NEET UG (2024)
Biology
Quiz-11
(BOTANY)

SECTION - A

101. The commonly known forms of basidiomycetes are–

(1) Mushrooms (2) Bracket fungi
(3) Puffballs (4) All of these

102. Fungi which produces endogenous asexual spores is-

(1) *Aspergillus* (2) *Puccinia*
(3) *Albugo* (4) *Claviceps*

103. Silica deposition occur in wall of–

(1) Euglenoids (2) Diatoms
(3) Dinoflagellates (4) Slime mould

104. Mark the **incorrectly** matched-

(1) *Mucor* – Aseptate hyphae
(2) *Claviceps* – Septate hyphae
(3) *Ustilago* – Conidia
(4) *Agaricus* – Sex organ absent

105. Read the following statements carefully & select true **(T)** & false **(F)** statements accordingly-

(P) Morels and truffles are edible

(Q) In ascomycetes, ascospore are produced exogenously

(R) *Neurospora* is used extensively in biochemical and genetic work

(S) Bacteriophages are single stranded DNA viruses

	P	**Q**	**R**	**S**
(1)	T	F	T	T
(2)	F	T	T	F
(3)	T	F	F	T
(4)	T	F	T	F

106. **Assertion:** Lichens are very good air pollution indicators.

Reason: They grow vigorously and effectively in SO_2 polluted areas.

(1) Both Assertion & Reason are true and the reason is the correct explanation of the assertion

(2) Both Assertion & Reason are true but the reason is not the correct explanation of the assertion

(3) Assertion is true statement but Reason is false.

(4) Both Assertion and Reason are false statements

107. Which of the following statements is **wrong** for viroids?

(1) They are smaller than viruses

(2) They cause infections

(3) Their RNA is of high molecular weight

(4) Viroid causes potato spindle tuber disease

108. Consider the following statements

(A) All Protozoans are heterotrophs.

(B) Protozoans are believed to be primitive relatives of animals.

(C) False feet is the characteristic of *Flagellated protozoan*.

Mark the **correct** option-

(1) Both (A) & (C) (2) Both (A) & (B)

(3) Only (C) (4) Only (A)

109. Protista having pigment similar to higher plants are

(1) Protozoa (2) Diatom

(3) Dinoflagellates (4) Euglenoids

110. Mark the **correctly** matched option-

(1) Photosynthetic – Diatom and Slime mould

(2) Marine – Diatom and Euglenoids

(3) Flagellates – Diatom and Dinoflagellates

(4) Saprophytic – Slime mould and Fungi

111. In *penicillium*, sexual reproduction results in the formation of–

(1) Zygospore (2) Oospore

(3) Basidiospore (4) Ascospore

112. Ascomycetes are mostly–

(1) Acellular (2) Unicellular

(3) Multicellular (4) All of these

113. The cell wall has stiff cellulose plates on the outer surface of _____ protists-

(1) Euglenoids (2) Amoeba

(3) Dinoflagellates (4) Slime mould

114. Protein cover pellicle is present in–

(1) Diatoms

(2) *Nostoc*

(3) Euglenoids

(4) Dinoflagellates

115. Consider the following feature.

Well defined nucleus, Oxygen producing, chloroplast, flagellated, Marine.

Given features are present in-.

(1) *Nostoc* (2) Methanogen

(3) Dinoflagellate (4) Euglenoid

116. Mark the **incorrectly** matched-

(1) Viroids – single strand RNA

(2) *Anabaena* – Double strand DNA

(3) Prions – Mad cow disease in cattle

(4) TMV – Double strand RNA

117. Consider the following statement.

(A) In *Albugo* hyphae is aseptate

(B) Dikaryon stage is not visible in *Rhizopus* and *Mucor*.

How many is/are **correct**?

(1) Only (A) (2) Both (A) and (B)

(3) Only (B) (4) Both wrong

118. Most common nutrition present in fungi is–

(1) Parasitic (2) Saprophytic

(3) Symbiotic (4) All of these

119. As compared to slime moulds, Euglenoids show–

(A) Chloroplasts

(B) Photosynthetic nutrition

(C) Proteinaceous pellicle

(D) Contractile vacuole

(1) Only A & B (2) Only B & C

(3) Only A, B & C (4) All of the above

120. Consider the following statement.
(A) Spores of slime mould have true cell wall
(B) Plasmodium show differentiation in favourable conditions
(C) Slime moulds are saprophytic protists
(D) Diatoms are chief producer of ocean
Mark the **correct** statement-
(1) Only A, B and D
(2) Only A, C and D
(3) Only A and D
(4) All are correct

121. Which of the following is **not true** for diatom?
(1) Passive movement
(2) Flagellated cells
(3) Cell wall like overlapping shells, which fit together as in a soap box
(4) Used in polishing, filtration of oils and syrups

122. Plant disease citrus canker caused by–
(1) Bacteria (2) Virus
(3) Protozoa (4) Fungi

123. **Assertion:** In the five kingdom classification bacteria are included in kingdom Monera.
Reason: Bacteria show the least metabolic diversity.
(1) Both Assertion & Reason are true and the reason is the correct explanation of the assertion
(2) Both Assertion & Reason are true but the reason is not the correct explanation of the assertion
(3) Assertion is true statement but Reason is false.
(4) Both Assertion and Reason are false statements.

