

BIOCHEMISTRY

PAPER-II

Time: 3 hours
Max. Marks:100

B.CHEM/D/20/03/II

Important Instructions:

- *You are provided with 5 answer sheet booklets. Each individual answer sheet booklet consists of 10 pages excluding the covering jackets.*
- *Answers to all the questions must be attempted within these 5 answer sheet booklets which must be later tagged together at the end of the exam.*
- *No additional supplementary answer sheet booklet will be provided.*
- *Attempt all questions in order.*
- *Each question carries 10 marks.*
- *Read the question carefully and answer to the point neatly and legibly.*
- *Do not leave any blank pages between two answers.*
- *Indicate the question number correctly for the answer in the margin space.*
- *Answer all the parts of a single question together.*
- *Start the answer to a question on a fresh page or leave adequate space between two answers.*
- *Draw table/diagrams/flowcharts wherever appropriate.*

Write short notes on:

1. Metabolic and endocrine functions of adipose tissues. 10
2. Antioxidant vitamins: biochemical basis of their antioxidant effect and their clinical significance. 10
3. Homocystinuria: its biochemical basis and clinical significance. 10
4. Metabolism of ethanol & methanol in human body and effect of chronic alcoholism on liver function. 10
5. De-novo synthesis of thymidylate. 10
6. Lipoprotein (a) [Lp(a)]: its structure and composition, metabolism and clinical significance. 10
7. Definition of high energy and low energy phosphates. Reaction catalyzed by adenylate kinase (myokinase) and physiological & pathological significance of this enzyme. 10
8. Bile acids: their biosynthesis, regulation of biosynthesis and physiological functions. 10
9. Calculation of energy requirement of a 45 year old sedentary male subject with type 2 diabetes mellitus. 10
10. Hyperphenylalaninemia: their biochemical basis, clinical features and laboratory diagnosis. 10
