NEET UG (2024)
Biology
Quiz-14
(BOTANY)

101. Leaves originate from _____ and are arranged in a/an _____ order.
(1) Root apical meristem, acropetal
(2) Floral meristem, basipetal
(3) Shoot apical meristem, acropetal
(4) Internodes, basipetal

102. Root hairs are present in/on
(1) Region of elongation
(2) Region of maturation
(3) Region of meristematic activity
(4) Root cap

103. The tap roots of _____ gets modified to store food.
(1) Carrot (2) Onion
(3) Ginger (4) Sweet potato

104. Adventitious roots of _____ get swollen and store food.
(1) Carrot (2) Turnip
(3) Radish (4) Sweet potato

105. Fleshy and cylindrical modified stem found in
(1) *Euphorbia*
(2) *Opuntia*
(3) Grass
(4) None of these

106. All are example of epigynous, **except**
(1) Cucumber (2) Sunflower
(3) Peach (4) Guava

107. Maize and sugarcane contain
(1) Storage root
(2) Stilt root
(3) Pneumatophores
(4) Prop roots

108. Find out the **incorrect** statement:
(1) Root hair absorbs water and mineral from the soil.
(2) Root increases in length due to region of elongation.
(3) Meristematic region have thin walled cell with dense cytoplasm.
(4) Root cannot synthesize plant growth regulator

109. Stems modified into flat green organs performing the functions of leaves are known as
(1) Scales (2) Cladodes
(3) Phyllodes (4) Phylloclades

110. Actinomorphic flower is present in
(1) Pea
(2) *Cassia*
(3) Chilli
(4) Gulmohur

111. Respiratory root is feature of plant
(1) Mustard (2) *Rhizophora*
(3) Carrot (4) *Alstonia*

112. Thorns in *Bougainvillea* is modification of
(1) Apical bud (2) Leaf
(3) Axillary bud (4) Root

113. The petiole expand and become green to synthesize food in
(1) *Solanum* (2) *Pisum sativum*
(3) Venus-fly trap (4) Australian *acacia*

114. Sepals of flower not show any overlapping is feature of ……. aestivation.
(1) Whorled
(2) Twisted
(3) Valvate
(4) Vexillary

115. Select the **incorrect** matched pair.
(1) Staminode – Sterile stamen which does not produce pollen
(2) Epiphyllous – Stamens are attached to petals as in Lily
(3) Pneumatophores - help *Rhizophora* to get oxygen for respiration
(4) Palmately compound leaves – Leaflets attached at a common point i.e. tip of petiole as in silk cotton**.**

116. Mark the **correctly** matched
(1) Chilli – Racemose
(2) Pea – Actinomorphic
(3) *Datura* – Zygomorphic
(4) Mustard – Tetramerous

117. Ray floret of sunflower show
(1) Hypogynous flower
(2) Perigynous flower
(3) Epigynous flower
(4) None of these

118. The term 'Polyadelphous' is related to
(1) Corolla
(2) Calyx
(3) Gynoecium
(4) Androecium

119. Axile placentation is present in
(1) Tomato
(2) Pea
(3) *Argemone*
(4) *Dianthus*

120. The given aestivation is _____ and found in_____

(1) Twisted, China rose
(2) Vexillary, Pea
(3) Valvate, *Calotropis*
(4) Imbricate, Gulmohur

121. Which of the following is **not** a stem modification?
(1) Pitcher of *Nepenthes*
(2) Thorns of *Citrus*
(3) Tendrils of cucumber
(4) Flattened structures of *Opuntia*

122. Which of the following statement(s) is/are **correct** about calyx?
(1) Calyx is the outermost whorl of the flower and are called sepals.
(2) Sepals are green, leaf like structure and protect the flower in the bud stage.
(3) The calyx may be gamosepalous (sepals free) or polysepalous (sepals united).
(4) Both (1) and (2)

123. Which of the following have polydelphous anther?
(1) Pea (2) *Citrus*
(3) Mustard (4) All of these

124. All are adventitious roots that provide extra mechanical support to the plants, **except**
(A) Stilt root
(B) Prop root
(C) Pneumatophores
(1) (B) only (2) (A) only
(3) Both (A) and (B) (4) (C) only

