

3rd 4.

Exam.Code:0907
Sub. Code: 6693

1128
B.E. (Bio-Technology) 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) What is the monomeric unit of chitin? (1)
- b) Write the structure and names of two basic amino acids. (2)
- c) Write the structure and name of a non reducing disaccharide (1)
- d) Write the structure and biochemical role of riboflavin? (1)
- e) Write the name and structure of any C-18 unsaturated fatty acid. (1)
- f) Write the structure and functions of cholesterol. (2)
- g) Write the structure of 5'-CATTG-3'? (2)

UNIT - I

- II. a) Describe in detail the TCA cycle. Write the molecular structures of intermediates and the enzymes involved. How many ATP's are formed.
- b) What do you understand by hypochromicity and hyperchromicity of DNA? (8,2)
- III. a) Describe in detail the levels of architecture present in proteins.
- b) What is the basis of absorption of UV light at 280 by the proteins? (8,2)
- IV. a) Describe the pathway of glycogenesis and its regulation.
- b) Write the structures and function of the following:-
 - i) Sphingolipid
 - ii) Pyridoxal phosphate
 - iii) Cellulose (7,3)

UNIT - II

- V. a) Describe fatty acid synthase complex and fatty acid biosynthesis pathway.
- b) Write general reaction of amino acid deamination? (8,2)

P.T.O.

(2)

VI. a) Describe the pathway of pyrimidine biosynthesis.

b) Describe urea cycle?

(5,5)

VII. Write short notes on:-

a) Electron transport chain

b) Photosynthesis

(5,5)

x-x-x