

15023

M.Sc. DEGREE EXAMINATION, OCTOBER/NOVEMBER 2018.

FIRST SEMESTER

Biochemistry

Paper III — INTERMEDIARY METABOLISM — I

Time : Three hours

Maximum : 75 marks

(No additional sheet will be supplied)

PART A — (5 × 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page.

1. Oxidative phosphorylation.
2. Fermentation.
3. Futile cycle.
4. Glyoxylate cycle.
5. Microsomal electron transport.
6. Photorespiration.
7. Role of nucleotides as metabolic regulators.
8. Lesch-Nyhan syndrome.

PART B — (4 × 15 = 60 marks)

Answer ALL the questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages.

9. Explain the biochemical reactions of TCA cycle.

Or

10. Describe the organization of electron transport in mitochondrial membrane.

11. How lactate is converted to glucose in gluconeogenesis?

Or

12. What are the objectives of pentose phosphate pathway and how they are achieved in it?

13. How light energy is converted to chemical energy in photosynthetic electron transport?

Or

14. Discuss the role of superoxide dismutase and catalase in detoxification of oxyradicals.

15. Write the biosynthetic pathway of purines.

Or

16. How pyrimidines are degraded?