125. Syncarpous condition is seen in
(1) Lotus and mustard
(2) Rose and tomato
(3) Mustard and tomato
(4) Lotus and rose

126. Whorled phyllotaxy is found in
(1) Guava (2) China rose
(3) Mustard (4) *Alstonia*

127. Which of the following plant has a superior ovary?
(1) Peach (2) Guava
(3) China rose (4) Rose

128. Mark the **incorrect** match.
(1) *Calotropis* – Valvate
(2) Lady's finger – Twisted
(3) *Cassia* – Valvate
(4) Gulmohur – Imbricate

129. In _____ placentation, the placenta forms a ridge along the ventral suture of the ovary.
(1) Axile (2) Basal
(3) Free central (4) Marginal

130. Radial symmetry is found in flowers of
(1) *Cassia* (2) Chilli
(3) Gulmohur (4) *Canna*

131. Which of the following is **not** a part of a leaf?
(1) Pedicel (2) Leaf base
(3) Petiole (4) Lamina

132. Cells of zone of elongation are
(1) Undergo rapid elongation
(2) Gradually differentiate and mature
(3) Responsible for growth of root in length
(4) All of the above

133. When a Pair of leaf arise at one node than it is_____ phyllotaxy and_____ is an Example-
(1) Alternate, Guava
(2) Opposite, Sunflower
(3) Spiral, Mustard
(4) Opposite, Guava

134. Which of the following statements is/are **correct** about venation?
(i) The arrangement of veins and the veinlets in the lamina of leaf is called venation.
(ii) Reticulate venation is the characteristic of monocots.
(iii) When the veinlets form a network, the venation is termed as reticulate venation.
(iv) When the veins run parallel to each other within a lamina, the venation is termed as parallel venation.
(1) Only (i)
(2) Both (i) and (ii)
(3) Only (i), (iii) and (iv)
(4) All of these

135. **Assertion:** In hypogynous flower ovary is always inferior.
Reason: Parts of flower in hypogynous condition arises above ovary**.**
(1) Both Assertion and Reason are true and the Reason is the correct explanation of the Assertion
(2) Both Assertion and 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

SECTION – B

136. In cucumber, the axillary bud is modified to form
(1) Bladders (2) Tendrils
(3) Thorns (4) Pitchers

137. When the margins of sepals or petals overlap one another in a particular direction, the condition is termed as
(1) Valvate (2) Vexillary
(3) Imbricate (4) Twisted

138. Flowers are zygomorphic in
(1) *Datura*
(2) Mustard
(3) Gulmohur
(4) Tomato

139. Match the following columns and select the **correct** option

	Column I		**Column II**
a	China rose	i	Basal placentation
b	*Argemone*	ii	Axile placentation
c	*Dianthus*	iii	Parietal placentation
d	Sunflower	iv	Free-central placentation

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

140. In china rose the flower are
(1) Actinomorphic, epigynous with valvate aestivation
(2) Zygomorphic, hypogynous with imbricate aestivation
(3) Zygomorphic, epigynous with twisted aestivation
(4) Actinomorphic, hypogynous with twisted aestivation

141. Racemose inflorescence is present in
(1) *Petunia*
(2) Sunhemp
(3) Lily
(4) Brinjal

142. The roots that originate from the base of the stem are:
(1) Primary roots
(2) Prop roots
(3) Lateral roots
(4) Fibrous roots

143. In cymose the type of inflorescence is:
(A) Main axis terminates into flower.
(B) Flower born in basipetal order.
(C) Main axis not terminates into flower.
(D) Flower born in acropetal order.
(1) Only (A) and (B)
(2) Only (C) and (D)
(3) Only (A) and (C)
(4) Only (B) and (C)

144. Consider the following statements

(A) Corm and *Rhizome* both are root modification

(B) Axillary bud can modify into thorns

(C) Marginal placentation present in pea

Which statements is/are **correct**?

(1) Only (B) and (C)
(2) All three
(3) Only (A) and (B)
(4) Only (A)

145. Mark the **odd** one (w.r.t. perigynous flower).

(1) Pea (2) Rose
(3) Peach (4) Plum

146. Prop or pillar roots are found in

(1) Carrot (2) Sweet potato
(3) Banyan tree (4) Maize

147. A lateral branch with short internodes and each node bearing a rosette of leaves and a tuft of roots are found in aquatic plants like

(1) *Pistia*
(2) *Eichhornia*
(3) Pineapple
(4) Both (1) and (2)

148. Consider the following statements-

(A) Mustard show unequal stamen and alternate phyllotaxy

(B) Leaf develop from apical and axillary bud both

(C) Sweet potato is modified root

Of these statements

(1) A and B are true but C is false
(2) A and C are true but B is false
(3) A and B are false but C is true
(4) A and C are false but B is true

