

SECOND SEMESTER EXAMINATION 2021-22

M.Sc. Botany

Paper - IV

Plant Physiology & Metabolism

Time : 3.00 Hrs.

Max. Marks : 80

Total No. of Printed Page : 03

Mini. Marks : 29

Note:- Question paper is divided into three sections. Attempt question of all three section as per direction Distribution of marks is given in each section.

Section 'A'

Very short answer question (in few words)

Q.1 Attempt any six questions from the following :

6x2=12

- (i) Glycolysis operates in ?
- (ii) Common source of energy for cellular activity is ?
- (iii) Hexose monophosphate shunt is called ?
- (iv) Name the stress hormone ?
- (v) Low temperature treatment is called ?
- (vi) Conversion of organic nitrogenous compound into ammonium compound is called ?
- (vii) Organism that fix nitrogen in aquatic habitats are ?
- (viii) Which part in plants fats are found especially ?
- (ix) The cause of guttation is mainly ?

(2)

- (x) The Plants responds to Photoperiods due to the presence of ?

Section 'B'

Short answer type question (in 200 words)

Q.1 Attempt any four questions from the following : 4x5=20

- (i) Why does anerobic respiration produce less energy than aerobic respiration.
- (ii) Transpiration and their stomatal movement ?
- (iii) Role of Phytochrome in flower initiation ?
- (iv) Comment on Salinity stress ?
- (v) Why nitrogen is essential for Plants ?
- (vi) Structure and function of lipids ?
- (vii) Define Photoperiodic Induction ?

Section 'C'

Long answer/Essay type question.

4x12=48

Q.3 Attempt any four questions from the following questions :

- (i) Discuss various steps of krebs cycle in Plant respiration ?
- (ii) Explain why transpiration in higher Plants is considered a necessary evil ?
- (iii) Define Photoperiodism ? Give a brief account of the division of Plants based on Photoperiodic responses ?
- (iv) Enumerte the steps leading to the synthesis of fat in Plants ?

(3)

- (v) Write an essay on stress Physiology ?
- (vi) Write note on the following :
 - (a) Vernalisation
 - (b) Nodule formation in Leguminous Plants ?
- (vii) Give an account of Nitrogen fixation in nature ?

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