(b) Outline the different stages of meiosis. 7

Or

6. (a) Write about the structure and functions of the cytoskeleton. 7

(b) Discuss the different types of cell junctions involved in cell-cell communication. 7

7. What is cancer? Discuss the etiology of cancer in detail. 4+10=14

Or

8. (a) Differentiate between proto oncogenes and oncogenes.

(b) Discuss the roles performed by proto-oncogenes in a cell. 4+10=14

9. Discuss the structure and functions of plant cell wall and plasmo-desmata. Explain the role of plasmodesmata in virus transfer. 5+5+4=14

Or

10. (a) Write a note on plastid structure and biogenesis. 10

(b) Explain chloeoplast-nucleus interaction. 4

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PG Odd Semester Examination, 2022

BIOTECHNOLOGY

(1st Semester)

Course No.: BTYCC-502

(Cell Biology)

Full Marks: 70

Pass Marks: 28

Time: 3 hours

The figures in the margin indicate full marks for the questions.

1. Discuss the structure and function of the following : 7x2=14

(a) Endoplasmic Reticulum

(b) Golgi Apparatus

Or

2. What is electron microscopy? Differentiate between SEM and TEM. 4+10=14

3. Discuss the molecular mechanisms of membrane transport. Add a note on nuclear transport. 9+5=14

Or

4. What are cell-surface receptors? Discuss the cell-signaling mechanism of any hormone which binds to a cell-surface receptor. What are second messengers? 3+8+3=14

5. (a) Discuss about the cell cycle and its regulation. 7