

This question paper contains 2 printed pages]

NY—01—2023

FACULTY OF SCIENCE

M.Sc. (First Year) (First Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(New/CBCS Pattern)

BIOTECHNOLOGY

Paper-BT-I

(Cell and Development Biology)

(Tuesday, 5-12-2023)

Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (1) *All questions are compulsory.*

(2) *All questions carry equal marks.*

(3) *Draw well diagram wherever necessary.*

1. Describe in brief structure and function of Chloroplasts. 15

Or

Explain in detail Cilia and Flagella.

2. Describe in detail neurotransmission and its regulation. 15

Or

Explain in brief signaling through GPCR.

3. What is Meiosis ? Describe different stages of meiosis. 15

Or

Write notes on :

(a) Oncogene

(b) Tumor suppressor genes.

P.T.O.

WT

(2)

NY—01—2023

4. What is fertilization ? Describe the fertilization in detail. 15

Or

Describe in brief gene patterning and development in *Drosophila melanogaster*.

5. Write short notes on (any *three*) : 3×5=15

- (a) Osmosis
- (b) Integrins
- (c) Apoptosis
- (d) Cleavage
- (e) Cell theory.

NY—01—2023

2