

TELANGANA UNIVERSITY

S.S.R. PG COLLEGE, NIZAMABAD (C.C:5029)

MSC(BOTANY) II SEMESTER INTERNAL ASSESSMENT-I EXAMINATIONS (APRIL-2025)

Sub: - PLANT WATER RELATIONS & MINERAL NUTRITION

Time : 30 mts

Max. Marks : 20

Name of the Candidate _____ H.T.No. _____

Date : _____ Marks secured _____ Examiner signature _____

I. Multiple Choice Questions.

10X1/2=5

- 1) Water potential value is the highest for []
a) Hypertonic solution b) Isotonic solution c) Neutral solution d) Pure water
- 2) Diffusion is always driven by []
a) Concentration gradient b) Temperature difference c) Pressure difference d) Atmosphere difference
- 3) In pickles, jams and jellies the invaded bacteria die due to []
a) Endosmosis b) Lack of aeration c) Osmosis d) Plasmolysis
- 4) Presence of K^+ , Cl^- and malate in guard cells immediately leads to []
a) Water potential decrease b) Water potential increase c) Wall pressure increase d) All of these
- 5) Rate of transpiration is rapid, when []
a) Outer atmosphere is dry b) Atmospheric pressure is high c) Air is still d) Air is humid
- 6) Hormone synthesized in guard cells particularly under water stress condition is []
a) IBA b) IAA c) Zeatin d) ABA
- 7) Number of ATP generated in non cyclic photo-phosphorylation during the release of two molecules of oxygen []
a) 8 b) 6 c) 12 d) 2
- 8) The compound that accepts and reacts with CO_2 during C_3 cycle is []
a) NADP b) ATP c) RUBP d) RUBISCO
- 9) Carbohydrates are synthesized through calvin cycle in []
a) C_3 plants only b) C_4 plants only c) C_3 & some C_4 plants d) All C_3 & C_4 plants
- 10) Photorespiration can be defined as the uptake of oxygen and release of carbondioxide in the presence of light by plants is termed as []
a) C_2 cycle b) Glycolate metabolism
c) Photosynthetic carbon oxidation reactions d) All of these

II. Fill in the Blanks.

10X1/2=5

- 1) SPAC stands for _____
- 2) Growth and development of roots can be analyzed by special subterranean camera, known as _____
- 3) The upward transport of xylem sap is rapid during the _____ when transpiration rates are _____
- 4) In CAM plants stomata opens during _____ time and closed during _____ time
- 5) Elements which are translocated fast are called _____
- 6) Value of planck's constant _____
- 7) The compound that accepts and reacts with CO_2 during C_4 cycle is _____
- 8) Passive absorption means _____
- 9) NADPH Stands for _____
- 10) Transpiration pull means _____

III. Answer the following questions.

5X2=10

- 1) Micronutrients ?
- 2) Photo System – I ?
- 3) Photorespiration ?
- 4) Diffusion ?
- 5) Osmosis ?

IV. Assignment

1X 5 =5 Marks