124. From given statements, mark the **correct**-
(1) *Ustilago* produced sexual spore exogenously
(2) Coenocytic mycelium is found in *Penicillium*
(3) Ascomycetes are mostly unicellular
(4) Both (1) and (2)

125. Fungi which produces exogenously sexual spores is-
(1) *Aspergillus* (2) *Agaricus*
(3) *Trichoderma* (4) *Albugo*

126. Prothallus-
(1) Inconspicuous
(2) Multicellular free living, photosynthetic
(3) Thalloid gametophyte
(4) All of these

127. Which of the following pairs is **incorrectly** matched?
(1) Chlorophyceae – Major pigments are chl a and b.
(2) Phaeophyceae – Cell wall is made up of cellulose and algin.
(3) Chlorophyceae – Stored food is mannitol.
(4) Chlorophyceae – Cell wall is made up of cellulose.

128. Most common type of life cycle in algae is
(1) Haplontic
(2) Diplontic
(3) Also found in *Fucus*
(4) Diplo-haplontic

129. Pyriform or pear shape gamete present in-
(1) *Ectocarpus* (2) *Porphyra*
(3) *Chlamydomonas* (4) *Chlorella*

130. Coralloid roots having association with N_2 fixing bacteria are found in-
(1) *Pinus* (2) *Cedrus*
(3) *Sequoia* (4) *Cycas*

131. Select the **true** statement from the following-
(1) Zygotic meiosis does not occur in *Volvox*
(2) *Fucus* does not show the same life-cycle pattern as most of the algae show
(3) In both bryophytes and pteridophytes, the dominant phase is diploid sporophyte
(4) All vascular plants are seed bearing plants

132. Find out the **incorrect** statement-
(1) Cones in pteridophytes are formed in *Selaginella* and *Equisetum.*
(2) Majority of Pteridophytes are homosporous.
(3) *Selaginella* and *Salvinia* are heterosporous pteridophytes.
(4) Main plant body of bryophyte is diploid

133. The female gametophyte of gymnosperms-
(1) Bear two archegonia
(2) Retained within megasporangium
(3) Is unicellular
(4) Both (1) and (2)

134. Branched stem present in-
(1) *Pinus*
(2) *Cedrus*
(3) Both (1) and (2)
(4) *Cycas*

135. Which of the statements regarding haplontic life cycle is **incorrect**?
(1) Sporophytic generation is represented only by the one-celled zygote.
(2) There is no free-living sporophyte.
(3) Mitosis in the zygote results in the formation of haploid spores.
(4) The haploid spores divide mitotically and form the gametophyte

SECTION - B

136. How many organisms show haplo-diplontic life cycle?
Sphagnum, Volvox, Ulothrix, Marchantia, Polytrichum, Selaginella, Pinus, Cedrus, Ectocarpus, Polysiphonia
(1) 8 (2) 6
(3) 7 (4) 9

137. Precursor of seed habits first develop into–
(1) *Seleginella* and *Salvinia*
(2) Bryophytes
(3) Algae
(4) Gymnosperm

138. Select the **mismatch-**
(1) *Ulothrix* – Filamentous
(2) *Volvox* – Oogamous
(3) *Sargassum* – Chl b
(4) *Sphagnum* – Antherozoid

139. Mark the **correctly** matched –
(1) *Polysiphonia* – Oogamous
(2) *Kelp* – Chl d
(3) *Spirogyra* – Motile male gamete
(4) *Chlorella* – Chl c

140. In which of the following dominant stage is not gametophyte –
(1) Algae (2) Pteridophyte
(3) Liverwort (4) Moss

141. The fusing gametes are non-motile and similar in size, as in species of-
(1) *Ulothrix* (2) *Volvox*
(3) *Fucus* (4) *Spirogyra*

142. Choose the **not correct** option w.r.t. first terrestrial plant-
(1) Haploid phase in the life cycle is more differentiated than that of algae
(2) Zygote divides by meiosis immediately
(3) The sporophyte is not free-living and independent
(4) The spores germinate to produce gametophyte either directly or by a protonema stage

143. Sporophyte in bryophytes is-
(1) Free-living.
(2) Attached to the photosynthetic gametophyte.
(3) Unicellular.
(4) Produced by spores

144. The parasite of sleeping sickness is-
(1) *Entamoeba* (2) *Trypanosoma*
(3) *Paramoecium* (4) *Amoeba*

145. Carrageen is secreted by-
(1) All of the algae
(2) Only brown algae
(3) Only red algae
(4) Both red and brown algae

146. Pyrenoids is located in the chloroplast of–
(1) *Ectocarpus* (2) *Chlamydomonas*
(3) *Porphyra* (4) *Dictyota*

147. Amoeboid protozoans found in-
(1) Fresh water (2) Marine
(3) Moist soil (4) All of these

148. Multicellular rhizoids are the feature of-
(1) *Marchantia* (2) *Ectocarpus*
(3) *Funaria* (4) *Fucus*

149. Which of the following fungi only reproduce by asexual spores conidia?
(1) *Alternaria*
(2) *Colletotrichum*
(3) *Trichoderma*
(4) All of these