149. *Cassia* and pea have similarity –

(1) Margins show overlapping
(2) Zygomorphic
(3) Actinomorphic
(4) Both (1) and (2)

150. In stem of maize and sugarcane ..... roots come out of the lowermost nodes of stem is known as ..... root-

(1) Respiratory, Prop
(2) Supporting, Pneumatophore
(3) Supporting, Stilt
(4) Supporting, storage

(ZOOLOGY)

SECTION-A

151. Which of the following structures in respiratory system supported by incomplete cartilaginous rings?

(1) Trachea
(2) Primary, secondary and tertiary bronchi
(3) Initial bronchioles
(4) All of the above

152. Which is a incorrect point in the following?

(1) Larynx is voice box
(2) Leads of ECG are attached to Right ankle
(3) Capillaries contain simple squamous epithelium
(4) Chordae tendinae are associated with ventricles

153. The chamber formed dorsally by the vertebral column, ventrally by sternum, laterally by ribs and on the lower side by dome shaped diaphragm is:

(1) Abdominal cavity
(2) Thoracic chamber
(3) Pelvic cavity
(4) Cranial cavity

154. How many statements are true from given below statements

(A) We have the ability to increase the strength of inspiration and expiration with the help of additional muscle in the abdomen.
(B) Alveoli are the primary sties of exchange of gases.
(C) The diffusion membrane is made up of 2 major layers
(D) Blood is the medium of transport for O_2 and CO_2

(1) 1 (2) 2
(3) 3 (4) 4

155. Which one of the following are the correct matching of respiratory capacities and respiratory volumes?

	Column-I		Column-II
A.	Residual volume	P.	3000 mL
B.	Vital capacity	Q.	3500 mL
C.	Inspiratory reserve volume	R.	1200 mL
D.	Inspiratory capacity	S.	4600 mL

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

156. Binding of O_2 with haemoglobin is primarily related to
(1) pCO_2
(2) pO_2
(3) H^+ concentration
(4) Temperature

157. Each 100 ml of deoxygenated blood delivers _____ ml of CO_2 of the alveoli under normal physiological condition
(1) 4 ml (2) 2 ml
(3) 3 ml (4) 5 ml

158. Human excretory system consist of:
(1) A pair of kidneys
(2) One pair of ureters
(3) A urinary bladder, a Urethra
(4) All of the above

159. Which of the following statements is false:
I. Outer cortex and inner medulla are the two zones in kidney.
II. Medulla is divided into a few conical masses.
III. Each kidney has nearly 100 tubular structures called Neuron.
IV. Pyramid project into calyx.
(1) I, IV (2) II, IV
(3) Only III (4) III, IV

160. In prawns excretory organ is
(1) Antennal gland (2) Kidney
(3) Nephridia (4) Flame cells

161. Which one of the following is the structural and functional unit of kidney?
(1) Urethra (2) Urinary bladder
(3) Renal column (4) Nephron

162. All of the following structures are situated in the cortical region of kidney except?
(1) Loop of Henle
(2) Malpighian corpuscle
(3) DCT
(4) PCT

163. Vasa recta is:
(1) S-shaped (2) U- shaped
(3) J- shaped (4) V-shaped

164. Urine formation involves?
(1) Ultrafiltration, reabsorption and secretion occurring in different parts of nephron
(2) Ultra filtration and reabsorption occurring in same part of nephron
(3) Ultrafiltration and reabsorption occurring in different parts of nephron
(4) Ultrafiltration, reabsorption and secretion occurring in same part of nephron

165. Renal corpuscle or Malpighian body is:
(1) Glomerulus only
(2) Glomerulus along with Bowman's capsule
(3) Bowman's capsule
(4) Glomerulus with afferent arteriole

166. The amount of the filtrate formed by the kidney per minute is called GFR (Glomerular filtration Rate). The GFR of a healthy adult is
(1) 125 ml/min (2) 80 ml/min
(3) 500 ml/min (4) 170 ml/min

167. Which of the following nitrogenous waste is most toxic?
(1) Uric acid (2) Urea
(3) Ammonia (4) Both (1) and (2)

168. Blood is a special type of connective tissue.
(1) Consists of a plasma
(2) Has a formed elements
(3) Blood is the most commonly used body fluid by most of the higher organisms
(4) All of the above

169. Plasma is a straw coloured viscous fluid constituting nearly _____% of blood
(1) 45 (2) 55
(3) 90 (4) 10

170. Which plasma protein is primarily involved in defense mechanism?
(1) Albumin (2) Globulin
(3) Fibrinogen (4) Prothrombin

171. **Assertion:** Reduction in number of platelets can lead to excessive loss of blood from the body in case of injury.
Reason: Platelets help in the coagulation of blood.
(1) Both assertion and reason are true and reason is the correct explanation of assertion.
(2) Assertion is true and reason is false.
(3) Assertion is false Reason is true
(4) Both assertion and reason are true and reason is not the correct explanation of assertion.

