



[LD 505]

NOVEMBER 2013

Sub. Code : 4056

**FIRST M.B.B.S. DEGREE EXAMINATION**

**PAPER VI – BIOCHEMISTRY - II**

*Q. P. Code : 524056*

**Time : Three hours**

**Maximum: 50 Marks**

**Answer ALL questions.**

**Draw Suitable diagrams wherever necessary**

**I. Elaborate on:**

**(2 x 7.5 = 15)**

1. List the parameters that are commonly used in clinical practice as indicators to assess the functions of the liver. Explain the basis of the use of these parameters in assessment of liver function. Briefly discuss medical conditions in which these parameters become abnormal.
2. Describe the role of the kidney to maintain the pH of blood. What are the compensatory mechanisms the kidney will adopt to maintain pH in the presence of metabolic acidosis?

**II. Write notes on :**

**(10 x 2.5 = 25)**

1. Denaturation of proteins.
2. Types of mutations.
3. Post-transcriptional modifications of RNA.
4. Restriction endonucleases and their uses.
5. Specialized products derived from tyrosine.
6. Principle and applications of electrophoresis.
7. Cell cycle.
8. Causes and clinical features of dehydration.
9. Consequences of hyperuricemia.
10. Structure of DNA.

**III. Short answers on :**

**(10 x 1 = 10)**

1. What is multiple myeloma? What is a laboratory test that can be used to confirm diagnosis of this condition?
2. List 4 functions of nucleotides.
3. Which amino acid gives rise to nitric oxide in the body? What is the enzyme that catalyzes this process?
4. What is the biochemical basis of the encephalopathy that can develop in patients who have liver cirrhosis?
5. List the biochemical abnormalities seen in phenylketonuria.
6. Give examples of 4 conjugating agents in the body that are involved in metabolism of xenobiotics.
7. What is the role of gamma-amino butyric acid in the body? Name the amino acid from which it is derived.
8. What is the principle of a radioimmuno assay (RIA)?
9. List the different types of immunoglobulins.
10. List 4 causes of respiratory acidosis.

