

**(DBOT 23)**

M.Sc. (Final) DEGREE EXAMINATION, JUNE 2010.

Second Year

Botany

Paper VII — CELL BIOLOGY AND MOLECULAR  
BIOLOGY

Time : Three hours

Maximum : 100 marks

SECTION A — (5 × 8 = 40 marks)

Answer any FIVE of the following.

All questions carry equal marks.

1. Endoplasmic reticulum.
2. Vacuole.
3. Fluorescent microscope.
4. Cell signalling.
5. Conjugation.
6. Transduction.
7. DNA repair.
8. Transcription.

SECTION B — (4 × 15 = 60 marks)

Answer ALL questions.

9. (a) Describe the ultra structural organisation of plasma membrane.

Or

- (b) Explain the structure and functions of chloroplast.

10. (a) Write an essay on genetics of cancer.

Or

- (b) Enumerate the salient features of transposable elements.

11. (a) Describe the fine structure of gene.

Or

- (b) Trace the steps involved in the evolution of gene concept.

12. (a) Write an elaborate essay on genetic code.

Or

- (b) Explain the regulation of gene in prokaryotes.