

MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER M.Sc. (MEDICAL BIOCHEMISTRY) DEGREE EXAMINATION – JUNE 2021
SUBJECT: CARBOHYDRATES AND PROTEIN – CHEMISTRY AND METABOLISM (MBC 603)

Tuesday, June 22, 2021

Time: 10:00 – 12:30 Hrs.

Maximum Marks: 50

✍ Answer ALL the questions.

✍ Long answer questions:

- 1A. Write the reactions of phenylalanine catabolism.
1B. Mention any **two** in born errors of metabolism of phenylalanine indicating the affected reaction.
1C. Write the steps involved in the synthesis of epinephrine from tyrosine.

(5+2+3 = 10 marks)

- 2A. Describe Embden-Meyerhof pathway with energetics.
2B. Write a note on allosteric regulation of this pathway.

(8+2 = 10 marks)

3. Explain the following:

- 3A. Glycogenolysis.
3B. Digestion of dietary proteins in gastrointestinal tract.
3C. Structure of collagen.
3D. Classification of carbohydrates with examples.
3E. C-Reactive protein.
3F. Urea cycle.

(5 marks × 6 = 30 marks)

