QP Code: 101383 **Reg . No……**

First Year M.Sc. MLT Degree Supplementary Examinations May 2018 (Biochemistry)

PAPER – I GENERAL BIOCHEMISTRY & CHEMISTRY OF BIOMOLECULES

Time: 3 hrs. **Max. marks: 100**

- *Answer all questions*
- *Draw diagrams wherever necessary*

Essays: **(10x10=100)**

1. Define SI system. Name any six SI base units. Mention the formula to convert mg/100ml to mmol/L. What is meant by international unit of enzyme activity. What is the importance of SI system.

2. Explain facilitated diffusion and active transport with respect to sodium - potassium pump (anti-port system).

3. Explain briefly: ● Any three errors during specimen collection and how you would avoid it. ● Any two anti-coagulants and its uses ● Two urine preservatives and its uses

4. What is an ultracentrifuge. Explain in detail the separation of sub cellular organelles by ultracentrifugation

5. State Beer-Lambert's law. Draw and explain the functions of the different parts of a photo colorimeter. Mention any two advantages of a spectrophotometer over a photo colorimeter

6. Define the four different levels of protein structure. Explain and state the role of peptide bond, hydrogen bond, Van Der Waal's forces, electrostatic bond, sulphide bond and hydrophobic interactions in maintaining the protein structure.

7. Name the sources of the carbon and nitrogen atoms of a purine ring. Describe the Watson-crick model of DNA.

8. Classify phospholipids with examples and state its functions. Add a note on rancidity and essential fatty acids.

9. Define chromatography. Discuss briefly partition chromatography and HPLC.

10. Discuss briefly: ● Biomedical waste disposal ● pH meter

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