150. Match the column-I with column-II and choose the **correct** option-

	Column-I		**Column-II**
A	Amphibian of the plant kingdom	**I**	*Sphagnum*
B	Specialized structures in liverworts for asexual reproduction	**II**	Angiosperms
C	Monocotyledons and dicotyledons	**III**	Bryophytes
D	A plant which has capacity to holding water	**IV**	Gemmae

(1) (A – III); (B – IV); (C – I); (D – II)
(2) (A – III); (B – IV); (C – II); (D – I)
(3) (A – IV); (B – III); (C – II); (D – I)
(4) (A – III); (B – II); (C – IV); (D –I)

(ZOOLOGY)

SECTION - A

151. Which plasma protein help in defence by killing pathogens?
(1) Albumin (2) Globulin
(3) Fibrinogen (4) Prothrombin

152. Closed circulatory system is found in -
(1) Arthropoda (2) Echinodermata
(3) Hemichordata (4) Annelida

153. Ventricles are thick walled as compared to atrium because -
(1) It is to receive blood from atria.
(2) It is present on the posterior side.
(3) It has to pump blood to different body organs.
(4) None of these

154. **Assertion:** In a healthy person cardiac output is almost equal to 5 litres.
Reason: In each cardiac cycle approx. 5 litre blood circulates throughout the body.
(1) Both Assertion and Reason are true but Reason is the correct explanation of Assertion.
(2) Both Assertion and Reason are true but Reason is not the correct explanation of Assertion
(3) Assertion is true but Reason is false.
(4) Both assertion and reason both are false.

155. Two chambered venous heart is found in -
(1) Birds (2) Frog
(3) Reptiles (4) Fishes

156. Megakaryocytes of bone marrow produces:
(1) RBCs (2) Monocytes
(3) Lymphocyte (4) Platelets

157. A person with blood group A +ve contain:
(1) A antigen on RBC and anti A antibody in plasma
(2) B antigen on RBC and anti B antibody in plasma
(3) Rh antigen on RBC and anti B antibody in plasma
(4) No antigen on RBC anti A antibody in plasma

158. Which nodal tissue is found in the upper right corner of the right atrium?
(1) SA node (2) AV node
(3) Purkinje fibres (4) AV bundle

159. Match **column I** with **column II** and choose the correct options.

Column-I		Column-II	
A	Agranulocytes	**P**	5-55 million/mm3
B	Granulocytes	**Q**	12-16 gm
C	Haemoglobin	**R**	Neutrophil
D	Red blood corpuscles	**S**	Lymphocyte

(1) (A-P); (B-Q); (C-R); (D-S)
(2) (A-S); (B-R); (C-Q); (D-P)
(3) (A-Q); (B-R); (C-P); (D-S)
(4) (A-P); (B-S); (C-R); (D-Q)

160. If the stroke volume is 70 mL and heart rate is 72 per min. What is cardiac output?
(1) 500 mL (2) 5040 mL
(3) 3600 mL (4) 300 mL

161. When two atria contract simultaneously and result in the blood pumping into the ventricle, is called as?
(1) Atrial diastole
(2) Atrial systole
(3) Ventricular diastole
(4) Ventricular systole

162. Which enzyme is responsible for conversion of fibrinogen to fibrin?
(1) Thrombin (2) Thrombokinase
(3) Prothrombin (4) Thromboplastin

163. Two separate circulatory pathways i.e., double circulation is found in:
(1) Reptiles and birds
(2) Mammals only
(3) Birds, crocodile and mammals
(4) Reptiles and mammals

164. Match column I with column II and choose the most appropriate option:

	Column-I		Column-II
A	Sympathetic nerves	**I**	Can decrease heart rate and speed of conduction of action potential
B	Parasympathetic nerves	**II**	Can increase heart and strength of ventricular contraction
C	Auto-regulation	**III**	By special muscles called nodal tissues
D	Medulla oblongata	**IV**	Special centre in the brain for regulation of cardiac activity

(1) (A-IV); (B-II); (C-I); (D-III)
(2) (A-II); (B-I); (C-IV); (D-III)
(3) (A-II); (B-I); (C-III); (D-IV)
(4) (A-III); (B-I); (C-IV); (D-II)

165. All the components of the nodal tissues are auto excitable. Why does the SA node act as the normal pacemaker?
(1) SA node has the lowest rate of depolarisation.
(2) The SAN can generate the maximum no. of action potentials.
(3) Only SA node has the ability to generate action potential.
(4) Both (2) and (3)

166. From the given structural components of the heart which of the following parts carry oxygenated blood-
(1) Pulmonary vein
(2) Hepatic vein portal
(3) Pulmonary artery
(4) Both (1) and (2)

167. To obtain a standard ECG the patient is connected to the machine with their electrical loads these three electrical leads are connected to
(1) Chest and each wrist
(2) Each ankle and wrist
(3) Thigh and ankle
(4) Each wrist and left ankle

168. Erythroblastosis foetalis is a disease in which.
(1) 1st Foetus suffers from Anaemia
(2) 2nd foetus suffers from cancer
(3) 2nd foetus is normal and 1st foetus has jaundice
(4) 2nd foetus suffers from jaundice

169. The first heart sound "Lub" occurs in which phase of the cardiac cycle?
(1) Joint diastole
(2) Atrial systole
(3) Ventricular systole
(4) Ventricular diastole

170. Which leucocyte secretes histamine?
(1) Basophils (2) Eosinophils
(3) Lymphocytes (4) Platelets

171. The cardiac impulse is initiated and conducted further up to ventricle the correct sequence of conduction of impulse is:
(1) SA node → AV node→ Purkinje fibres → AV bundle
(2) SA node → Purkinje fibres → AV node → AV bundle
(3) SA node → AV node → AV bundle → Purkinje fibres
(4) SA node → Purkinje fibres → AV bundle → AV node

172. Leucocytes are known as WBCs as they are colourless due to -
(1) Presence of nucleus
(2) Presence of Mitochondria
(3) Lack of Haemoglobin
(4) The presence of secretory granules.

