NEET UG (2024) Biology Quiz-15

106.	Diffusion is a	process and is not dependent
	on	

- (1) Slow, gradient of concentration
- (2) Slow, living system
- (3) Rapid, temperature
- (4) Rapid, pressure
- **107.** Trichome are hair like structure have all features, **except**
  - (1) Can be secretory
  - (2) Only stiff
  - (3) Branched or unbranched
  - (4) Helps preventing water loss due to transpiration

108. Water potential is dependent on-

- (1) K. E of water molecule
- (2) Concentration of water molecule
- (3) Random motion of water
- (4) All of the above
- **109.** Which is not short distance transport?
  - (1) Cytoplasmic streaming
  - (2) Simple diffusion
  - (3) Phloem transport
  - (4) Active transport
- **110.** The value of solute potential is
  - (1) Always positive
  - (2) Always negative
  - (3) Sometimes negative
  - (4) Sometime negative or positive
- **111.** Water molecules possess kinetic energy which is also called:
  - (1) Solute potential
  - (2) Pressure potential
  - (3) Water potential
  - (4) All of the above
- **112.** Osmosis is the passage of ...P.... molecules from a region of their ...Q... concentration to a region of their....R.... concentration through semipermeable membrane.

Select the option which correctly fill the blanks P, Q and R

	Р	Q	R
(1)	Solvent	Higher	Lower
(2)	Solute	Lower	Higher
(3)	Solute	Higher	Lower
(4)	Solvent	Lower	Higher

- **113.** During osmosis, water moves through a semipermeable membrane from
  - (1) Low water potential to high water potential
  - (2) High solute concentration to low solute concentration
  - (3) Low free energy to high free energy
  - (4) A hypotonic solution to hypertonic solution
- **114. Statement-I:** Passive transport does not utilize energy to pump molecules along the concentration gradient.

**Statement-II:** Addition of solute decrease water potential.

- (1) Statement-I and statement-II are true
- (2) Statement-I and statement-II are false
- (3) Statement-I is true and statement-II is false
- (4) Statement-I is false and Statement-II is true
- 115. Channels present in membrane is
  - (1) Specificity
  - (2) Show saturation
  - (3) Show inhibition
  - (4) All of these
- **116.** Which property is shown by simple diffusion?
  - (1) Selectivity (2) Saturation
  - (3) Uphill transport (4) Downhill transport
- **117.** Which of the following statements is **not correct** for osmotic pressure?
  - (1) It is hydrostatic pressure
  - (2) It develops only in a confined system
  - (3) Its numerical value is equal to that of osmotic potential, but the sign is opposite.
  - (4) Its value is always negative

## **118.** Osmotic pressure is \_\_A\_\_ pressure applied, while osmotic potential is \_\_B\_\_.

	A	В
(1)	Negative	Positive
(2)	Positive	Positive
(3)	Negative	Negative
(4)	Positive	Negative

## 119. Gaseous movement within the plant body is due to

- (1) Diffusion and sometimes by active transport
- (2) Active transport and sometimes by diffusion/ facilitated diffusion
- (3) Active transport only
- (4) Diffusion only

**120. Assertion**: The more the solute molecules in solution, the higher (more positive) is the solute potential of solution.

**Reason**: For a solution at atmospheric pressure, water potential is not equal to solute potential

- (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

**121.** Mark the **incorrect** statement.

- (1) The porins are proteins that form huge pores in the outer membranes of the plastids, mitochondria and some bacteria.
- (2) Water channels made up of eight different types of aquaporins.
- (3) Diffusion rates are affected by the gradient of concentration, the permeability of the membrane separating them.
- (4) In facilitated diffusion special proteins help move substances across membranes with expenditure of ATP energy.

## **122.** Consider the following statements.

- **A.** Water is essential for all physiological activities of the plant and plays a very important role in all living organisms.
- **B.** Terrestrial plants take up huge amount water daily but most of it is lost to the air through transpiration from the leaves.
- **C.** Water molecules possess kinetic energy. In liquid and gaseous form, they are in random motion that is both rapid and constant.

Which statement(s) is/are correct?