172. Which of the following statement is/are true?
(1) Basophils are associated with allergic reaction
(2) Eosinophils are most abundant cells in WBCs.
(3) Basophils secrete histamine serotonin, heparin etc.
(4) Leucocytes are anucleated cells

173. An open circulatory system is characterized by:
(1) The absence of heart.
(2) Blood pumped by the heart passes through large vessels into open space or body cavities called sinuses.
(3) Blood circulated through a closed network of blood vessels.
(4) Blood never comes in direct contact with body organs and tissues.

174. Erythroblastosis foetalis occurs when a factor from mother passes into the foetus through the placenta, the factor is
(1) Rh antigen (2) Rh antibodies
(3) Albumin (4) ABO

175. Which is incorrect statement?
(1) Lymph contain Lymphocytes
(2) Lymph contain RBCs
(3) 70% of CO_2 is transported as bicarbonate in plasma
(4) pO_2 is oxygenated blood is 95 mm Hg

176. Incomplete double circulation is found in which of the following animals?
(1) Mammals
(2) Birds
(3) Birds and mammals
(4) Amphibians and Reptiles

177. Tricuspid valve is present between the
(1) Two ventricles
(2) Left atrium and Right atrium
(3) Left atrium and left Ventricle
(4) Right atrium and Right ventricle

178. Sino-atrial node (SAN) can generate maximum no. of action potential is?
(1) 35-40 min^{-1} (2) 120-140 min^{-1}
(3) 70-75 min^{-1} (4) 50-55 min^{-1}

179. AV node (AVN) is located in?
(1) Upper lateral wall of left atrium
(2) Lower left corner of the right atrium close to the atrio-ventricular septum
(3) Upper Lateral wall of left atrium
(4) Upper lateral wall right atrium

180. If the stroke volume is 50 mL and heart rate is 72/min what is the cardiac output?
(1) 5000 mL (2) 3600 mL
(3) 4000 mL (4) 30000 mL

181. First cardiac sound (Lub) is associated with.
(1) Opening of bicuspid or tricuspid valve
(2) Closure of semilunar valve
(3) Closure of the tricuspid and biscuspid valve
(4) Opening of the semilunar valve.

182. In ECG P wave represents
(1) Depolarisation of the atria
(2) Depolarisation of ventricle
(3) Repolarisation of ventricle
(4) Repolarisation of atria

183. **Assertion:** The SA node acts as pacemaker.
Reason: The SA node is located in wall of the left atrium
(1) Both assertion and reason are true and reason is the correct explanation of assertion.
(2) Assertion is false and reason is true.
(3) Assertion is True Reason is false
(4) Both assertion and reason are true and reason is not the correct explanation of assertion.

184. Artery compared to veins have
(1) Values (2) Thin tunica media
(3) Low BP (4) Thick tunica media.

185. The systemic circulation involve?
(1) Provides nutrients to tissue
(2) Takes out CO_2 from tissues
(3) Provides O_2 to the tissue
(4) All of the above

SECTION-B

186. Pulmonary circulation is
(1) Left atrium $\xrightarrow{\text{oxygenated blood}}$ Lungs $\xrightarrow{\text{Deoxygenated blood}}$ Right Ventricle
(2) Left atrium $\xrightarrow{\text{Deoxygenated blood}}$ Lungs $\xrightarrow{\text{oxygenated blood}}$ Right Ventricle
(3) Right Ventricle $\xrightarrow{\text{Deoxygenated blood}}$ Lungs $\xrightarrow{\text{oxygenated blood}}$ Left atrium
(4) Right Ventricle $\xrightarrow{\text{oxygenated blood}}$ Lungs $\xrightarrow{\text{Deoxygenated blood}}$ Left atrium

