

**M. SC. (Microbiology) SEM-II (C.B.C.S.) (2012 COURSE) : WINTER
2018**

SUBJECT: ELECTIVE – (B) PHYSIOLOGY AND METABOLISM

Day : -Monday
Date : 15/10/2018

W-2018-1028

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 labeled diagrams **WHEREVER** necessary.
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Q.1 What is protein enzyme? Describe the mechanism of feedback control. **(15)**

OR

What is hemoglobin? Describe the changes in hemoglobin structure on oxygen binding.

Q.2 Attempt the following:

- a) Describe structure and biosynthesis of phospholipids in bacteria? **(10)**
- b) Describe fat soluble vitamins. **(05)**

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

- a) Biological action of eicosanoids.
- b) Photochemical centers.
- c) Endocrine glands and their secretion.
- d) Nitrogen metabolism of glutamate synthase.

Q.4 Write short notes on any **THREE** of the following: **(15)**

- a) Dark reaction in photosynthesis.
- b) Non-protein enzymes and their functions.
- c) Principle and functioning of X-ray crystallography.
- d) Allosteric enzymes.

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