173. The true statement about RBCs is -
(1) RBCs have an average life span of 120 days.
(2) RBCs are formed in the red bone marrow in adults.
(3) RBCs are destroyed in the spleen (graveyard of RBCs)
(4) All of the above

174. Which of the following are parts of systemic circulation?
(1) Aorta, pulmonary, Vena cava
(2) Vena cava, Pulmonary, Aorta artery
(3) Aorta, Vena cava, coronary artery
(4) Superior Vena cava, coronary artery, Pulmonary vein

175. Tricuspid valve is present in between:
(1) Right atrium and right ventricle
(2) Right atrium and left ventricle
(3) Left atrium and left ventricle
(4) Left atrium and right ventricle

176. Which of the following will result in decreased heart rate?
(1) Adrenaline
(2) Noradrenaline
(3) Sympathetic nervous system
(4) Parasympathetic nervous system

177. Which part of the brain can moderate cardiac functions?
(1) Pons (2) Cerebrum
(3) Medulla (4) Cerebellum

178. Which one of the following is an incorrect pair?
(1) Albumin → Plasma protein
(2) QRS complex → Ventricular depolarisation
(3) T-wave → Ventricular repolarization
(4) End of T-wave → End of Diastole

179. The process of excretion involves -
(1) Removal of useful substances from the body.
(2) Removal of metabolic wastes from the body
(3) Removal of the substances which have never been used by the body
(4) Removal of by-products formed during useful activities in the body

180. Among the following ___X___ most toxic and ___Y___ requires least water for its excretion.
(1) X = NH_3 and Y = Urea
(2) X = Urea and Y = Uric acid
(3) X = Uric acid and Y = NH_3
(4) X = NH_3 and Y = Uric acid

181. Which part of the nephron is not found in the cortex?
(1) PCT (2) DCT
(3) Glomerulus (4) Loop of Henle

182. "Excretion of N_2 waste in the form of paste or pellet" is seen in -
(1) Bony fishes
(2) Reptiles
(3) Aquatic amphibians
(4) Mammals

183. Each kidney of adult human measure:

	Length	Width	Thickness	Weight
(1)	10-12 cm	5-7 cm	2-3 cm	120-170gm
(2)	10-12 cm	10-12 cm	6-12 cm	40-50gm
(3)	2-6 cm	10-12 cm	6-12 cm	40-50gm
(4)	10-12 cm	6-7 cm	2-3 cm	120-170gm

184. Collecting ducts converge and open into the __A__ through __B__ in the calyces.
(1) A – renal pelvis, B – medullary pyramids
(2) A – renal tubules, B – medullary pyramids
(3) A – hilum, B – renal pelvis
(4) A – renal pelvis, B – renal columns

185. A special network of blood vessels which is present in our body exclusively for the circulation of blood to and from the cardiac musculature is called?
(1) Pulmonary circulation
(2) Cardiac circulation
(3) Coronary circulation
(4) Systemic circulation

SECTION - B

186. Which one of the following is a tube that carries urine from the kidney to the urinary bladder?
(1) Loop of Henle
(2) Ureter
(3) Urethra
(4) Afferent arteriole

187. How many nephrons are there is each kidney?
(1) About 2 million
(2) About 1 million
(3) About 5000
(4) About 50,000

188. A special sensitive region formed by the cellular modification in the DCT and afferent arteriole at the location of their contact is called as
(1) Juxta – medullary apparatus
(2) Juxta – glomerular apparatus
(3) Glomerular apparatus
(4) Filtration slits

189. Match the column I with column II

Column-I		Column-II	
A	Nephridia	**I**	Crustaceans (Prawn)
B	Malpighian tubules	**II**	Annelids (Earthworm)
C	Antennal gland or green gland	**III**	Insects (Cockroach)

(1) (A-I); (B-II); (C-III)
(2) (A-III); (B-II); (C-I)
(3) (A-II); (B-III); (C-I)
(4) (A-II); (B-I); (C-III)

190. Kidneys are reddish brown, bean shaped structures situated between the level of ___A___ thoracic and ___B___ lumbar vertebrae.
(1) A - Last (12^{th}), B - 3^{rd}
(2) A - 3^{rd}, B - Last
(3) A – 3^{rd}, B – 5^{th}
(4) A – 3^{rd}, B – 2^{nd}

191. Protonephridia are the excretory structure in:
(1) Aschelminthes (2) Platyhelminthes
(3) Prawn (4) Molluscs

192. The efferent arteriole emerging from a fine capillary network around the renal tubule is called
(1) Proximal convoluted tubule
(2) Distal convoluted tubule
(3) Glomerulus
(4) Peritubular capillaries

193. The term Renal corpuscle or Malpighian body comprises:

(1) Bowman's capsule
(2) Glomerulus with afferent arteriole
(3) Glomerulus only
(4) Glomerulus along with Bowman's capsule

194. **Statement I**: Cortical nephrons are less in number as compared to Juxta medullary nephrons.