- (1) Only A
- (2) Both A and B
- (3) All three
- (4) Both B and C
- **123.** By convention, the water potential of ..... at standard temperatures, which is not under any pressure, is taken to be zero.
  - (1) Solution (2) Pure water
  - (3) Suspension (4) Colloid
- **124.** If a pressure greater than atmospheric pressure is applied to pure water or a solution, its water potential.
  - (1) Increases
  - (2) Decreases
  - (3) Constant
  - (4) All of the above possible

- **125.** The \_\_\_\_\_\_ is freely permeable to water and substances in solution hence is not a barrier to movement.
  - (1) Tonoplast (2) Cell wall
  - (3) Cell membrane (4) Lipid bilayer
- 126. Direction and rate of osmosis depends on
  - (1) Pressure gradient
  - (2) Concentration gradient
  - (3) Water
  - (4) Both (1) and (2)

### 127. The osmotic pressure is the function of the

- (1) Solution
- (2) Pressure
- (3) Solute concentration
- (4) All of the above

**128.** Based on the figure given below which of the following statements is **not** correct



Selectively permeable memor

- (1) A has higher solute potential
- (2) B has low water potential
- (3) Water move from A to B
- (4) B has higher water potential

**129.** The more the solute molecule in solution value of solute potential is

- (1) More positive
- (2) More negative
- (3) Increase
- (4) More than one

130. Which of the following statements are correct?

- (1) Solute potential and pressure potential are the two main components that determine water potential
- (2) The greater the concentration of water in a system, the greater is its 'water potential'
- (3) Pure water will have the greatest water potential
- (4) All of the above
- **131.** Meristem which is present at the tips of roots and stem and produces primary tissue are called.....
  - (1) Apical meristem
  - (2) Intercalary meristem
  - (3) Lateral meristem
  - (4) Cylindrical meristem

**132.** Statement-A: The peripheral region of the secondary xylem is lighter in colour and is known as the heartwood.

**Statement-B:** The region of wood that comprises of dead elements with highly lignified walls, is called sapwood.

- (1) Only statement A is correct
- (2) Only statement B is correct
- (3) Both statements A and B are correct
- (4) Both statements A and B are incorrect
- **133.** Exarch condition of xylem
  - (A) Is found in roots
  - (B) Show protoxylem towards periphery
  - (C) Is found in monocot stem
  - (D) Is found in radial vascular bundles
  - How many of the above statements is/are incorrect?
  - (1) Two (2) Four
  - (3) One (4) Three

### 134. Bulliform cells are present in

- (1) Adaxial epidermis of china rose leaf
- (2) Abaxial epidermis of banana leaf
- (3) Adaxial epidermis of grass leaf
- (4) Adaxial epidermis of mustard leaf
- **135.** Read the following features and identify the permanent tissue.
  - (A) Provide support to young dicot stem
  - (B) Thick cell wall at corners
  - (C) Absent in roots and monocot stem
  - (1) Sclerenchyma (2) Parenchyma
  - (3) Collenchyma (4) Chlorenchyma

### <u>SECTION – B</u>

- **136.** If some solute is dissolved in pure water, the concentration of water decreases, there result is:
  - (1) Increasing its water potential
  - (2) Reducing its water potential
  - (3) No effects on water potential
  - (4) All of these
- **137.** The value of pressure potential is:
  - (1) Always positive
  - (2) Always negative
  - (3) Usually negative
  - (4) Usually positive
- **138.** Cork cambium undergo redifferentiation to produce:
  - (1) Lateral root
  - (2) Secondary xylem
  - (3) Phelloderm
  - (4) Protoxylem

- **139.** Substances soluble in lipids diffuse through the ..... faster.
  - (1) Cell wall
  - (2) Cell membrane
  - (3) Tonoplast
  - (4) Both (2) and (3)
- **140.** Transport of two types of molecules across the membrane in the opposite direction is called:
  - (1) Antiport
  - (2) Symport
  - (3) Uniport
  - (4) Both (1) and (3)

### 141. Primary xylem have all except

- (1) Protoxylem
- (2) Sclerenchyma
- (3) Vessels
- (4) Bast fiber
- **142.** In old dicot stems, a major part of the wood is filled up with tannins, resins, gums etc. This part of wood is called
  - (1) Hard wood (2) Heart wood
  - (3) Sap wood (4) Soft wood
- **143.** Which of the following option have all cell/tissue is present as a ground tissue in plant organ?
  - (1) Epidermis, cortex, pericycle and phloem parenchyma
  - (2) Pith, pericycle, primary medullary rays, root hair and phellogen
  - (3) Cortex, trichome, Guard cell, endodermis and pericycle
  - (4) Pith, cortex, pericycle, mesophyll cell and hypodermis
- **144.** Age of tree can be calculated by counting number of
  - (1) Secondary xylem
  - (2) Secondary phloem
  - (3) Primary phloem
  - (4) Primary xylem
- **145.** Which of the following group of features belong to dicot stem?
  - (1) Exarch, radial bundle and vascular bundle scattered
  - (2) Presence of interfasicular cambium and vascular bundle in Ring
  - (3) Unequal size vascular bundle and endarch
  - (4) Exarch, conjoint and equal size vascular bundle

