

M.Sc. Botany - 2nd Sem.

(2517)

Paper - BOTC-524: Cell Biology**Time allowed: 3 hrs.****Max. Marks: 50**

Attempt all the sections.

Section-A

Q. 1. Attempt all parts. Answer to each part should not exceed four lines.

- (i) How will you distinguish between colonial and multicellular forms?
- (ii) Name the components of plasma membrane.
- (iii) Distinguish between plastid and a chloroplast.
- (iv) Define gene.
- (v) Distinguish between cell cycle and cell division
- (vi) What are G-proteins?
- (vii) What is the nature of cell surface receptors?
- (viii) What are cyclins?

8 X 1

Section-B

Attempt any seven questions. Answer to each question should not exceed two pages.

- Q. 2. Write a brief note on ion pumps and ion channels. 3
- Q. 3. Write a note on nuclear pore complex. 3
- Q. 4. Discuss briefly about the components of a operon. 3
- Q. 5. Describe the role of CDKs in cell cycle. 3
- Q. 6. Discuss briefly G-protein coupled receptors. 3
- Q. 7. Write a short note on membrane proteins. 3
- Q. 8. Write a note on structure of Golgi bodies. 3
- Q. 9. Write a brief note on levels of organization of tissues in plants. 3
- Q. 10. Write briefly on structure and functions of gap junctions. 3
- Q. 11. Write a note on thylakoid membranes. 3

Section-C

Attempt any three questions. Answer to each question should not exceed four pages.

- Q. 12. Write a detailed note on eukaryotic transposons. 7
- Q. 13. Discuss in detail two component signal transduction pathway. 7
- Q. 14. Describe the structure of cytoskeleton. 7
- Q. 15. Discuss in detail how protein are sorted and transported to various destinations within the cell. 7
- Q. 16. Describe the structure of chromosome. 7