Statement II: Juxta medullary nephrons have a longer loop of Henle that goes deep in the cortex of Kidney.

(1) Both statement I and statement II are correct.
(2) Statement I is correct, but statement II is incorrect.
(3) Statement I is incorrect but statement II is correct.
(4) Both statement I and statement II are incorrect.

195. **Assertion:** Blood exhibits coagulation or clotting in response to an injury or trauma.

Reason: Blood coagulation is mechanism to prevent excessive loss of blood from the body.

(1) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.
(2) Both Assertion and Reason are true but Reason is not the correct explanation of Assertion.
(3) Assertion is true and Reason is false.
(4) Assertion and Reason both are false.

196. A person's ECG indicated 100 QRS complex in a time interval of 1 min. The heart rate of that person is:

(1) 50 per min (2) 100 per min
(3) 40 per min (4) 40 per min

197. Congestive heart failure involves congestion in

(1) Liver (2) Lungs
(3) Kidney (4) Brain

198. A person with unknown blood group under ABO system, has suffered much blood loss in an accident and needs immediate blood transfusion. His friend who has valid certificate of his own blood type, offers for blood donation without delay. What would have been the type of blood group of the donor friend?

(1) Type B (2) Type AB
(3) Type O (4) Type A

199. Which one is a correct statement in the following?

(1) Heart is protected by double walled pleura
(2) When heart stops beating, condition is called heart failure
(3) Cardiac output of athletes in higher than a normal man
(4) Tunica externa of the artery is made up of smooth muscles.

200. Angina pectoris can be best described as:

(1) A symptom of acute chest pain when not enough oxygen is reaching the heart muscles
(2) Sudden damage to the heart muscles
(3) Insufficient blood supply to the brain
(4) When heart stops beating

Solution

(BOTANY)

101. (4)

* Commonly known forms of basidiomycetes are mushrooms, bracket fungi or puffballs

Class 11th NCERT Pg. No. 24

102. (3)

* Phycomycetes produces endogenous asexual spores.
* In ascomycetes, the asexual spores are conidia produced exogenously.
* In basidiomycetes- The asexual spores are generally not found.
* *Aspergillus* and *Claviceps* are example of ascomycetes
* *Puccinia* is example of basidiomycetes
* *Albugo* is example of Phycomycetes

Class 11th NCERT Pg. No. 23, 24

103. (2)

In diatoms the cell walls form two thin overlapping shells, which fit together as in a soap box. The walls are embedded with silica and thus the walls are indestructible.

Class 11th NCERT Pg. No. 20

104. (3)

In basidiomycetes -the asexual spores are generally not found.

Class 11th NCERT Pg. No 23, 24

105. (4)

* In ascomycetes, ascospore are produced endogenously.
* Bacteriophages are double stranded DNA viruses

Class 11th NCERT Pg. No. 24,33

106. (3)

Lichens are very good pollution indicators – they do not grow in polluted areas

Class 11th NCERT Pg. No. 27

107. (3)

The RNA of the viroid was of low molecular weight

Class 11th NCERT Pg. No. 27

108. (2)

False feet is the characteristic of *Amoeboid protozoan*

Class 11th NCERT Pg. No. 22

109. (4)

Pigments of euglenoids are identical to those present in higher plants

Class 11th NCERT Pg. No. 20

110. (4)

* Slime moulds are saprophytic protists.
* Euglenoids-Majority of them are fresh water organisms found in stagnant water.
* Diatoms-Float passively in water currents (plankton). Flagella absent in diatoms.

Class 11th NCERT Pg. No. 19

111. (4)

* *Penicillium* belong to class of fungi ascomycetes.
* Sexual spores are called ascospores

Class 11th NCERT Pg. No. 18

112. (3)

Commonly known as sac-fungi, the ascomycetes are mostly multicellular, e.g., *Penicillium*, or rarely unicellular, e.g., yeast (*Saccharomyces*).

Class 11th NCERT Pg. No. 23

113. (3)

Dinoflagellates-The cell wall has stiff cellulose plates on the outer surface

Class 11th NCERT Pg. No. 21

114. (3)

In Euglenoids instead of a cell wall, they have a protein rich layer called pellicle which makes their body flexible.

Class 11th NCERT Pg. No. 21

115. (3)

Dinoflagellates-These organisms are mostly marine and photosynthetic. They appear yellow, green, brown, blue or red depending on the main pigments present in their cells. Most of them have two flagella.

* *Nostoc* and methanogen are prokaryotes.

Class 11th NCERT Pg. No. 21

116. (4)

Viruses that infect plants have single stranded RNA.

Class 11th NCERT Pg. No. 26

117. (2)

In phycomycetes-Dikaryon stage is not visible.

Mucor, Albugo, Rhizopus belong to phycomycetes

Class 11th NCERT Pg. No. 23

118. (2)

Most common nutrition present in fungi is saprophytic.

