

S.No. 53

12PBT01

(For the candidates admitted from 2012 – 2013 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

First Semester

Biotechnology

CELL BIOLOGY

Time : Three hours

Maximum : 75 marks

SECTION A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) What does cell theory tells about?

Or

(b) Explain the Structure and function of lysosomes.

2. (a) Write short notes on function of gaint chromosome.

Or

(b) Explain Chromosomal abnormalities with respect to down's syndrome.

3. (a) Describe the various stages of mitosis.

Or

(b) Briefly explain cellular aging.

4. (a) Explain the types of cell signaling.

Or

(b) Apoptosis – Why cell commit suicide?

5. (a) Substantiate *Caenorhabditis elegans* as a model organism to study animal development.

Or

(b) Classify stem cell based on the potency.

SECTION B — (5 × 10 = 50 marks)

Answer ALL questions.

6. (a) Explain the structure and function of endoplasmic reticulum.

Or

(b) Give an account on cytoskeleton and its components.

7. (a) Describe polytene chromosome.

Or

(b) Explain Karyotyping and how disorders can be done using karyotyping analysis.

8. (a) Discuss on cyclin dependent kinase involved in cell regulation.

Or

(b) Give an account on various stages of meiosis.

9. (a) Discuss about the structure and types of membrane receptors.

Or

(b) Explain the structural organization of Microfilament.

10. (a) Explain why fruit flies are used in biomedical research.

Or

(b) Explain embryonic stem cell.