

NEET TRANSPORT IN PLANTS — LONG DISTANCE TRANSPORT OF WATER, ASCENT OF SAP — PYQS

Max. Marks: 44

Questions: 11

Section A (MCQ) — 11 questions

Q.1 Match **List I** with **List II** : [NEET (UG) 2023]

List I		List II	
A.	Cohesion	I.	More attraction in liquid phase
B.	Adhesion	II.	Mutual attraction among water molecules
C.	Surface tension	III.	Water loss in liquid phase
D.	Guttation	IV.	Attraction towards polar surfaces

(1) A-IV, B-III, C-II, D-I (2) A-III, B-I, C-IV, D-II

(3) A-II, B-I, C-IV, D-III (4) A-II, B-IV, C-I, D-III

Scan or tap for the full solution



Q.2 Which of the following is not observed during apoplastic pathway? [NEET (UG) 2022]

- (1) Movement of water occurs through intercellular spaces and wall of the cells
- (2) The movement does not involve crossing of cell membrane
- (3) The movement is aided by cytoplasmic streaming
- (4) Apoplast is continuous and does not provide any barrier to water movement

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Q.3 The ascent of xylem sap in plants is mainly accomplished by the [NEET (UG) 2022 (Phase 2)]

- (1) root pressure
- (2) size of the stomatal aperture
- (3) distribution of stomata on the upper and lower epidermis
- (4) cohesion and adhesion between water molecules

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Q.4 Match **List-I** with **List-II** :

List-I		List-II	
a.	Cohesion	i.	More attraction in liquid phase
b.	Adhesion	ii.	Mutual attraction among water molecules
c.	Surface tension	iii.	Water loss in liquid phase
d.	Guttation	iv.	Attraction towards polar surfaces

Choose the correct answer from the options given below. [NEET (UG) 2021]

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

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

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

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

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Q.5 The process responsible for facilitating loss of water in liquid form from the tip of grass blades at night and in early morning is [NEET (UG) 2020]

- (1) Transpiration
- (2) Root pressure
- (3) Imbibition
- (4) Plasmolysis

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Q.6 Xylem translocates: [NEET (UG) 2019]

- (1) Water, mineral salts and some organic nitrogen only
- (2) Water, mineral salts, some organic nitrogen and hormones
- (3) Water only
- (4) Water and mineral salts only

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Q.7 Root pressure develops due to [AIPMT 2015]

- (1) passive absorption
- (2) active absorption
- (3) increase in transpiration
- (4) low osmotic potential in soil.

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Q.8 A column of water within xylem vessels of tall trees does not break under its weight because of

[AIPMT 2015]

- (1) lignification of xylem vessels
- (2) positive root pressure
- (3) dissolved sugars in water
- (4) tensile strength of water.

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Q.9 Transpiration and root pressure cause water to rise in plants by

[AIPMT 2015 (Cancelled)]

- (1) pushing it upward
- (2) pushing and pulling it, respectively
- (3) pulling it upward
- (4) pulling and pushing it, respectively.

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Q.10 Guttation is the result of

[AIPMT 2011 (Mains)]

- (1) diffusion
- (2) transpiration
- (3) osmosis
- (4) root pressure

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Q.11 The rupture and fractionation do not usually occur in the water column in vessel/tracheids during the ascent of sap because of

[AIPMT 2008]

- (1) weak gravitational pull
- (2) transpiration pull
- (3) lignified thick walls
- (4) cohesion and adhesion

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	4	3	4	2	2	2	2	4	4	4	4