[LB 1012] **OCTOBER 2012** **Sub. Code: 1201**

M.Sc BIOCHEMISTRY DEGREE EXAMINATION

For candidates admitted from 2008-2009 regulations

PAPER I - PHYSICAL AND ORGANIC ASPECTS OF BIOCHEMISTRY,BIO – INSTRUMENTATION AND BIOCHEMICAL TECHNIQUES, BIOSTATISTICS

Q.P. Code : 281201

Time : 3 hours **Maximum : 100 marks**

(180 Min)

Answer ALL questions in the same order.

I. Elaborate on :	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Define electrophoresis & mention the various types. Describe in detail the principle, instrumentation and applications of agarose gel electrophoresis.	17	40	20
2. Describe in detail the various levels of organization of protein structure, its types and elucidation of structure of the different levels of organization.	17	40	20
II. Write Notes on :			
1. What are phospholipids? Classify and describe in detail about physiologically significant phospholipids.	4	10	6
2. What are Histones? Mention the various types and their functions.	4	10	6
3. Describe the synthetic nucleotide analogues with examples and their applications.	4	10	6
4. Define polysaccharides with examples. Detail about the various mucopolysaccharides with a note on mucopolysaccharidosis.	4	10	6
5. Classify the various transport mechanism operating in a eukaryotic cell and describe in detail about macromolecular transport.	4	10	6
6. Describe in detail Donnan Membrane equilibrium and its applications.	4	10	6
7. What are the various types of reagent grade water? Describe about how they are produced and their applications.	4	10	6
8. Name the basic biostatistic tests required for assessment of quality in the clinical laboratory and describe about their applications and calculations.	4	10	6
9. What is the ideal method to quantitatively assess serum zinc level in a patient? Describe in detail the principles, instrumentation and applications of the technique.	4	10	6
10. Describe in detail the structure and function of the mitochondria and a note on its disorders.	4	10	6

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