Reg.No.									

INTERNATIONAL CENTRE FOR APPLIED SCIENCES

(Manipal University)

III SEMESTER B.S. DEGREE EXAMINATION – NOV. / DEC. 2016

SUBJECT: BIOCHEMISTRY (BT 233)

(BRANCH: INDUSTRIAL BIOTECHNOLOGY)

Wednesday, 30 November 2016

Time: 3 Hours **Max. Marks: 100**

- ✓ **Answer ANY FIVE full Questions.**
- ✓ **Missing data, if any, may be suitably assumed**

1A. Give schematic representations of urea cycle.
1B. Explain the chemical properties of glucose.
1C. Explain the classification of fatty acids with details. (6+6+8)

2A. Describe the principle and procedure of bioaffinity chromatography.
2B. Explain the structure and functions of phospholipids.
2C. Give the classification of proteins based on functional properties with examples. (6+6+8)

3A. Explain the secondary structure of tRNA. Give an account of modified bases.
3B. Give an account of biological sterols and their significance.
3C. Explain the structure of steroid hormones and their functions. (6+6+8)

4A. Give the significance of biologically coupled reactions.
4B. Write the reactions of metabolism of unsaturated fatty acids.
4C. Explain the mechanism of allosteric enzymes. (6+6+8)

5A. Describe the modifications done to messenger RNA in the cell.
5B. What are ampholytes? Where does it exist in biological system?
5C. Explain the different sites action of phospholipase. Add a note on its sources. (6+6+8)

6A. Explain the nitrogen metabolism in living system
6B. Define urea clearance? Write note on bile pigments and bile salts.
6C. Explain the sugar derivatives of biomedical importance along with structure. (6+6+8)

7A. How collagen is different from other tertiary structure?
7B. Write a note on major hormone secreting glands.
7C. Comment on specificity of enzymes. Add a note on its classification. (6+6+8)

8A. What are invert sugars? Explain mutarotation with suitable example.
8B. Explain the types of enzyme inhibition with examples.
8C. Explain the general properties of amino acids. (6+6+8)