

Code No. : **8081**

FACULTY OF SCIENCE
B.Sc. I Year Examination, March/April 2012
BIOCHEMISTRY
Paper – I : Biomolecules and Enzymology

Time: 3 Hours]

[Max. Marks: 100

SECTION – A

Answer **any 8** questions from the following :

(8x5=40 Marks)

- ~~1.~~ Storage polysaccharides.
- ~~2.~~ Biological importance of disaccharides.
- ~~3.~~ Glycoproteins
- ~~4.~~ What is acid value and its importance ?
- ~~5.~~ Phospholipids – structure and functions.
- ~~6.~~ Liposomes – formation and their application/uses.
7. What are amphipathic lipids ? What is their role in membranes ?
- ~~8.~~ Essential and non essential aminoacids.
- ~~9.~~ Non-protein amino acids.
- ~~10.~~ Denaturation and renaturation of proteins.
- ~~11.~~ Hypochromic effect.
- ~~12.~~ Multienzyme complexes.



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SECTION – B

Answer all the questions :

(4×15=60 Marks)

13. a) Explain the following :

- i) Blood group substances
- ii) Chitin and pectin
- iii) D and L designation of carbohydrates.

OR

~~b) Write the structures and biological functions of prostaglandins.~~

14. a) Explain with the help of a diagram the titration curve of an amino acid. What is pka and its significance.

OR

b) Discuss in detail the forces that stabilize the structure of proteins.

15. a) What are the effects of acid, alkali and enzymes on DNA and RNA molecules and add a note on T_m value and its significance.

OR

~~b) Discuss in detail the secondary and tertiary structure of t-RNA molecule and explain how they help in protein synthesis.~~

16. a) Explain the following :

- a) Acid base catalysis
- b) Covalent catalysis
- c) Metal ion catalysis

OR

~~b) Discuss in detail the models suggested to explain enzyme-substrate interaction.~~