Class 11th NCERT Pg. No. 22

119. (4)

All of these.

Class 11th NCERT Pg. No. 21

120. (2)

Plasmodium show differentiation in unfavourable conditions.

Class 11th NCERT Pg. No. 126

121. (2)

Diatom do not have flagella.

Class 11th NCERT Pg. No. 20

122. (1)

Plant disease citrus canker caused by bacteria.

Class 11th NCERT Pg. No. 20

123. (3)

Bacteria show the most extensive metabolic diversity.

Class 11th NCERT Pg. No. 19

124. (1)

Coenocytic mycelium is found in Phycomycetes.

* Ascomycetes are mostly multicellular

Class 11th NCERT Pg. No. 23

125. (2)

Basidiospores are produced by members of basidiomycetes. *Agaricus* belongs to class basidiomycetes.

Class 11th NCERT Pg. No. 24

126. (4)

In Pteridophytes: The spores germinate to give rise to inconspicuous, small but multicellular free living, mostly photosynthetic thalloid gametophytes called prothallus.

Class 11th NCERT Pg. No 38

127. (3)

Chlorophyceae – Stored food is starch.

Class 11th NCERT Pg. No. 33

128. (1)

Most common type of life cycle in algae is haplontic.

Class 11th NCERT Pg. No. 42

129. (1)

Pyriform or pear shape gamete present in *Ectocarpus.*

Class 11th NCERT Pg. 33

130. (4)

Coralloid roots having association with N_2 fixing bacteria are found in *Cycas*

Class 11th NCERT Pg. No. 38

131. (2)

* Zygotic meiosis occur in *Volvox*
* *Fucus* shows diplontic life cycles
* In bryophytes dominant stage is gametophyte.
* In pteridophytes, the dominant phase is diploid sporophyte.
* Vascular plants are pteridophytes, gymnosperm and angiosperm but only gymnosperm and angiosperm are seed bearing plants.

Class 11th NCERT Pg. No. 30, 34 & 36

132. (4)

Main plant body of bryophyte is haploid.

Class 11th NCERT Pg. No.35, 36

133. (4)

One of the megaspores enclosed within the megasporangium develops into a multicellular female gametophyte that bears two or more archegonia or female sex organs. The multicellular female gametophyte is also retained within megasporangium.

Class 11th NCERT Pg. No. 39

134. (3)

The stems are unbranched (*Cycas)* or branched (*Pinus, Cedrus*).

Class 11th NCERT Pg. No. 38

135. (3)

Meiosis in the zygote results in the formation of haploid spores.

Class 11th NCERT Pg. No. 42

136. (2)

Sphagnum, Marchantia, Polytrichum, Selaginella, Ectocarpus, Polysiphonia

Class 11th NCERT Pg. No. 33

137. (1)

- *Selaginella* and *Salvinia* -produce two kinds of spores, macro (large) and micro (small) spores, are known as heterosporous
- The development of the zygotes into young embryos take place within the female gametophyte.

Class 11th NCERT Pg. No. 38

138. (3)

Sargassum (Phaeophyceae -Brown algae) -Chl c

Class 11th NCERT Pg. No. 33

139. (1)

Polysiphonia–Oogamous

Class 11th NCERT Pg. No. 36

140. (2)

In pteridophytes, the main plant body is a sporophyte.

Class 11th NCERT Pg. No. 36

141. (4)

* The gametes can be flagellated(motile) and similar in size as in *Ulothrix*
* The gametes can be non-flagellated (non-motile) but similar in size as in *Spirogyra*
* Fusion between one large, non-motile (static) female gamete and a smaller, motile male gamete is termed oogamous, e.g., *Volvox, Fucus*

Class 11th NCERT Pg. No. 30

142. (2)

* Bryophytes are first terrestrial plant.
* Zygotes do not undergo reduction division immediately. They produce a multicellular body called a sporophyte

Class 11th NCERT Pg. No. 34

143. (2)

* Sporophyte is not free-living but attached to the photosynthetic gametophyte and derives nourishment rom it.
* Sporophytes-Multicellular

Class 11th NCERT Pg. No. 35

144. (2)

Flagellated protozoans: The parasitic forms cause diseases such as sleeping sickness. Example: Trypanosoma.

Class 11th NCERT Pg. No. 22

145. (3)

Certain marine brown and red algae produce large amount of hydrocolloids (water holding substances), e.g., algin (brown algae) and carrageen (red algae) which are used commercially.

Class 11th NCERT Pg. No. 32

146. (2)

* Pyrenoids is located in the chloroplast of green algae.
* *Chlamydomonas* is green algae
* *Porphyra* is red algae
* *Dictyota* and *Ectocarpus* are brown algae.

Class 11th NCERT Pg. No. 32

147. (4)

Amoeboid protozoans: These organisms live in fresh water, sea water or moist soil

Class 11th NCERT Pg. No. 21

148. (3)

Multicellular rhizoids are feature of mosses

Class 11th NCERT Pg. No. 36

149. (4)

Deuteromycetes class of fungi only reproduce by asexual spores conidia.

