
NEET BIOLOGY 2018-19 - Chennai

Periodic Test : 12

Number of questions: 150

Name: _____

ID No: _____

Test ID : 024

Test date: 01.04.2019

Time: 3HRS

Negative Marks : 4 marks for correct attempt & 1 mark deducted for every wrong attempt.

- The water potential of pure water is
 - less than zero
 - more than zero but less than one
 - more than one
 - zero.
- Which of the following facilitates opening of stomata aperture?
 - Decrease in turgidity of guard cells
 - Radial orientation of cellulose micro fibrils in the cell wall of guard cells
 - Longitudinal orientation of cellulose micro fibrils in the cell wall of guard cells
 - Contraction of outer wall of guard cells
- A few drops of sap were collected by cutting across a plant stem by a suitable method the sap was tested chemically. Which one of the following test results indicates the sap?
 - Acidic
 - alkaline
 - Low refractive
 - Absence of sugar
- Root pressure develop due to
 - passive absorption
 - active absorption
 - increase in transpiration
 - low osmotic potential in soil.
- A column of water within xylem vessels of tall trees does not break under its weight because of
 - lignifications of xylem vessels
 - positive root pressure
 - dissolved sugars in water
 - Tensile strength of water.
- In a ring girdled plant
 - the shoot and root die together
 - neither root nor shoot will die
 - the shoot dies first
 - the root dies first.
- Transpiration and root pressure cause water to rise in plants by
 - pushing it upward
 - pushing and pulling it respectively
 - pulling it upward
 - Pulling and pushing it respectively.

8. Which one gives the most valid and recent explanation for stomatal movement?

- (a) Starch hydrolysis
- (b) Guard cell photosynthesis
- (c) Transpiration
- (d) Potassium influx and efflux

9. Which of the following criteria does not pertain to facilitated transport?

- (a) Transport saturation
- (b) Uphill transport
- (c) Requirement of special membrane proteins
- (d) High selectivity

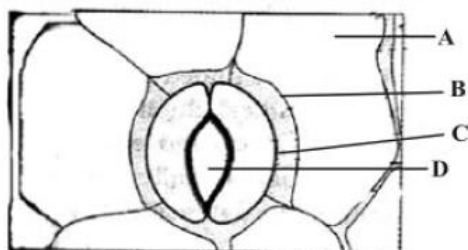
10. In land plants, the guard cells differ from other epidermal cells in having

- (a) Cytoskeleton
- (b) Mitochondria
- (c) Endoplasmic reticulum
- (d) Chloroplasts.

11. Guttation is the result of

- (a) Diffusion
- (b) Transpiration
- (c) Osmosis
- (d) Root pressure.

12. Given below is the diagram of a stomatal apparatus. In which of the following all the four parts labeled as A, B, C and D are correctly identified?



A	B	C	D
a) Subsidiary cell	epidermal cell	Guard cell	Stomatal aperture
b) Guard cell	Stomatal aperture	Subsidiary cell	epidermal cell
c) epidermal cell	Guard cell	Stomatal aperture	Subsidiary cell
d) epidermal cell	Subsidiary cell	Stomatal aperture	Guard cell

13. Guard cells help in

- (a) Transpiration
- (b) Guttation
- (c) Fighting against infection
- (d) Protection against grazing.

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

- (a) weak gravitational pull
- (b) transpiration pull
- (c) lignified thick walls
- (d) cohesion and adhesion

15. Two cells A and B are contiguous. Cell A has osmotic pressure 10 atm, turgor pressure 7 atm and diffusion pressure deficit 3 atm. Cell B has osmotic pressure 8 atm, turgor pressure 3 atm and diffusion pressure deficit 5 atm. The result will be

- (a) No movement of water
- (b) Equilibrium between the two
- (c) Movement of water A to B
- (d) Movement of water from B to A.

16. The translocation of members is supported by
- Cytoplasmic streaming
 - Root pressure and transpiration pull
 - P-proteins
 - Mass flow involving a carrier and ATP
17. Photometer works on the principle of
- osmotic pressure
 - amount of water absorbed equals the amount transpired
 - root pressure
 - Potential difference between the tip of the tube and that of the plant.
18. Stomata of a plant open due to
- influx of potassium ions
 - efflux of potassium ions
 - influx of hydrogen ions
 - influx of calcium ions.
19. Main function of lenticel is
- transpiration
 - guttation
 - gaseous exchange
 - Bleeding.
20. Opening and closing of stomata is due to the
- hormonal change in guard cells
 - change in turgor pressure of guard cells
 - gaseous exchange
 - respiration,
21. Passive absorption of minerals depends on
- temperature
 - temperature and metabolic inhibitor
 - metabolic inhibitor
 - humidity
22. Glycolate induces opening of stomata in
- Presence of oxygen
 - low CO_2 concentration
 - high CO_2
 - CO_2 absent,
23. Loading of phloem is related to
- increase of sugar in phloem
 - elongation of phloem cell
 - separation of phloem parenchyma
 - Strengthening of phloem fiber.
24. The movement of ions against the concentration gradient will be
- active transport
 - osmosis
 - diffusion
 - all of the above.
25. In soil, water available for plants is
- gravitational water
 - chemically bound water
 - capillary water
 - Hygroscopic water.

