

M. SC. (MICROBIOLOGY) SEM-I (C.B.C.S.) (2012 COURSE)

: SUMMER - 2018

SUBJECT: BIOCHEMISTRY

Day: **Tuesday**
Date: **10/04/2018**

S-2018-0901

Time: **03.00 PM TO 06.00 PM**
Max. Marks: 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.

Q.1 Describe in brief various forms of DNA and elaborate on Watson and Crick model. **(15)**

OR

Explain in brief the secondary and tertiary structures encountered in globular proteins with suitable examples.

Q.2 a) Diagrammatically illustrate the D- series of aldoses. **(08)**

b) Explain structure and function of prostaglandins. **(07)**

Q.3 Attempt any **THREE** of the following: **(15)**

- a)** Name any three functional groups and highlight their structure in biomolecules.
- b)** What are ionophores? Explain their function with suitable example.
- c)** Explain keto-enol tautomerism in nucleic acid bases.
- d)** Write a note on r-RNA.

Q.4 Attempt any **THREE** of the following: **(15)**

- a)** Draw structure of peptide bond and comment on its properties.
- b)** Write a note on disaccharides.
- c)** Describe the nomenclature and properties of fatty acids.
- d)** Explain the structure and function of $\text{Na}^+ - \text{K}^+$ pump.

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