[LA 0412] **Sub. Code: 1203**

M.Sc BIOCHEMISTRY DEGREE EXAMINATION

Candidates admitted from 2008-2009 batch

PAPER III – MOLECULAR BIOLOGY, CLINICAL BIOCHEMISTRY, FUNCTION TESTS, ENDOCRINILOGY, IMMUNOLOGY, RECENT ADVANCES IN BIOCHEMISTRY

Q.P. Code : 281203

Time : Three hours **Maximum :100marks**

Answer All questions.

I. Elaborate on :	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. What is Blot transfer technique? Briefly explain the various types of blot transfer techniques and their applications.	17	40	20
2. What is a buffer? Explain how the various buffers help to maintain acid base status.	17	40	20
II. Write notes on :			
1. What is genetic code? What are the features of the genetic code?	4	10	6
2. What are Proto-oncogenes? Explain the normal mechanism of action of proto-oncogenes and how they are activated to oncogenes.	4	10	6
3. Anion gap.	4	10	6
4. Monoclonal antibodies and their clinical significance.	4	10	6
5. Explain mechanism of hormone action through cytosolic or nuclear receptors.	4	10	6
6. Transport of iron in plasma and its storage.	4	10	6
7. What are the biochemical investigations to assess the tabular function of kidneys?	4	10	6
8. Alkaline phosphatase and its clinical importance.	4	10	6
9. Enumerate and describe briefly the pre-analytical errors in clinical laboratory	4	10	6
10. Laboratory Information System.	4	10	6

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[LB 1012] **OCTOBER 2012** **Sub. Code: 1203**

M.Sc BIOCHEMISTRY DEGREE EXAMINATION

(Candidates admitted from 2008-2009 batch)

PAPER III – MOLECULAR BIOLOGY, CLINICAL BIOCHEMISTRY, FUNCTION TESTS, ENDOCRINILOGY, IMMUNOLOGY, RECENT ADVANCES IN BIOCHEMISTRY

Q.P. Code : 281203

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. Describe in detail Recombinant DNA technology and its application in medicine. Add a note on molecular scissors.	17	40	20
2. How is acid- base balance regulated in the body?	17	40	20
II. Write Notes on :			
1. Investigations to be performed in a case of Nephrotic syndrome.	4	10	6
2. Estimation of blood glucose with a note on sample required, interferences and reference range.	4	10	6
3. Describe the various post-transcriptional modifications.	4	10	6
4. Mention the normal levels of serum electrolytes. Detail about the sodium homeostasis in our body.	4	10	6
5. Evaluation of thyroid function in a case of goiter.	4	10	6
6. Hyperuricemia.	4	10	6
7. Describe in detail western blotting technique and its applications.	4	10	6
8. Describe about mitochondrial DNA.	4	10	6
9. Describe the various tumour markers and their applications.	4	10	6
10. Estimation of amylase in the laboratory with a note on sample required and its clinical applications.	4	10	6

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[LC 0413] **APRIL 2013** **Sub. Code: 1203**

M.Sc BIOCHEMISTRY DEGREE EXAMINATION

Candidates admitted from 2008-2009 batch

PAPER III – MOLECULAR BIOLOGY, CLINICAL BIOCHEMISTRY, FUNCTION TESTS, ENDOCRINILOGY, IMMUNOLOGY, RECENT ADVANCES IN BIOCHEMISTRY

Q.P. Code : 281203

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

I. Elaborate on: **(2x20=40)**

1. How is uric acid produced in the body? Add a note on disorders associated with it.
2. Describe in detail protein synthesis and the various post-translational modifications of proteins.

II. Write notes on : **(10X6=60)**

1. Describe the various stages of cell cycle with a note on its regulation.
2. Define mutation. Classify & describe the various types with examples.
3. Describe the types of DNA damage & repair mechanism.
4. Describe the mechanism of action of Type I hormones.
5. What are the various diagnostic & prognostic tests to be performed in a diabetic patient.
6. How is calcium homeostasis maintained in our body?
7. Describe in detail the structure , types and functions of Immunoglobulins.
8. CSF analysis and its application.
9. Estimation of Gamma Glutamyl Transferase(GGT).
10. Prenatal diagnosis of inborn errors of metabolism.

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