

FACULTY OF SCIENCE

M. Sc. I – Semester (CBCS / Non-CBCS) Examination, December 2013

Subject : Biochemistry

Paper – IV : Bioenergetics and Cell Biology

Time : 3 Hours

Max. Marks: 80

Note : Answer all questions from Part–A and Part–B. Each question carries 4 marks in Part–A and 12 marks in Part – B.

PART – A (8 x 4 = 32 Marks)
(Short Answer Type)

1. Membrane fluidity
2. Laws of thermodynamics
3. Tetracyclin mechanism of action
4. Chemostat
5. Draw a diagram of animal cell and label various organelles
6. Cell cycle
7. FRET
8. Fractionation of cell organelles

PART – B (4 x 12 = 48 Marks)
(Essay Answer Type)

9.(a) Outline various events associated with mitochondrial electron transport.

OR

(b) Describe the structure and function of Na / K ATPase.

10.(a) Outline various parameters under consideration for large scale culturing of bacterial for commercial use.

OR

(b) Outline various media used to isolate or enrich bacteria from natural source.

11.(a) Write about various cytoskeletal components and their physiological importance.

OR

(b) Write briefly about (i) apoptosis (ii) polytene chromosomes (6+6)

12.(a) Write about construction and applications of SEM.

OR

(b) Write about applications of plant and animal cell culture.