## **146.** Which of the following is **present** in monocot stem?

- (1) Phloem parenchyma
- (2) Interfasicular cambium
- (3) Phloem fiber
- (4) Hypodermis

## **147.** Mark the **incorrectly** matched.

- (1) Vessels made up of vessels members
- (2) Trichome can be unbranched
- (3) Trichome can be branched
- (4) Spring wood higher density
- **148.** Which of the following is not product of redifferentiation?
  - (1) Secondary root (2) Cork cambium
  - (3) Phellem (4) Complimentary cell
    - SECTION-A
- 151. Thin filament do not contain
  - (1) Actin (2) Myosin
  - (3) Troponin (4) Tropomyosin
- **152.** The pivot joint between atlas and axis is an example of:
  - (1) Cartilaginous joint (2) Synovial joint
  - (3) Saddle joint (4) Fibrous joint
- **153.** Each coxal bone is formed by fusion of three bones
  - (1) ilium, ischium, pubis
  - (2) ilium, sacrum, pubis
  - (3) ilium, sacrum, coccyx
  - (4) ilium sacrum, ischium
- **154.** Select the correct matching of the type of the joints with the example in human skeletal system:

	Type of joints	Example	
(1)	Cartilaginous joint	between frontal and parietal	
(2)	Pivot joint	between third and fourth cervical vertebrae	
(3)	Hinge joint	between humerus and pectoral girdle	
(4)	Gliding joint	between carpals	

- **155.** Which of the following muscles having functionally multinucleated conditions?
  - (1) Cardiac muscle (2) Smooth muscle
  - (3) Voluntary muscle (4) All of these
- **156.** The functional unit of contraction is
  - (1) Muscle fibre (2) Sarcomere
  - (3) Sarosomes (4) Sarcoplasm

- 149. Feature absent in dicot stem
  - (1) Radial bundle
     (2) Endarch
  - (2) Endarch(3) Starch sheath
  - (4) Secondary growth
- **150.** Major similarity between active transport and faciliated diffusion is that
  - (1) Both consume ATP
  - (2) Both are passive

(ZOOLOGY)

- (3) Both are non-selective
- (4) Both require membrane protein
- 157. Calcium is important in skeletal muscle
  - contraction because it (1) Binds to troponin to remove the masking of
    - (1) Binds to troponin to remove the masking of active sites on actin for myosin.
    - (2) Activates the myosin ATPase by binding to it.
    - (3) Detaches the myosin head from the actin filament.
    - (4) Prevents the formation of bonds between the myosin cross bridges and the actin filament.
  - **158.** How much % of body weight of a adult human is contributed by muscles
    - (1) 20-30% (2) 30-35%
    - (3) 40-50% (4) 60-65%
  - **159.** The thick filaments in 'A' band are held together in the middle of this band by a thin membrane called
    - (1) Z-line (2) M-line
    - (3) H-line (4) O-line
  - 160. What is a cross arm contain
    - (1) Head + Tail of Myosin
    - (2) Head + Short arm of Myosin
    - (3) Tail + Short arm
    - (4) Actin + Troponin
  - 161. Myosin head contains
    - (1) ATPase
    - (2) ATP binding sites
    - (3) Active sites for actin
    - (4) All of these
  - **162.** Which of the following characteristics is not associated with red muscle fibres?
    - (1) High quantity of myoglobin is present
    - (2) Amount of mitochondria are more
    - (3) Amount of sarcoplasmic reticulum is high
    - (4) Contraction is slow and for long duration

