



**INTERNATIONAL CENTRE FOR APPLIED SCIENCES  
MAHE, MANIPAL**

**B.Sc. (Applied Sciences) in Engg.  
End – Semester Theory Examinations – MAY 2021  
IV SEMESTER - BIOCHEMISTRY (IBT 231)  
Branch: Chemical**

**Time: 3 Hours**

**Date: 24 May 2021**

**Max. Marks: 50**

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- ✓ Answer ALL FIVE full Questions.
  - ✓ Missing data, if any, may be suitably assumed
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- 1A.** Draw the structures of maltose, sucrose and lactose and brief their properties. (6)
- 1B.** Explain the different type of mucopolysaccharides and their biochemical importance. (4)
- 2A.** List out all the reactions of glycolysis that uses the enzyme kinase. (6)
- 2B.** Describe the first oxidative step of glycolysis. (4)
- 3A.** Explain the primary, secondary, super-secondary, tertiary and quaternary structures of proteins. (6)
- 3B.** Explain the nomenclature and classification of enzymes as per IUB standards. (4)
- 4A.** Classify and describe the phospholipids with examples. (6)
- 4B.** Describe the sterols of biological importance. (4)
- 5A.** Explain the steps of  $\beta$ -oxidation with an illustration. (6)
- 5B.** Tabulate the energy produced in TCA cycle. (4)

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