

756303

Jan. 2022

**M.Sc. (Botany) IIIrd SEMESTER
Physiology and Biochemistry (MBOT-303)**

Time : 90 Minutes]

[Max. Marks : 25

Instructions :

1. *It is compulsory to answer all the questions (1 mark each) of Part-A in short.*
2. *Answer any three questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART - A

1. Comment on the following in brief :

- (a) Protein foldings. (1)
- (b) Molecular motors. (1)
- (c) CAM plants. (1)
- (d) Accessory pigments. (1)
- (e) Phototropins. (1)
- (f) Transporter proteins. (1)
- (g) Abscisic acid. (1)

- (h) Vernalization. (1)
- (i) Grafting. (1)
- (j) Photorespiration. (1)

PART - B

- 2. (a) Describe the origin and evolution of biocatalytic reactions. (3)
- (b) Mention the steps involved in Pentose Phosphate Pathway. (2)
- 3. (a) Mention the functions of phytochrome in plants. (2)
- (b) Differentiate between PS I and PS II. (3)
- 4. Discuss the regulation of enzyme activity. (5)
- 5. (a) Mention the factors affecting CO₂ reduction. (3)
- (b) Describe the regulation of flowering by light. (2)
- 6. (a) Explain the techniques for quantification of hormones. (2)
- (b) Describe the mechanism of phosphorus and iron uptake in plants. (3)