(NO. OF PAGES: 2)

(FOR THE CANDIDATES ADMITTED DURING THE ACADEMIC YEAR 2022 only)

22PBY206

REG. NO

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS: MAY-2023

COURSE NAME: M.Sc.-BOTANY **MAXIMUM MARKS: 50**

SEMESTER: II **TIME : 3 HOURS**

PLANT PHYSIOLOGY

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.
MULTIPLE CHOICE QUESTIONS. K1

1. Identify loss of water from aerial parts of plants in the form of water vapour _____.
   a) Guttation b) Transpiration c) Evaporation d) Diffusion

2. Which of the following is reason for Chlorosis?
   a) Nitroge b) Sodium c) Calcium d) Magnesium

3. Where are the photosynthetic pigments embedded ?
   a) Matrix b) Chloroplast c) Photoglobin d) Thylakoids

4. What is the site of Krebs cycle?
   a) Vesicles of ER b) Mitochondrial matrix c) Lysosomes d) Dictyosomes

5. Vernalization is done at _____.
   a) low temperature b) low light intensity c) high light intensity d) High temperature

ANSWER THE FOLLOWING IN ONE OR TWO SENTENCES. K2

6. Imbitions.
7. Micronutrients.
8. Metabolism.
9. ATP.
10. Florigen.

SECTION – B (5 X 3 = 15 MARKS)

ANSWER EITHER (A) OR (B) IN EACH OF THE FOLLOWING QUESTIONS. K3

11. a) Compare briefly diffusion and osmosis with suitable examples.

(OR)

b) List the factors which affect transpiration.

12. a) Assess the jasmonic acid signaling.

(OR)

b) Mention the symptoms of mineral deficiencies and their effects in plants.

13.a) Describe the photosynthetic pigments and their role.

(OR)

b) Assess crassulacean acid metabolism briefly.

(CONTD…….2)

14. a) Compare aerobic and anaerobic respiration.

(OR)

b) Describe pentose Phosphate Pathway briefly.

15. a) What is seed dormancy is and explain, how to break seed dormancy?

(OR)

b) Mention the mechanism of biotic and a biotic stress tolerance.

SECTION – C (5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. K4 & K5

16. a) Discuss in detail absorption of water.

(OR)

b) Describe the mechanism of translocation in the phloem.

17.a) Give an account of mineral nutrition in Plants.

(OR)

b) Describe nutrient uptake and transport mechanism in plants.

18.a) Elucidate photophosphorylation with neat diagram.

(OR)

b) Explain photorespiration and C4 cycle in detail

19.a) Analyze glycolysis and its regulation.

(OR)

b) Summarise the biological nitrogen fixation with neat diagram.

20. a) Comment on photoperiodism.

(OR)

b) Interpret the role of auxins and gibberellins in plant growth.

****