

10/12/19 (M)

Exam. Code: 0907
Sub. Code: 6693

1129
B.E. (Biotechnology) Third Semester
BIO-313: Biochemistry

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

- I. Attempt the following:-
- a) Write the structures and names of any two unsaturated fatty acids. (2)
 - b) Write the structures and name of a reducing disaccharide. (1)
 - c) Write the structures and names of two hydrophobic amino acids. (2)
 - d) Write the structure and coenzyme form of pantothenic acid? (1)
 - e) Which enzymes are involved in purine salvage pathway. (2)
 - f) Why cholesterol is considered a bad molecule? (1)
 - g) Write the molecular structure of GTP? (1)

UNIT - I

- II. a) Describe in detail the levels of architecture present in proteins and their examples.
b) Which amino acids are responsible for absorption of UV light? (8,2)
- III. a) Describe the pathway of glycolysis. Write the molecular structures of intermediates and the enzymes involved.
b) Write the structure and function of cellulose? (8,2)
- IV. a) Describe Watson and Crick model of DNA.
b) How many types of DNA exist?
c) Write the structures and function of
- i) Aglycolipid
 - ii) Acidic amino acid
 - iii) Thiamine (5,2,3)

UNIT - II

- V. a) Describe the metabolic pathway of fatty acid oxidation. What is the role of carnitine.
b) Calculate the number of ATP's formed? (8,2)

P.T.O.

(2)

- VI. a) Describe the pathway of purine biosynthesis,
b) Write the complete reaction of transamination of amino acids (8,2)
- VII. a) Describe Electron transport chain in detail
b) Write the first reaction of Photosynthesis and its enzyme. (8,2)

x-x-x