I. Answer any ten of the following each in a paragraph. Each Question carries 2 marks (10x 2 = 20 marks)

1) What is a Covalent bond?
2) Comment on Ribose sugar
3) Write notes on Resilin
4) Write a brief account on Lecithin and its biological functions
5) Comment on the peculiarities of Z DNA
6) What is the importance of IUB system?
7) What is Glucose Tolerance Test? State its clinical application
8) Comment on Deamination
9) What is Ketone Bodies? Comment on its clinical significance?
10) Write a brief note on ADP
11) What is Drug detoxification?
12) Comment on the Internally generated sources of free radicals
13) Write notes on Lipid peroxidation
14) What are Prions?
15) Write notes on Lymph formation and its biological functions

II. Answer any six of the following each not exceeding a page Each Question carries 4 marks (6x 4 = 24 marks)

16) What is Structural isomerism? Mention its significance
17) Write a brief note on properties of amino acids
18) Explain briefly on fatty acid nomenclature
19) Briefly explain Cori Cycle and comment on its biological importance
20) Comment on the Plasma Bilirubin and its biological functions
21) Write a note on metabolism of cholesterol
22) Write a brief account on ATP synthesis
23) Comment on the importance of saliva analysis
24) What is Apoptosis? Explain its biological importance
25) Briefly explain Chemiosmotic theory

III. Write short essay not exceeding two pages on any three of the following. Each question carries seven marks. (3x7 = 21 Marks)

26) What are Heparin and Agar-Agar? Explain their uses in the field of biochemistry
27) Explain the quaternary structure of Haemoglobin
28) Describe the Watson-Crick Model of DNA
29) Explain the concept of cellular aging
30) Discuss about different types of diabetes, its causes, clinical importance and control measures

IV. Answer any one of the following not exceeding four pages. The question carries ten marks. (1x10 = 10 Marks)

31) Write an essay on the steps involved in Glycolysis
32) Briefly explain how toxic compounds are formed in our body