187. Which of the following events occurs during joint diastole?

I. All four chambers are in relaxed state
II. Tricuspid and Bicuspid valves are open
III. Semilunar valves are closed
IV. Blood from the pulmonary veins and vena cava flows into the left and right ventricles respectively through the left and right atria the correct option is

(1) Only I (2) Only III
(3) II and IV (4) I, II, III and IV

188. Vascular connection between the digestive tracts and liver is called?

(1) Hepatic circulation
(2) Hepatic-portal system
(3) Pulmonary circulation
(4) Coronary circulation

189. Which system can decrease the heart Rate and cardiac output

(1) Sympathetic nervous system
(2) Adrenaline hormone
(3) Parasympathetic nervous system
(4) Noradrenaline hormone

190. Normal BP = 120/80 mm Hg in an adult. In this measurement 120 mm Hg. Is the _____ pressure and 80 mm Hg is _____ pressure

(1) Diastolic; systolic
(2) Systolic; Diastolic
(3) Pulse; Systolic
(4) Pulse; diastolic

191. Match the column I with column II.

	Column-I		**Column-II**
A.	Heart failure	P.	Lumen of arteries narrower
B.	Angina	Q.	A symptom of acute chest pain when no enough oxygen is reaching the heart muscle.
C.	Hypertension	R.	Affects vital organ like brain and kidney
D.	Coronary artery disease	S.	State of heart when it is not pumping blood effectively enough to meets the need of body.

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

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

(1) Hepatocyte
(2) Cardiac musculature
(3) Cornea
(4) Liver

193. **Assertion:** The anatomical setup of lungs in thorax is such that any change in the volume of the thoracic wall cavity will be reflected in the lung cavity (Pulmonary cavity)

Reason: Lungs have no muscles so we can not directly alter the pulmonary volume.

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

194. About _____CO_2 is carried by haemoglobin as carbamino-haemoglobin

(1) 70% (2) 97%
(3) 20-25% (4) 7%

195. Which of the following disorder caused by long exposure of grinding or stone breaking leads to inflammation leading to Fibrosis and cause serious lung damage

(1) Bronchitis
(2) Asthma
(3) Occupational respiratory disorder
(4) Emphysema.

196. Ammonia is converted into urea in

(1) Kidney (2) Liver
(3) Spleen (4) Intestine

197. Which of the following organism are Ammonotelic

(1) Aquatic amphibians.
(2) Bony fishes
(3) Mammals
(4) Both (1) and (2)

198. Flame cells are excretory structure of
(1) Platyhelminthes
(2) Mammals
(3) Crustaceans
(4) Insect

199. The human kidney has about
(1) One million nephron
(2) Two thousand nephron
(3) Three thousand nephron
(4) Ten billion nephron

200. The cortex extends in between the medullary pyramids as renal columns called
(1) PCT
(2) DCT
(3) column of Bertini
(4) Bowman's capsule

Solution

(BOTANY)

101. (3)
Leaves originate from shoot apical meristem and are arranged in an acropetal order.
CLASS 11 NCERT PG NO.69

102. (2)
Root hairs are present in region of maturation.
CLASS 11 NCERT PG NO.66

103. (1)
The tap roots of carrot get modified to store food.
CLASS 11 NCERT PG NO.67

104. (4)
Adventitious roots of sweet potato get swollen
CLASS 11 NCERT PG NO.67

105. (1)
Euphorbia
CLASS 11 NCERT PG NO.68

106. (3)
In epigynous flowers, the margin of thalamus grows upward enclosing the ovary completely and getting fused with it, the other parts of flower arise above the ovary. Hence, the ovary is said to be inferior as in flowers of guava and cucumber, and the ray florets of sunflower.
*Peach-perigynous flower
CLASS 11 NCERT PG NO.73

107. (2)
The stems of maize and sugarcane have supporting roots coming out of the lower nodes of the stem. These are called stilt roots.
CLASS 11 NCERT PG NO.67

108. (4)
The main functions of the root system are absorption of water and minerals from the soil, providing a proper anchorage to the plant parts, storing reserve food material and synthesis of plant growth regulators.
CLASS 11 NCERT PG NO.66

109. (4)
Stems modified into flat green organs performing the functions of leaves are known as Phylloclades.
CLASS 11 NCERT PG NO.68

110. (3)
* Actinomorphic – e.g. *Datura*, Chilli, mustard,
* Zygomorphic – e.g. pea, gulmohur, bean, *Cassia.*