163.	In a muscle fibre, Ca <sup>++</sup> is stored in (1) Sarcoplasmic reticulum	173.	Which of the following is wrong statement about hyoid bone?	
	(2) Sarcosom		(1) One in number	
	(3) Sarcolemma		(2) U-shaped	
	(4) Salcolemina		(3) Not attached with any other bone of the body	
164.	Cardiac muscles are		(4) Present at the top of the buccal cavity	
10.0	(1) Striated, voluntary			
	(2) Striated, involuntary	174.	The clavicle articulates with of scapula	
	(3) Unstriated, voluntary		(1) Acromion process	
	(4) Unstriated, involuntary		(2) Glenoid cavity	
			(3) Acetabulum cavity	
165.	Ciliary movement is found in:		(4) Occipital condyles	
	(1) Macrophages and leucocytes			
	(2) Fallopian tube and vasa deferentia	175.	Scapula is present between	
	(3) Fallopian tube and Trachea		(1) $1^{st} - 4^{st}$ Rib (2) $2^{st} - 7^{st}$ Rib	
	(4) Tongue and Limbs		(3) $5^{\text{m}}-7^{\text{m}}$ Rib (4) $10^{\text{m}}-12^{\text{m}}$ Rib	
166.	Amoeboid movement is found in	176.	Cranium of man is made up of	
	(1) Limbs, Jaw		(1) 8 bones (2) 12 bones	
	(2) Macrophages, Leucocytes		(3) 16 bones (4) 14 bones	
	(3) Trachea, Falloplan tube			
	(4) Toligue, Leucocytes	177.	Deposition of uric acid crystals within the	
167.	In the center of I-Band is an elastic fiber which		synovial joint causes	
10/1	bisect it		(1) Gout (2) Osteoarthritis	
	(1) 'H'-zone (2) 'M'-line		(3) Paralysis (4) Rheumatoid arthritis	
	(3) 'Z' line (4) A-band			
		178.	The example of pivot joint is	
168.	During muscles contraction which part/band		(1) Between Humerus and Acetabulum	
	disappears totally		(2) Between Occipital and Atlas	
	(1) I band (2) A-band		(3) Between atlas and axis	
	(3) H-zone (4) Z line		(4) Between Carpals or Between Tarsals	
169.	Neural canal is a feature of	179.	Assertion: Menopause may lead to osteoporosis	
	(1) Ribs (2) Vertebra		<b>Reason:</b> In osteoporosis bone Mass increases and	
	(3) Scapula (4) Clavicle		bone gets prone to fractures	
			(1) Both assertion and reason are correct and	
170.	During muscle relaxation which molecule plays a		reason is the correct explanation for assertion.	
	(1) A set slab sline		(2) Both assertion and reason are correct but	
	(1) Acetylcholinestrase		reason is not the correct explanation for	
	(2) Activition estimate (3) $C_2^{+2}$ Release of Sarcolemma		assertion	
	(4) Shortening of Sarcomere		(3) Assertion is correct but reason is incorrect	
	(1) Shortening of Surconiere		<ul><li>(4) Both assertion and reason are incorrect</li></ul>	
171.	Which of the following is not a function of the			
	skeletal system?	180	Which is a autoimmune disorder	
	(1) Locomotion	1000	(1) Muscular (2) Gout	
	(2) Production of erythrocytes		(3) Osteonorosis (4) Myasthenia gravis	
	(3) Storage of minerals			
	(4) Production of body heat	181	Extremely low levels of $Ca^{+2}$ in body fluids may	
		101.	cause	
172.	Which of the following joints would allow no		(1) Inflammation of Joints	
	movement? (1) Dell and Seclect in it		(2) Paralysis of skeletal Muscles	
	(1) Ball and Socket joint		(=, 1 mm, 510 51 51010m1 111000100	

(3) Rapid spasms in muscle

(4) Progressive degeneration of skeletal muscles

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- (2) Fibrous joint
- (3) Cartilaginous joint
- (4) Synovial joint

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- 182. Clavicle articulates with
  - (1) Ribs and Sternum
  - (2) Sternum and Scapula
  - (3) Scapula and Ribs
  - (4) Scapula and vertebral column
- 183. Ribs articulate with

(1)	Atlas	(2)	Axis
(3)	7 <sup>th</sup> vertebra	(4)	12 <sup>th</sup> vertebra

- **184.** Elbow joint is
  - (1) Ball & socket (2) Pivot
  - (3) Gliding (4) Hinge
- **185.** A cup shaped cavity for articulation of femur head is:
  - (1) Acetabulum (2) Glenoid cavity
  - (3) Sigmoid notch (4) Obturator foramen

