

FACULTY OF SCIENCE

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

Subject : Biochemistry

Paper – II (102)

Chemistry and Metabolism of Carbohydrates, Nucleic Acid and Vitamins

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. Mucopolysaccharides
2. Pasteur and crabtree effects
3. Gluconeogenesis
4. Denaturation and Renaturation of nucleic acids
5. Riboflavin
6. Heteroduplex mapping
7. Reducing and optical properties of sugars
8. Anaplerotic reactions

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

- 9.(a) Give an account of the structure, functions and importance of polysaccharides with suitable examples.
- OR**
- (b) Write notes on the following:
(i) Storage polysaccharides
(ii) Disaccharides
(iii) Lectins
- 10.(a) Explain the steps involved in reactions of photosynthesis.
- OR**
- (b) Differentiate C₃ and C₄ cycles in plants.
- 11.(a) Explain double helical structure of DNA.
- OR**
- (b) Discuss the reactions involved in degradation of purines and pyrimidines.
- 12.(a) Give an account of the source, functions of vitamin -C and Nicotinic acid.
- OR**
- (b) Outline the importance and biological role of vitamin-E and K.