CLASS 11 NCERT PG NO.74

111. (2)
Rhizophora.
CLASS 11 NCERT PG NO.67

112. (3)
Axillary buds of stems may also get modified into woody, straight and pointed thorns.
CLASS 11 NCERT PG NO.68

113. (4)
Petiole expand and become green, structure called phyllode to synthesize food.71
CLASS 11 NCERT PG NO

114. (3)
Valvate Aestivation.
CLASS 11 NCERT PG NO.74

115. (2)
* Epiphyllous -when attached to the perianth as in the flowers of lily. Epiphyllous conditions present in Liliaceae family.
* Epipetalous- when stamens are attached to the petals, as in brinjal. Epipetalous condition present in Solanaceae family

CLASS 11 NCERT PG NO.75

116. (4)
* Chilli – Cymose (Solanaceae family show cymose inflorescence)
* Pea – Zygomorphic
* *Datura* – Actinomorphic
* Mustard – Tetramerous

CLASS 11 NCERT PG NO.72

117. (3)
Ray floret of sunflower shows epigynous flower.
CLASS 11 NCERT PG NO.73

118. (4)
The stamens may be united into one bunch or one bundle (monoadelphous) as in china rose, or two bundles (diadelphous) as in pea, or into more than two bundles (polyadelphous) as in citrus.
CLASS 11 NCERT PG NO.75

119. (1)
* When the ovules are borne on central axis and septa are absent, as in *Dianthus* and *Primrose* the placentation is called free central.
* In marginal placentation the placenta forms a ridge along the ventral suture of the ovary and the ovules are borne on this ridge forming two rows, as in pea.
* When the placenta is axial and the ovules are attached to it in a multilocular ovary, the placentation is said to be axile, as in china rose, tomato and lemon.

CLASS 11 NCERT PG NO.75

120. (2)
The given aestivation is vexillary and found in pea.
CLASS 11 NCERT PG NO.74

121. (1)
Leaves of certain insectivorous plants such as pitcher plant, Venus–fly trap are also modified leaves.
CLASS 11 NCERT PG NO.71

122. (4)
The calyx is the outermost whorl of the flower and the members are called sepals. Generally, sepals are green, leaf like and protect the flower in the bud stage. The calyx may be gamosepalous (sepals united) or polysepalous (sepals free).
CLASS 11 NCERT PG NO.73

123. (2)
Polydelphous anther - Citrus.
* Diadelphous - Pea
* Unequal stem – Mustard

CLASS 11 NCERT PG NO.75

124. (4)
Pneumatophores are respiratory roots.
Class 11th NCERT Pg. No. 67

125. (3)
Syncarpous – when carpels are fused, as in mustard and tomato.
CLASS 11 NCERT PG NO.75

126. (4)
If more than two leaves arise at a node and form a whorl, it is called whorled, as in *Alstonia*.
CLASS 11 NCERT PG NO.71

127. (3)
Guava - Inferior ovary
Peach and Rose - Perigynous
China rose - Superior ovary
CLASS 11 NCERT PG NO.73

128. (3)
Cassia shows imbricate aestivation.
CLASS 11 NCERT PG NO.75

129. (4)
In marginal placentation, the placenta forms a ridge along the ventral suture of the ovary
CLASS 11 NCERT PG NO.75

130. (2)
Radial symmetry is found in flowers of chilli.
CLASS 11 NCERT PG NO.72

131. (1)
Pedicel is not part of leaf.
CLASS 11 NCERT PG NO.70

132. (4)
The cells proximal to this region undergo rapid elongation and enlargement and are responsible for the growth of the root in length. This region is called the region of elongation. The cells of the elongation zone gradually differentiate and mature.
CLASS 11 NCERT PG NO.66

133. (4)
In opposite type, a pair of leaves arise at each node and lie opposite to each other as in Calotropis and guava plants
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134. (3)
Reticulate venation is the characteristic of dicot.
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135. (4)
Both Assertion and Reason are false statements
* In the hypogynous flower the gynoecium occupies the highest position while the other parts are situated below it. The ovary in such flowers is said to be superior, e.g., mustard, china rose and brinjal**.**

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136. (2)
* Stem tendrils which develop from axillary buds, are slender and spirally coiled and help plants to climb such as in gourds (cucumber, pumpkins, watermelon) and grapevines.
* Axillary buds of stems may also get modified into woody, straight and pointed thorns. Thorns are found in many plants such as *Citrus, Bougainvillea.*