### **SECTION-B**

- **186.** Number of bones present in a forelimb of human:
- **187.** Assertion: Human ribs are bicephalic Reason: They have articulating ends or points on ventral side
  - (1) Both assertion and reason are correct and reason is the correct explanation for assertion.
  - (2) Both assertion and reason are correct but reason is not the correct explanation for assertion
  - (3) Assertion is correct but reason is incorrect
  - (4) Both assertion and reason are incorrect
- 188. Which disease is a result of genetic condition
  - (1) Myasthenia gravis
  - (2) Gout
  - (3) Muscular Dystrophy
  - (4) Osteoporosis
- 189. Rib cage consist of
  - (1) Vertebral column + Ribs + Clavicle
  - (2) Ribs + sternum + Hyoid
  - (3) Thoracic vertebrae + Ribs + sternum
  - (4) Sternum + Scapula + Clavicle
- **190.** Coccygeal bone is a bone of:
  - (1) Skull
  - (2) Pectoral girdle
  - (3) Vertebral column
  - (4) Pelvis
- **191. Statement I:** We have 14 Vertebrochondral ribs **Statement II:** Sperms show movements with help of flagella
  - (1) Both statement I and 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 II are incorrect.

- **192.** In which one of the following bones acromion process is found:
  - (1) Femur (2) Pelvic girdle
  - (3) Atlas (4) Pectoral girdle
- **193.** The number of cervical vertebrae in mammals including human being are

  - (3) 9 (4) 10
- **194.** Statement I: First vertebra is atlas Statement II: Sarcomere decreases in size
  - during muscles contraction
  - (1) Both statement I and 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 II are incorrect.

## **195.** Which is a ear ossicle

- (1) Parietal (2) Zygomatics
- (3) Lacrimal (4) Incus
- **196.** H-zone contains
  - (1) Myosin only (2) Myosin + Troponin
  - (3) Myosin + actin (4) Actin only
- **197.** Match the column I with column II and choose the correct option.

	Column-I		Column-II
A.	True ribs	(i)	3 pairs
B.	False ribs	(ii)	2 pairs
C.	Floating ribs	(iii)	7 pairs

- (1) A—(i), B—(ii), C—(iii)
- (2) A—(iii), B—(i), C—(ii)
- (3) A—(iii), B—(ii), C—(i)
- (4) A—(ii), B—(i), C—(iii)
- **198.** Human skull is:
  - (1) Dicondylic (2) Monocondylic
  - (3) Procoelous (4) Hetercoelous
- 199. How many bones make up the human skeleton?
  - (1) 948
     (2) 96

     (3) 796
     (4) 206
- **200.** Inflammation of joins are found in
  - (1) Myasthenia (2) Muscular Dystrophy
  - (3) Arthritis (4) Osteoporosis

## Solution

- \* In facilitated diffusion special proteins help move substances across membranes without expenditure of ATP energy.
- \* These proteins are sensitive to inhibitors that react with protein side chains.
- \* Transport rate reaches a maximum when all of the protein transporters are being used (saturation)

### CLASS 11th NCERT pg no. 176

### **103.** (3)

Simple diffusion is not highly selective. CLASS 11th NCERT pg no. 178

## 104. (3)

Active transport which uses energy to pump molecules against a concentration gradient. **CLASS 11th NCERT pg no. 178** 

### 105. (3)

Symport – both molecules cross membrane in same direction

- \* Uniport-single type of molecule cross membrane
- \* Watermelon have 92% of water

## CLASS 11th NCERT pg no. 177

### 106. (2)

Slow, living system CLASS 11th NCERT pg no. 176

### 107. (2)

Trichome are hair like structure can be soft or stiff CLASS 11th NCERT pg no. 89

## 108. (4)

All of the above CLASS 11th NCERT pg no. 179

### 109. (3)

Phloem transport is long distance transport CLASS 11th NCERT pg no. 175

### 110. (2)

The value of solute potential is always negative CLASS 11th NCERT pg no. 179

## 111. (3)

Water molecules possess kinetic energy. In liquid and gaseous form they are in random motion that is both rapid and constant. The greater the concentration of water in a system, the greater is its kinetic energy or 'water potential.

