctly matched ?
- 1) Aerenchyma – *Opuntia*
 - 2) Age pyramid – Biome
 - 3) ***Parthenium hysterophorus* – Threat to biodiversity**
 - 4) Stratification – Population
176. Red list contains data or information on
- 1) All economically important plants
 - 2) Plants whose products are in international trade
 - 3) **Threatened species**
 - 4) Marine vertebrates only
177. Which of the following National Parks is home to the famous musk deer or hangul ?
- 1) Keibul Lamjao National Park, Manipur
 - 2) Bandhavgarh National Park, Madhya Pradesh
 - 3) Eaglenest Wildlife Sanctuary, Arunachal Pradesh
 - 4) **Dachigam National Park, Jammu and Kashmir**
178. Biochemical Oxygen Demand (BOD) may not be a good index for pollution for water bodies receiving effluents from
- 1) Domestic sewage
 - 2) Dairy industry
 - 3) **Petroleum industry**
 - 4) Sugar industry.

179. A lake which is rich in organic waste may result in
- 1) Increased population of aquatic organisms due to minerals
 - 2) Drying of the lake due to algal bloom
 - 3) Increased population of fish due to lots of nutrients
 - 4) **Mortality of fish due to lack of oxygen**
180. The highest DDT concentration in aquatic food chain shall occur in
- 1) Phytoplankton
 - 2) **Seagull**
 - 3) Crab
 - 4) Eel

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