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137. (4)
If one margin of the appendage overlaps that of the next one and so on as in China rose, lady's finger and cotton, it is called twisted.
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138. (3)
Flowers in Gulmohur are zygomorphic.
* Brassicaceae, Solanaceae and Liliaceae family shows actinomorphic symmetry.
* Fabaceae family shows zygomorphic symmetry**.**

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139. (1)
* China rose – Axile placentation
* *Argemone* – Parietal placentation
* *Dianthu*s – Free-central placentation
* Sunflower – Basal placentation

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140. (4)
China rose flowers are
* Actinomorphic
* Hypogynous
* Twisted aestivation

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141. (2)
Racemose inflorescence is present in Brassicaceae and Fabaceae family.
* Cymose inflorescence is present in Liliaceae and Solanaceae family.
* *Petunia*, Brinjal– Solanaceae family
* *Sunhemp* – Fabaceae
* Lily– Liliaceae

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142. (4)
In monocotyledonous plants, the primary root is short lived and is replaced by a large number of roots. These roots originate from the base of the stem and constitute the fibrous root system, as seen in the wheat plant
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143. (1)
In cymose type of inflorescence the main axis terminates in a flower, hence is limited in growth. The flowers are borne in a basipetal order**.**
CLASS 11 NCERT PG NO.72

144. (1)
* Corm and *Rhizome* are stem modifications.
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145. (1)
Plum, peach and rose plants have perigynous flowers while pea plants have superior ovary**.**
CLASS 11 NCERT PG NO.73

146. (3)
Prop or pillar roots are found in banyan.
CLASS 11 NCERT PG NO.67

147. (4)
A lateral branch with short internodes and each node bearing a rosette of leaves and a tuft of roots is found in aquatic plants like *Pistia* and *Eichhornia.*
CLASS 11 NCERT PG NO.69

148. (2)
It develops at the node and bears a bud in its axil. The axillary bud later develops into a branch. Leaves originate from shoot apical meristems.
CLASS 11 NCERT PG NO.68, 69

149. (4)
* In pea and bean flowers, there are five petals, the largest (standard) overlaps the two lateral petals (wings) which in turn overlap the two smallest anterior petals (keel); this type of aestivation is known as vexillary or papilionaceous.
* If the margins of sepals or petals overlap one another but not in any particular direction as in *Cassia* and gulmohur, the aestivation is called imbricate. So, margin shows overlapping in both *Cassia* and pea.
* When it can be divided into two similar halves only in one particular vertical plane, it is zygomorphic, e.g., pea, gulmohur, bean, *Cassia*.
CLASS 11 NCERT PG NO.72,74

150. (3)
The stems of maize and sugarcane have supporting roots coming out of the lower nodes of the stem. These are called stilt roots.
CLASS 11 NCERT PG NO.67

(ZOOLOGY)

151. (4)
Trachea, Primary, secondary, tertiary bronchi and initial bronchioles is supported by incomplete cartilaginous ring.
XI NCERT Pg. 269.

152. (2)
ECG leads are attach one to each wrist and to the left ankle
XI NCERT Pg. 286.

153. (2)
Thoracic chamber is formed dorsally by the vertebral column, ventrally by sternum, laterally by ribs and on the lower side by dome shaped diaphragm.
XI NCERT Pg. 270.

154. (3)
The diffusion membrane is made up of 3 major layers
XI NCERT Pg. 271-273

155. (3)
Residual volume – 1200 ml
Vital capacity – 4600 ml
Inspiratory reserve volume – 3000 ml
Inspiratory capacity – 3500 ml
XI NCERT Pg. 271-272.

156. (2)
Binding of O_2 with haemoglobin is primarily related to partial pressure of oxygen (PO_2)
XI NCERT Pg. 274.

157. (1)

Each 100 ml of deoxygenated blood deliver 4 ml of CO_2 of the alveoli under normal condition.
XI NCERT Pg. 275.

158. (4)

A pair of kidneys, one pair of ureters, a urethra, a urinary bladder consist of Human excretory system.
XI NCERT Pg. 291.

159. (3)

Each kidney has nearly 1 million tubular structure scalled nephrons.
XI NCERT Pg. 291-292.

160. (1)

Antennal gland is excretory organ in prawn.
XI NCERT Pg. 291.

161. (4)

Nephron is the structural and functional unit of kidneys.
XI NCERT Pg. 292.

162. (1)

Loop of Henle dips into the medulla region.
XI NCERT Pg. 293.

163. (2)

Vasa recta is U-shaped structure.
XI NCERT Pg. 293.

