

B.Sc. MEDICAL LABORATORY TECHNOLOGY
THIRD YEAR
PAPER II – BIOCHEMISTRY – II

Q.P. Code: 725032

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on: **(3 x 10 = 30)**

1. The structure of Nucleosome and Deoxy-ribo Nucleic Acid (DNA). Explain with neat sketches, the different types of DNA. Add a small note on B-DNA.
2. The metabolism of Low density lipoprotein (LDL) and High Density Lipoprotein (HDL) with a neat labeled flowcharted sketch. Add a note on HDL cycle.
3. Different enzymes analyzed in Clinical Biochemistry, used as markers of various diseases.

II. Write notes on: **(8 x 5 = 40)**

1. Different parameters tested during Liver Function Tests (LFT).
2. Importance of alpha-feto protein and carcino-embryonic antigen (CEA) estimation in various tumors.
3. Recombinant DNA technology
4. Post transcriptional modification/processing.
5. Clinical significance of Bence-Jones Proteins.
6. Western blotting in Acquired Immune Deficiency Syndrome (AIDS).
7. Causes of and investigations to be done in Hereditary Fructose Intolerance.
8. Estimation of Cholesterol.

III. Short answers on: **(10 x 3 = 30)**

1. Cell cycle and its stages.
2. Chemical mutagens and their effects on human body.
3. Principle of Glucose estimation using kit method.
4. Metabolic acidosis.
5. Inhibitors of Protein Synthesis.
6. Operon (lac operon) hypothesis.
7. Significance of Vanillyl Mandelic acid (VMA) in diagnostics.
8. Principle of competitive immuno-assay.
9. Restriction Endonuclease.
10. Role of Transfer RNA (tRNA).