Examples are *Alternaria, Colletotrichum and Trichoderma.*

Class 11th NCERT Pg. No. 24

150. (2)

* Bryophytes are called as the amphibian of the plant kingdom because these plants can live in soil but are dependent on water for sexual reproduction.
* Gemma is specialised structure in liverworts for asexual reproduction. Monocotyledons and dicotyledons are two groups of angiosperms. Species of *Sphagnum*, a moss provide peat that have been long been used as a fuel.

Class 11th NCERT Pg. No. 35

(ZOOLOGY)

151. (2)

Plasma contains three proteins namely, fibrinogen, globulins and albumins. Fibrinogens are needed for clotting or coagulation of blood. Globulins are involved in defence mechanisms of the body and the albumins help in osmotic balance.

NCERT Pg no. 279

152. (4)

The closed circulatory system found in annelids and chordates involves the heart pumping blood through a closed network of blood vessels. This arrangement is considered advantageous because it allows for more precise regulation of fluid flow.

NCERT Pg no. 282

153. (3)

The walls of ventricle are thicker when compared to the walls of atria, as ventricle have to pump blood to all the different organs of the body.

NCERT Pg no. 284

154. (3)

In a cardiac cycle, each ventricle ejects approximately 70 mL of blood, known as the stroke volume, hence in each cardiac cycle 70 mL of blood circulates in the body.

The cardiac output is calculated by multiplying the stroke volume with the heart rate (number of beats per minute). Hence, the cardiac output represents the volume of blood pumped out by each ventricle per minute and typically averages 5000 mL or 5 litres in a healthy individual.

NCERT Pg no. 285

155. (4)

Fishes have a 2-chambered heart with an atrium and a ventricle.

NCERT Pg no. 282

156. (4)

Platelets, also known as thrombocytes, are cell fragments formed from megakaryocytes, specialized cells in the bone marrow. In a typical blood sample, there are 1,500,000 to 3,500,000 platelets per cubic millimetre (mm^{-3}). Platelets play a crucial role in blood clotting, as they can release various substances involved in the coagulation process. When the platelet count decreases, it can result in clotting disorders, leading to excessive blood loss from the body.

NCERT Pg no. 280

157. (3)

A person with blood group A +ve contains Rh antigen and anti – B antibody in plasma.

NCERT Pg no. 280

158. (1)

SAN (sino – atrial node) is found in the upper right corner of the right atrium, known as the pacemaker of the heart.

NCERT Pg no. 284

159. (2)

Agranulocyte – Lymphocyte
Granulocytes – Neutrophil
Haemoglobin – 12 to 16 gm
Red blood corpuscles – 5 to 5.5 million/mm^3

NCERT Pg no. 279

160. (2)

The cardiac output is calculated by multiplying the stroke volume with the heart rate (number of beats per minute). So, 70 x 72 = 5040 mL

NCERT Pg no. 285

161. (2)

After the sinoatrial node (SAN) generates an action potential, it triggers a simultaneous contraction of both atria, known as atrial systole. This contraction enhances the blood flow into the ventricles, increasing it by approximately 30 percent, hence, resulting in the blood pumped into the ventricles.

NCERT Pg no. 284

162. (1)

Fibrins are formed by the conversion of inactive fibrinogens in the plasma by the enzyme thrombin. Thrombin, in turn, are formed from another inactive substance present in the plasma called prothrombin.

NCERT Pg no. 281

163. (3)

Crocodiles, birds and mammals possess a 4-chambered heart with two atria and two ventricles. Hence two separate circulatory pathways or double circulation.

NCERT Pg no. 282

164. (3)

A special neural centre in the medulla oblangata can moderate the cardiac function through autonomic nervous system (ANS). Neural signals through the sympathetic nerves can increase the rate of heart beat, the strength of ventricular contraction and thereby the cardiac output. On the other hand, parasympathetic neural signals decrease the rate of heart beat, speed of conduction of action potential and thereby the cardiac output.

NCERT Pg no. 287

165. (2)

SAN can generate the maximum no. of action potentials among all the nodal tissues.

NCERT Pg no. 284

166. (1)

Pulmonary vein carries oxygenated blood. The pulmonary artery carries deoxygenated blood to the lungs, where it undergoes oxygenation through respiration. Subsequently, the oxygenated blood is transported back to the heart via the pulmonary veins, entering the left atrium. This entire process forms the pulmonary circulation.

NCERT Pg no. 284

167. (4)

To obtain a standard ECG, a patient is connected to the machine with three electrical leads, one to each wrist and to the left ankle. That continuously monitors the heart activity. For a detailed evaluation of the heart's function, multiple leads are attached to the chest region.

NCERT Pg no. 286

168. (4)

Textual based.

NCERT Pg no. 281

169. (3)

Two distinct sounds are generated during each cardiac cycle, readily audible through a stethoscope. The initial heart sound (lub) corresponds to the closure of the tricuspid and bicuspid valves, while the second heart sound (dub) aligns with the closure of the semilunar valves. These acoustic signals hold crucial importance in clinical diagnosis.

NCERT Pg no. 285

170. (1)

Basophil secrete histamine, serotonin and heparin, and are involved in inflammatory reactions.

NCERT Pg no. 279

171. (3)

The correct sequence of conduction of impulse:
SA node → AV node → AV bundle → Purkinje fibres.

NCERT Pg no. 284

172. (3)

Leukocytes are also known as white blood cells (WBC) as they are colourless due to the lack of haemoglobin. They are nucleated and are relatively lesser in number which averages 6000-8000 mm–3 of blood.

