

Mock Question Paper

Microbiology(Hons.)

Core Paper-6

Time-2 hr

F.M-40

1. Answer any *five* of the following questions:

1x5=5

- a) Define facilitated diffusion.
- b) Distinguish between diffusion and osmosis.
- c) What is desmosome?
- d) What is the role of the nuclear localization sequence in a nuclear protein?
- e) What is the concept of cell apoptosis?
- f) What is peroxisome?

2. Answer any *five* of the following questions:

2x5=10

- a) Give functions of lysosomes.
- b) Significance of S-phase in cell cycle.
- c) What do you mean by pluripotency?
- d) What do you mean by stem cell? Give example
- e) What do you mean gap junction?
- f) What is nucleolus?

3. Answer any *three* of the following questions:

5x3=15

- a) Describe different types of cell surface receptors for signaling
- b) Give structure and significance of tight junctions. What is adhesion junction? 3+2
- c) Describe the structure of nucleus and give its function
- d) Write a short note on programmed cell death
- e) Describe passive transport across a biological membrane.
- f) What is protein sorting? Describe it

4. Answer any *one* of the following questions:

10x1=10

- a) Describe how Na^+ and K^+ ions move across the cell membrane.
- b) What is the difference between the nuclear envelope and the cell membrane in terms of structure and function?
- c) Give an account on mechanism of cell cycle regulation and add notes on checkpoints of cell cycle.
- d) Describe the role of oncogenes in cancer development. What is protein glycosylation? 7+3
- e) Give structure and function of golgi bodies.
- f) Write short note on:
 - i) Active transport
 - ii) Group translocation.

5+5

