

5641

M.Sc. (Previous) Examination – 2024
BOTANY
Paper-I
(Cell & Molecular Biology of Plants)

Time Allowed: Three Hours

Maximum Marks: 100

Each theory paper will have 9 questions, out of which a student has to attempt 5 questions and the question No. 1 will be compulsory. The question No. 1 will carry 20 marks and will be of short type of questions with a limit of 20 words.

No supplementary answer book will be given to any candidate. Hence the candidates should write the answer precisely in the main answer book only.

All the parts of one question should be answered at one place in the answer book. One complete question should not be answered at different places in the answer book.

PART-A

1. Answer the following in short -

[20]

- (i) What is site of cellulose synthase complex?
- (ii) What is transporter?
- (iii) What is splicing?
- (iv) What is poly A tail?
- (v) Define genetic marker.
- (vi) What is dynein?
- (vii) Define translation.
- (viii) What is Guardian of genome?
- (ix) What is function of SER?
- (x) What is Tonoplast?

PART-B

2. Describe the following -

[10+10=20]

- (a) ATP synthase
- (b) Plasmodesmata

OR

What is biochemical energetics? Give a brief account on different energy production types in living organisms.

[20]

3. Write short notes on following -

[10+10=20]

- (a) ATPase
- (b) Nucleochloroplastic interactions

OR

Write a detailed account on A, B and Z forms of DNA.

[20]

4. Give a detailed account on protein sorting in organelles.

[20]

OR

Write short notes on following -

[10+10=20]

- (a) Role of tRNA
- (b) Microfilament

5. Explain the role of CDKs in cell cycle.

[20]

OR

Write notes on the following -

[10+10=20]

- (a) Cell plate formation
 - (b) Microbodies
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