

[4]

SECTION 'C'

4 × 10 = 40

Long Answer questions (Word limit 400-450 words.)

UNIT-I

Q. 1. Describe cyclic and non cyclic photophosphorylation.

OR

What is Cu plants? Write character and mechanism of Cu cycle.

UNIT-II

Q. 2. Write a detail account on Pentose Phosphate Pathway of Glucose oxidation.

OR

Draw only diagram –

(a) Glycolysis (b) TCA cycle

UNIT-III

Q. 3. How are nitrogen and sulphar assimilated by plants.

OR

Describe nitrogen metabolism in plants.

UNIT-IV

Q. 4. Give a detail account of photoperiodism and its significances.

OR

Give an illustrated account and mechanism of action of auxin and ethelens.

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[1]

ROLL NO.....

**BOT. 204/21**

**II SEMESTER EXAMINATION, 2021**

**M.Sc. (BOTANY)**

**PAPER-IV**

**PLANT METABOLISM**

TIME: 3 HOURS

MAX.- 80

MIN.- 16

**Note: The question paper consists of three sections A, B & C. All questions are compulsory.**

**Section A- Attempt all multiple choice questions.**

**Section B- Attempt one question from each unit.**

**Section C- Attempt one question from each unit.**

SECTION 'A'

2 × 8 = 16

**MCQ (Multiple Choice Questions)**

- At high intensity of light is the process of photosynthesis decrease called -  
(a) Radiation (b) Solarization  
(c) Vascularization (d) Stephan –Boltzmann reaction
- During cyclic photophosphorylation electron is transmitted-  
(a) by splitting of water (b) by dissolution of CO<sub>2</sub>  
(c) from cytochrome (d) Bu P 700
- Which cofactor is involved in Glycolysis and Kreb's cycle-  
(a) NAD+Mg (b) Coenzyme-A  
(c) Lipoic acid (d) all the above

[2]

4. What is formed by semi-dissolution as a result of anaerobic respiration-

- (a) Fructose + H<sub>2</sub>O (b) CO<sub>2</sub>+H<sub>2</sub>O  
(c) Glucose+CO<sub>2</sub> (d) Alchohal+ CO<sub>2</sub>

5. The main contribution of Molybden is -

- (a) in chromosome condensation (b) M<sub>2</sub> fixation  
(c) C fixation (d) Increasing of flowering

6. Growth regulation substances that affect the opening of the stomatal pores which of the following chemical affect the clouser-

- (a) Kinetin (b) Absasic acid  
(c) Gibberellic acid (d) Indole-bytyric acid

7. What is synthesis site of florigen -

- (a) Root (b) Fruit  
(c) Leaves (d) Stem

8. Protanaceous pigment which is associated with light activity -

- (a) Phytocrome (b) Chlorophyll  
(c) Anthocynine (d) Carotenoids

[3]

SECTION 'B' 4 × 6 = 24

Short Answer Type Questions (Word limit 200-250 words.)

**UNIT-I**

Q. 1. Write a note on photo synthetic apparatus.

**OR**

Give difference between pigment system I & pigment system II.

**UNIT-II**

Q. 2. Give short description on oxidative phasphorylation.

**OR**

Write biological importance of lipid.

**UNIT-III**

Q. 3. Write a note on sulphar uptake.

**OR**

Describe the role of micro organism in Nitrogen fixation.

**UNIT-IV**

Q. 4. Describe the role of gibberellins and cytokinins in plant growth, and development.

**OR**

Describe florigen hormone and its function.