### CLASS 11th NCERT pg no. 179

## 112. (1)

Osmosis is the passage of solvent molecules from a region of their higher concentration to a region of their lower concentration through semipermeable membrane. CLASS 11th NCERT pg no. 180

## 113. (4)

A hypotonic solution to hypertonic solution. CLASS 11th NCERT pg no. 180

### 114. (1)

Statement-I and statement-II are true. CLASS 11th NCERT pg no. 176

115. (4) All of these correct. CLASS 11th NCERT pg no. 178

### 116. (4)

The net result being substances moving from regions of higher concentration to regions of lower concentration i.e., downhills transport.

- \* Highly Selective and Saturation shown by Facilitated Active Transport.
- \* Uphill transport shown by Active Transport.
- \* Transport rate reaches a maximum when all the protein transporters are being used or are saturated.

## CLASS 11th NCERT pg no. 178

### 117. (4)

Osmotic pressure is the positive pressure applied. CLASS 11th NCERT pg no. 181

### 118. (4)

Osmotic pressure is the positive pressure applied, while osmotic potential is negative. CLASS 11th NCERT pg no. 180

## 119. (4)

Diffusion is the only means of gaseous exchange in Plants.

### CLASS 11th NCERT pg no. 176

### 120. (4)

- \* The more the solute molecules in solution, the lower (more negative) is the solute potential of solution.
- \* For a solution at atmospheric pressure, water potential =solute potential

## CLASS 11th NCERT pg no. 179

### 121. (4)

In facilitated diffusion special proteins help move substances across membranes without expenditure of ATP energy.

## CLASS 11th NCERT pg no. 176

122. (3)

# (3)All three are correct.CLASS 11th NCERT pg no. 175

123. (2)

By convention, the water potential of pure water at standard temperatures, which is not under any pressure, is taken to be zero.

## CLASS 11th NCERT pg no. 179

## 124. (1)

If a pressure greater than atmospheric pressure is applied to pure water or a solution, its water potential increases.

CLASS 11th NCERT pg no. 179

## 125. (2)

The cell wall is freely permeable to water and substances in solution hence is not a barrier to movement.

## CLASS 11th NCERT pg no. 180

## 126. (4)

Osmosis occurs spontaneously in response to a driving force. The net direction and rate of osmosis depends on both the pressure gradient and concentration gradient.

## CLASS 11th NCERT pg no. 180

## 127. (3)

This pressure required to prevent water from diffusing is in fact, the osmotic pressure and this is the function of the solute concentration; more the solute concentration, greater will be the pressure required to prevent water from diffusing.

CLASS 11th NCERT pg no. 181

## 128. (4)

Class 11th NCERT Pg. No. 180

129. (2)

The more the solute molecule in solution value of solute potential is more negative. CLASS 11th NCERT pg no. 179

130. (4)

All of these are correct. CLASS 11th NCERT pg no. 179

### 131. (1) Meristem which

Meristem which is present at tip of branch is apical meristem. CLASS 11th NCERT pg no. 85

- 132. (4)
  - \* The peripheral region of the secondary xylem is lighter in colour and is known as the sapwood.
  - \* The region of wood that comprises of dead elements with highly lignified walls, is called heartwood.

## CLASS 11th NCERT pg no. 96

## 133. (3)

Exarch xylems are found in monocot and dicot roots.

CLASS 11th NCERT pg no. 87

## 134. (3)

Adaxial epidermis of grass leaf CLASS 11th NCERT pg no. 93

## 135. (3)

Collenchyma CLASS 11th NCERT pg no. 86

136. (2)

Reducing its water potential CLASS 11th NCERT pg no. 179

## 137. (4)

Pressure potential is usually positive, though in plants negative potential or tension in the water column in the xylem plays a major role in water transport up a stem.

## CLASS 11th NCERT pg no. 180

138. (3)

Phelloderm (secondary cortex). CLASS 11th NCERT pg no. 96

## 139. (4)

Both (2) and (3) CLASS 11th NCERT pg no. 180

## 140. (1)

Transport of two types of molecules across the membrane in the opposite direction is called symport.

## CLASS 11th NCERT pg no. 177

## 141. (4)

Phloem fibres (bast fibres) are made up of sclerenchymatous cells. These are generally absent in the primary phloem.

