Exam.Code:0435
Sub. Code: 3466

1129

M. Sc. (Biotechnology) First Semester

MBIO-102: Biomolecules

Time allowed: 3 Hours **Max. Marks: 80**

NOTE: *Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.*

x-x-x

I. Attempt the following:-

a) Define pyranose ring.

b) What are anomers..

c) What is Cori's cycle?

d) Define chaperons.

e) What is a dihedral angle in peptides?

f) What are prostaglandins?

g) Define ketone bodies?

h) What are the constituents of a nucleoside? (8x2)

UNIT – I

II. a) Discuss the structure and function of starch.

b) Discuss the experimental details in derivation of a metabolic pathway. (2x8)

III. a) Explain the reactions in hexose monophosphate shunt.

b) Discuss the process of glycogenesis. (2x8)

UNIT – II

IV. a) Discuss the ramanchandran plot.

b) Describe the structural features of collagen. (2x8)

V. a) Discuss the role of chaperones in protein folding..

b) Discuss the forces stabilizing quartenary structure of proteins. (2x8)

UNIT – III

VI. a) Discuss the structure and function of phosphoglycerides.

b) Explain the formation and utilization of ketone bodies. (2x8)

P.T.O.

VII. a) Discuss the synthesis of triacylglycerols.

b) Discuss the beta oxidation pathway for saturated fatty acids. (2x8)

UNIT – IV

VIII. a) Discuss salvage pathway for purine synthesis.

b) Explain the difference in A,B and Z form of DNA. (2x8)

IX. a) Discuss the synthesis of CMP.

b) Discuss the experimental evidence for nucleic acids as genetic material. (2x8)

x-x-x