164. (1)

Urine formation involves 3 main processes namely, glomerular filtration, reabsorption and secretion that takes place in different parts of nephron
XI NCERT Pg. 293.

165. (2)

Glomerulus along with bowman's capsule is malpighian body.
XI NCERT Pg. 292.

166. (1)

The GFR of a healthy adult is 125 ml/min
XI NCERT Pg. 294.

167. (3)

Ammonia is a most toxic nitrogenous waste as compared to urea and uric acid.
XI NCERT Pg. 290.

168. (4)

Blood is a special type of connective tissue consist of plasma, formed elements and most commonly used body fluid by most of the higher organisms.
XI NCERT Pg. 278.

169. (2)

Plasma is a straw coloured viscous fluid constituting nearly 55% of blood.
XI NCERT Pg. 279.

170. (2)

Globulin is involved in defence mechanisms.
XI NCERT Pg. 279.

171. (1)

Reduction in number of platelets can lead to excessive loss of blood from the body in case of injury because platelets help in the coagulation of blood.
XI NCERT Pg. 280.

172. (3)

Leucocyte are nucleated cells. Eosinophils are associated with allergy and neutrophils are most abundant cell in WBCs.
XI NCERT Pg. 194.

173. (2)

In open circulatory system pumped by the heart passes through large vessels into open space or body cavity called sinuses.
XI NCERT Pg. 282.

174. (2)

Ery**t**hroblastosis foetalis occurs when anti Rh-antibodies passes from mother to the foetus through placenta.
XI NCERT Pg. 281.

175. (2)

Lymph doesn't contain RBCs.
XI NCERT Pg. 283.

176. (4)

In amphibians and Reptiles. Incomplete double circulation is found.
XI NCERT Pg. 197.

177. (4)

Tricuspid valve is present between Right atrium and Right ventricle.
XI NCERT Pg. 198.

178. (3)

SA node generate 70-75 min^{-1} action potential

XI NCERT Pg. 199.

179. (2)

AV node is located in Lower left corner of the right atrium close to the atrioventricular septum.

XI NCERT Pg. 199.

180. (2)

C.O = stroke volume × Hear rate

= 50 × 72

= 3600 mL

181. (3)

I^{st} cardiac sound lub is associated with closure of the bicuspid and tricuspid valve.

XI NCERT Pg. 200.

182. (1)

P-Wave represent-Depolarisation of the atria.

XI NCERT Pg. 201.

183. (3)

A patch of the tissue is present in the right upper corner of the right atrium called sino atrial node.

Assertion is true reason is false.

XI NCERT Pg. 199.

184. (3)

Veins are having thin tunica media.

XI NCERT Pg. 201.

185. (4)

Systemic circulation provide nutrients to tissue. Takes out CO_2 from tissue and provides O_2 to the tissue.

XI NCERT Pg. 201.

186. (3)

Textual Based questions

XI NCERT Pg. 201.

187. (4)

In joint diastole all events which is given is statements are occur

XI NCERT Pg. 200.

188. (2)

Hepatic portal system is the vascular connection between the digestive tracts and liver.

XI NCERT Pg. 202.

189. (3)

Parasympathetic nervous system can decrease the heart rate and cardiac output.

190. (2)

120 → systolic Blood pressure.

80 → Diastolic Blood pressure

XI NCERT Pg. 202.

191. (1)

Textual Based questions.

XI NCERT Pg. 203.

192. (2)

Cardiac musculature is a special coronary system of blood vessels present in our body exclusively for the circulation of blood

XI NCERT Pg. 202.

193. (1)

Both assertion and reason are true and reason is the correct explanation of assertion

XI NCERT Pg. 185.

194. (3)

About 20-25% CO_2 is carried by haemoglobin as carbamino – haemoglobin

195. (3)

Occupational respiratory disorder is caused by long exposure of grinding or stone breaking leads to inflammation cause serious lung damage

XI NCERT Pg. 191.

196. (2)

In liver Ammonia is converted into urea.

XI NCERT Pg. 205.

197. (4)

Aquatic amphibians and Bony fishes are ammonotelic

XI NCERT Pg. 205.

198. (1)

Flame cells are excretory structure in platy helminthes

XI NCERT Pg. 206.

199. (1)

In human kidney 1 million nephron are present.

XI NCERT Pg. 207

200. (3)

Medullary pyramid as renal column called column of Bertini

XI NCERT Pg . 207