CLASS 11th NCERT pg no. 88

142. (2)

- In old trees, the greater part of secondary xylem is dark brown due to deposition of organic compounds like tannins, resins, oils, gums, aromatic substances and essential oils in the central or innermost layers of the stem.
- \* These substances make it hard, durable and resistant to the attacks of microorganisms and insects. This region comprises dead elements with highly lignified walls and is called heartwood

## CLASS 11th NCERT pg no. 96

### 143. (4)

All tissues except epidermis and vascular bundles constitute the ground tissue. It consists of simple tissues such as parenchyma, collenchyma and sclerenchyma. Parenchymatous cells are usually present in cortex, pericycle, pith and medullary rays, in the primary stems and roots. In leaves, the ground tissue consists of thin-walled chloroplast containing cells and is called mesophyll

CLASS 11th NCERT pg no. 89

### 144. (1)

Secondary Xylem. CLASS 11th NCERT pg no. 96

### 145. (2)

In conjoint type of vascular bundles, the xylem and phloem are jointly situated along the same radius of vascular bundles. Such vascular bundles are common in stems and leave.

- \* In stems, the protoxylem lies towards the centre (pith) and the metaxylem lies towards the periphery of the organ. This type of primary xylem is called endarch.
- \* A large number of vascular bundles are arranged in a ring.

## CLASS 11th NCERT pg no. 87

### 146. (4)

Hypodermis is present in monocot stem.

- \* Phloem parenchyma is absent in most of the monocotyledons.
- \* Phloem fibres (bast fibres) are made up of sclerenchymatous cells. These are generally absent in the primary phloem.

## CLASS 11th NCERT pg no. 93

## 147. (4)

The spring wood is lighter in colour and has a lower density whereas the autumn wood is darker and has a higher density.

CLASS 11th NCERT pg no. 96

## 148. (2)

Cork cambium is product of de-differentiation CLASS 11th NCERT pg no. 96

### 149. (1)

In dicot stem conjoint type of vascular Bundles present CLASS 11th NCERT pg no. 92

### 150. (4)

Both require membrane protein CLASS 11th NCERT pg no. 176

## (ZOOLOGY)

151.	(2) [NCERT Pg. No. 304]	156.	(2) [NCERT Pg. No. 305]
152.	(2) [NCERT Pg. No. 312]	157.	(1) [NCERT Pg. No. 307]
153.	(1) [NCERT Pg. No. 311]	158.	(3) [NCERT Pg. No. 303]
154.	(4) [NCERT Pg. No. 312]	159.	(2) [NCERT Pg. No. 305]
155.	(3) [NCERT Pg. No. 303]	160.	(2) [NCERT Pg. No. 306]

**161.** (4) [NCERT Pg. No. 306] **162.** (3) [NCERT Pg. No. 308] **163.** (1) [NCERT Pg. No. 307] **164.** (2) [NCERT Pg. No. 304] **165.** (3) [NCERT Pg. No. 303] **166.** (2) [NCERT Pg. No. 303] **167.** (3) [NCERT Pg. No. 308] **168.** (3) [NCERT Pg. No. 307] **169.** (2) [NCERT Pg. No. 310] 170. (2) [NCERT Pg. No. 308] 171. (4) [NCERT Pg. No. 309] 172. (2) [NCERT Pg. No. 312] 173. (4) [NCERT Pg. No. 309] 174. (1) [NCERT Pg. No. 311] 175. (2) [NCERT Pg. No. 311] 176. (1) [NCERT Pg. No. 309] 177. (1) [NCERT Pg. No. 312] 178. (3) [NCERT Pg. No. 312]

179. (3) [NCERT Pg. No. 312] 180. (4) [NCERT Pg. No. 312] **181.** (3) [NCERT Pg. No. 312] 182. (2) [NCERT Pg. No. 312] 183. (4) [NCERT Pg. No. 311] **184.** (4) [NCERT Pg. No. 312] 185. (1) [NCERT Pg. No. 311] **186.** (1) [NCERT Pg. No. 311] **187.** (3) [NCERT Pg. No. 310] **188.** (3) [NCERT Pg. No. 312] 189. (3) [NCERT Pg. No. 310] 190. (3) [NCERT Pg. No. 310] 191. (3) [NCERT Pg. No. 303 & 310] **192.** (4) [NCERT Pg. No. 311] **193.** (1) [NCERT Pg. No. 310] **194.** (1) [NCERT Pg. No. 301 & 305] 195. (4) [NCERT Pg. No. 310] 196. (1) [NCERT Pg. No. 305]

197. (2) [NCERT Pg. No. 310]

198. (1) [NCERT Pg. No. 310] 199. (4) [NCERT Pg. No. 309] •

200. (3) [NCERT Pg. No. 312]