

Bachelor of Science (B.Sc.) Semester–VI (C.B.S.) Examination

METABOLISM–II

Paper–1

(Bio-Chemistry)

Time : Three Hours]

[Maximum Marks : 50

Note :— (1) All questions are compulsory and carry equal marks.

(2) Draw diagrams wherever necessary.

1. Give a detailed account of HMP shunt and discuss its connection to lipid metabolism. 10

OR

(a) Describe the oxidation of unsaturated fatty acids 5

(b) Describe the transport of fatty acids into mitochondria. 5

2. Give a detailed account of fatty acid synthase complex reactions. 10

OR

(a) Describe the biosynthesis of phosphatidyl inositol 5

(b) Describe the biosynthesis of unsaturated fatty acids. 5

3. Describe protein metabolism with respect to :

(a) Transmethylation 5

(b) Decarboxylation. 5

OR

(c) Give a brief idea about the linkage of urea cycle and TCA cycle. 5

(d) Give a brief idea about urea cycle regulation. 5

4. (a) Describe catabolism of pyrimidine nucleotides 5

(b) Describe the role of cAMP in metabolism. 5

OR

(c) Describe the regulation of purine nucleotide biosynthesis 5

(d) Describe the causes and treatment of Gout. 5

5. Solve any **ten** of the following :

- (I) Define ω -oxidation.
- (II) What is α -oxidation ?
- (III) How many double bonds are present in oleic acid ?
- (IV) Define ketogenesis.
- (V) What are sphingolipids ?
- (VI) Define ketosis.
- (VII) Define transamination.
- (VIII) Name the coenzyme involved in oxidative deamination.
- (IX) What are ketogenic amino acids ?
- (X) What is the full form of PRPP ?
- (XI) Name the precursors for deoxyribonucleotides.
- (XII) Write the full form of HGPRT.

1×10=10