

Attempt two question from the each Section A and B and the section C is compulsory

Time 3 hrs

MM :74

**Section A**

- |   |  |    |
|---|--|----|
| 1 | What is the significance of compartmentalization in eukaryotic cells?                | 11 |
| 2 | How membrane transport is responsible for transfer of molecules across cell membrane | 11 |
| 3 | Define cytoskeleton? What are its different components?                              | 11 |
| 4 | What is Golgi complex? Explain the role of Golgi complex in secretion of proteins?   | 11 |

**Section B**

- |   |  |    |
|---|--|----|
| 5 | Write down structure and functions of vacuoles and microbodies.  | 11 |
| 6 | What are the different subunits of ribosome ? Differentiate between prokaryotic and eukaryotic ribosomes ? | 11 |
| 7 | Explain the phenomenon of signal transduction.   | 11 |
| 8 | Explain in detail Molecular basis of carcinogenesis.   | 11 |

**Section C**

- |   |                                 |    |
|---|---------------------------------|----|
| 9 | Explain the following (2 x 15)  | 30 |
|   | i. Capsule layer                |    |
|   | ii. Protoplasm                  |    |
|   | iii. Cell membrane              |    |
|   | iv. Cell fractionation          |    |
|   | v. Micelles                     |    |
|   | vi. Microfilaments              |    |
|   | vii. Functions of SER           |    |
|   | viii. Protein factories         |    |
|   | ix. Lysosomes                   |    |
|   | x. Tonoplast                    |    |
|   | xi. Grana                       |    |
|   | xii. Carrier proteins           |    |
|   | xiii. Nucleolus                 |    |
|   | xiv. Plasmodesmata              |    |
|   | xv. Receptor-Ligand interaction |    |