26. The water potential and osmotic potential of pure water are
- 100 and 200
 - zero and 100
 - 100 and zero
 - zero and zero,
27. When a cell is fully turgid, which of the following will be zero'?
- Turgor pressure
 - Water potential
 - Wall pressure
 - osmotic pressure
28. with an increase in the turgidity of a cell, the wail pressure will be
- fluctuate
 - remain unchanged
 - increase
 - decrease.
29. Bidirectional translocation of solutes Takes place
- parenchyma
 - cambium
 - xylem
 - phloem,
30. When water enters in roots due to diffusion, is termed as
- Osmosis
 - Passive absorption
 - Endocytosis
 - active absorption
31. The movement of water, from one cell of cortex to adjacent one in roots, is due to
- accumulation of inorganic salts in the cells
 - accumulation of organic compounds in the cells
 - water potential gradient
 - chemical potential gradient.
32. Translocation of carbohydrate nutrients usually occurs in the form of
- glucose
 - maltose
 - starch
 - sucrose.
33. In guard cells when sugar is converted into starch, the stomatal pore
- closes completely
 - opens partially
 - opens fully
 - remains unchanged.
34. At constant temperature, the rate of transpiration will be higher at
- sea level
 - 1 km below sea level
 1. km above sea level
 - 1.5 km above sea level.
35. Conversion of startch to organic acids is required for
- stomatal opening
 - stomatal closing
 - stomatal formation
 - stomatal activity

36. In terrestrial habitats, temperature and rainfall conditions are influenced by
- (a) water transformation
 - (b) transpiration
 - (c) thermoperiodism
 - (d) translocation.
37. Guttation is mainly due to
- (a) root pressure
 - (b) osmosis
 - (c) transpiration
 - (d) imbibitions
38. Which of the following is used to determine the rate of transpiration in plants?
- (a) Porometer/Hygrometer
 - (b) Photometer
 - (c) Auxanometer
 - (d) Tensiometer/Barometer
39. Water movement between cells is due to
- (a) T.P.
 - (b) W.P
 - (c) D.P.D,
 - (d) incipient plasmolysis
40. The most widely accepted theory for ascent of sap in trees is
- (a) Capillarity
 - (b) Role of atmosphere pressure
 - (c) Pulsating action of living cell
 - (d) Transpiration pull and cohesion theory of Dixon and Jolly
41. In soil the water available for root absorption
- (a) gravitational water
 - (b) capillary water
 - (c) hygroscopic water
 - (d) Combined water.
42. The principal pathway of water translocation in angiosperms is
- (a) sieve cells
 - (b) sieve tube elements
 - (c) xylem vessel system
 - (d) xylem and phloem
43. A bottle filled with previously moistened mustard seeds and water was screw capped tightly and kept in a corner. It blew up suddenly after about half an hour. The phenomenon involved is
- (a) Diffusion
 - (b) imbibition
 - (c) osmosis
 - (d) DPD.
44. Minerals absorbed by root move to the leaf through
- (a) xylem
 - (b) phloem
 - (c) sieve tubes
 - (d) None of the above.

45. Stomata open and close due to

- (a) Circadian rhythm
- (b) Genetic clock
- (c) Pressure of gases inside the leaves
- (d) Turgor pressure of guard cells.

46. Phenyl mercuric acetate (PMA) results

in

- (a) reduced photosynthesis
- (b) reduced transpiration
- (c) reduced respiration
- (d) killing of plants,

47. Transpiration is least in

- (a) good soil moisture
- (b) high wind velocity
- (c) dry environment
- (d) high atmospheric humidity

48. Water potential is equal to

- (a) $\psi_s + O.P$
- (b) $\psi_s = T.P$
- (c) $\psi_p + \psi_w$
- (d) $\psi_s + \psi_p$

49. Which is essential for the growth of root tip?

- (a) Zn
- (b) Fe
- (c) Ca
- (d) Mn

50. In which of the following all three are

macronutrients?

- (a) Molybdenum magnesium , manganese
- (b) Nitrogen, nickel , phosphorus
- (c) Boron, zinc, manganese
- (d) Iron, copper, molybdenum