

F. Y. B. SC. (BIOTECHNOLOGY) SEM – II (CBCS - 2015
COURSE) : WINTER - 2017

SUBJECT: BIOCHEMISTRY-I

Day : Saturday
Date : 28/10/2017

W-2017-0936

Time 10.00 AM TO 01.00 PM
Max.Marks.60

N.B.

- 1) Q.No.1 and Q.No.5 are **COMPULSORY**.
- 2) Answer **ANY TWO** questions from Q. No. 2, 3, and 4 in section- I
- 3) Answer **ANY TWO** questions from Q. No. 6, 7, and 8 in section- II
- 4) Answer the questions of section-I and section- II in **SEPARATE** answer books.
- 5) Figures to the right indicate **Full** marks

SECTION-I

- Q.1** Attempt **ANY FIVE** of the following: (10)
- a) What are phosphoproteins?
 - b) What are pyrimidines? Draw their structures.
 - c) Enlist the types of Vitamins B.
 - d) Explain about 'Na' ion and give its electronic configuration.
 - e) Name different types of electrophoresis techniques.
 - f) What are the various bonds involved in stabilization of the tertiary structure of protein.
- Q.2** Answer the following: (10)
- a) What are biocatalyst? Explain with suitable examples.
 - b) Explain in detail structure of DNA molecule.
- Q.3** Explain the following: (10)
- a) Explain different types of RNA, their structure and functions.
 - b) Explain classification of amino acid on the basis of functional R groups.
- Q.4** Write short notes on following: (10)
- a) Structural organization in protein molecule.
 - b) Chromo- proteins and phosphoproteins.

SECTION-II

- Q.5** Attempt the following questions: (10)
- a) Explain estimation of purity of water by Titrimetric method.
 - b) Describe the denaturation and renaturation of DNA.
- Q.6** Answer the following: (10)
- a) Explain the principle and applications of Ion Exchange Chromatography.
 - b) What are vitamins? Describe role of vitamins as coenzyme.
- Q.7** Answer the following: (10)
- a) Discuss the ultracentrifugation method of biomolecule separation.
 - b) Explain in detail about 'Mg' and 'Fe' ion with its electronic configuration and its significance.
- Q.8** Answer in brief: (10)
- a) Explain the structure and function of NAD and NADP
 - b) Describe the Kjeldahl's method of Nitrogen estimation