

**DO NOT WRITE ANYTHING ON YOUR QUESTION PAPER EXCEPT YOUR ROLL NO.  
QUESTION PAPER CONTAINING ANYTHING WOULD BE TREATED AS MAL-PRACTICE  
ANSWER THE QUESTIONS SERIALLY AND CONTINUOUSLY**

**Subject: BIO-CHEMISTRY & CLINICAL PATHOLOGY (Theory)**

**Full Mark -80**

**Time -3 Hrs.**

1. **Answer any six questions** (6x5)
- Describe different Liver function tests performed routinely and their clinical significance to assess the functions of Liver ?
  - Define ketogenesis ? Write the reaction involved in the synthesis of ketone bodies through it ?
  - What are the abnormal constituents of urine and mention their clinical significances ?
  - What do you mean by Glycolysis & write the steps involved in it ?
  - What are vitamins & classify it with examples ? Briefly describe the sources, chemical nature, biological functions and deficiency diseases of Vitamin-A & Vitamin-C ?
  - Write a note on Beta oxidation of saturated fatty acid ?
  - What do you mean by Urea cycle & explain the steps involved in the synthesis of Urea ?
2. **Answer any ten questions :** (10x3)
- Describe the detail procedure for identification of unknown carbohydrate sample ?
  - What are lipoproteins and attach a note on composition & functions of different types of lipoprotein ?
  - Write the application of Biotechnology in pharmaceutical sciences ?
  - Explain the various components present in ETC ?
  - What do you mean by lipid profile test and mention its clinical significances in lipid related diseases ?
  - Explain the role of iron and iodine and micronutrients in cell ?
  - Write the diseases caused by the phosphorous deficiency ?
  - Classify enzymes according to IUB & MB ?
  - Describe the salient features of structure of DNA with its functions ?
  - Write the role of calcium and potassium in cell ?
  - Describe the detail pathway of ornithine cycle and describe in brief about phenylketonuria ?
3. **Define the following terms (within twenty words):** (1x20)
- |   |                     |                      |                     |
|---|---------------------|----------------------|---------------------|
| i) Mutarotation                           | ii) Transamination  | iii) Zwitter ion     | iv) Decarboxylation |
| v) Polenske numbr                         | vi) Gluconeogenesis | vii) Vitamin-H       | viii) Coenzyme      |
| ix) Wilson's disease                      | x) ORT              | xi) Anisocytosis     | xii) Marasmus       |
| xiii) Ochronosis                          | xiv) EST            | xv) Biological value | xvi) Holoenzyme     |
| xvii) HMP shunt                           | xviii) SGOT         | xix) Galactosaemia   |                     |
| xx) Idiopathic Thrombocytopenic Purpura . |                     |                      |                     |



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