NCERT Pg no. 279

173. (4)

Textual based

NCERT Pg no. 279

174. (3)

The systemic circulation provides nutrients, O_2 and other essential substances to the tissues and takes CO_2 and other harmful substances away for elimination. Aorta, vena cava, and coronary artery are the components of systemic circulation.

NCERT Pg no. 286

175. (1)

The opening between the right atrium and the right ventricle is guarded by a valve formed of three muscular flaps or cusps, the tricuspid valve, whereas a bicuspid or mitral valve guards the opening between the left atrium and the left ventricle.

NCERT Pg no. 283

176. (4)

Parasympathetic neural signals decrease the heart rate and speed of conduction of action potential and therefore cardiac output is also decreased.

NCERT Pg no. 287

177. (3)

Textual based

NCERT Pg no. 287

178. (4)

The T-wave represents the return of the ventricles from excited to normal state i.e., repolarisation. The end of the T – wave marks the end of the systole.

NCERT Pg no. 286

179. (2)

The process of excretion involves removal of metabolic wastes from the body.

NCERT Pg no. 290

180. (4)

Ammonia is the most toxic form and requires a large amount of water for its elimination, whereas uric acid, being the least toxic, can be removed with a minimum loss of water.

NCERT Pg no. 290

181. (4)

The Malpighian corpuscle, PCT and DCT of the nephron are situated in the cortical region of the kidney whereas the loop of Henle dips into the medulla.

NCERT Pg no. 293

182. (2)

Reptiles, birds, land snails and insects excrete nitrogenous wastes as uric acid in the form of pellet or paste with a minimum loss of water and are called uricotelic animals.

NCERT Pg no. 290

183. (1)

The kidneys are reddish-brown, bean-shaped organs located adjacent to the dorsal inner wall of the abdominal cavity, positioned between the levels of the last thoracic and third lumbar vertebrae. In an adult human, each kidney measures approximately 10-12 cm in length, 5-7 cm in width, and 2-3 cm in thickness, weighing an average of 120-170 g.

NCERT Pg no. 291

184. (1)

Collecting ducts converge and open into the renal pelvis through medullary pyramids in the calyces.

NCERT Pg no. 293

185. (3)

A special coronary system of blood vessels is present in our body exclusively for the circulation of blood to and from the cardiac musculature.

NCERT Pg no. 286

186. (2)

The tube that carries urine from the kidney to the urinary bladder is called ureters. A pair of ureters enter each kidney at a notch called hilum.

NCERT Pg no. 291

187. (2)

Each kidney has about a million nephrons.

NCERT Pg no. 292

188. (2)

JGA is a special sensitive region formed by cellular modifications in the distal convoluted tubule and the afferent arteriole at the location of their contact. A fall in GFR can activate the JG cells to release renin which can stimulate the glomerular blood flow and thereby the GFR back to normal.

NCERT Pg no. 294

189. (3)

Nephridia – Annelids
Malpighian tubules – Insects
Antennal gland or green gland – Crustaceans

NCERT Pg no. 290

190. (1)

The kidneys are reddish-brown, bean-shaped organs located adjacent to the dorsal inner wall of the abdominal cavity, positioned between the levels of the last thoracic and third lumbar vertebrae. In an adult human, each kidney measures approximately 10-12 cm in length, 5-7 cm in width, and 2-3 cm in thickness, weighing an average of 120-170 g.

NCERT Pg no. 291

191. (2)

Protonephridia are the excretory structures in Platyhelminthes.

NCERT Pg no. 291

192. (4)

The efferent arteriole emerging from the glomerulus forms a fine capillary network around the renal tubule called the peritubular capillaries.

NCERT Pg no. 293

193. (4)

Glomerulus, along with Bowman's capsule, is called the malpighian body or renal corpuscle.

NCERT Pg no. 292

194. (4)

The majority of nephrons have a short loop of Henle, extending only a small distance into the medulla. These are referred to as cortical nephrons. However, some nephrons have a significantly longer loop of Henle that extends deep into the medulla. These particular nephrons are known as juxtamedullary nephrons.

NCERT Pg no. 293

195. (1)

Blood exhibits coagulation or clotting in response to an injury or trauma. This is a mechanism to prevent excessive loss of blood from the body.

NCERT Pg no. 281

196. (2)

By counting the number of QRS complexes that occur in a given time period, one can determine the heart beat rate of an individual. Hence, 100 QRS complexes in a minute means 100 cardiac cycles a minute so heart rate should be 100 per minute.

NCERT Pg no. 286

197. (2)

Heart failure means the state of heart when it is not pumping blood effectively enough to meet the needs of the body. It is sometimes called congestive heart failure because congestion of the lungs is one of the main symptoms of this disease.

NCERT Pg no. 288

198. (3)

Textual based

NCERT Pg no. 286

199. (3)

Heart is covered by a double walled pericardium. When the heart suddenly stops beating it is called a heart attack. Cardiac output of athletes is higher than a normal man. Tunica externa of the artery is made up of connective tissues.

NCERT Pg no. 283

200. (1)

A symptom of acute chest pain appears when no oxygen reaching the heart muscle is called angina pectoris.

NCERT Pg no. 288