

**First Year M.Sc. MLT Degree Examinations November 2017
(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. Explain the structure of cell membrane. Discuss the transport mechanisms with examples.
2. Describe the structure and functions of t RNA
3. Enumerate the composition, sources and functions of any five polysaccharides
4. Explain the principle of photometry. Mention the labeled diagrams for instrumentation of single beam and double beam spectrophotometers
5. Describe the primary and secondary structures of proteins giving any two examples
6. Name the major purine and pyrimidine bases, and the nucleotides formed from them. Mention any five functions of nucleotides.
7. How pH is measured. Explain the principle of its measurement. Discuss the Henderson-Hasselbalch equation and mention its importance
8. Name any two techniques used in determination of molecular weight of proteins and explain its principle.
9. Explain the general principle of centrifugation and mention how the sub cellular organelle are separated by centrifugation.
10. Explain the principle and applications of : • chemiluminescence • flow cytometry
