

**M. SC. (MICROBIOLOGY) SEM-II (C.B.C.S.) (2012 COURSE)
: WINTER - 2017**

SUBJECT: ELECTIVE – (B) PHYSIOLOGY AND METABOLISM

Day : Monday
Date : 30/10/2017

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

W-2017-0810

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 Describe the tertiary structure of globular proteins and comment on its functional diversity? **(15)**

OR

Describe the evolution of Hemoglobin and Myoglobin? What are the Hemoglobin variants?

Q.2 Attempt the following:

- a) Describe in detail water soluble vitamins. **(10)**
- b) Describe biochemical function of vitamins. **(05)**

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

- a) Neurotransmitters and their functions.
- b) Electron carriers in photosynthesis.
- c) Biosynthesis of cholesterol.
- d) Nitrogen metabolism of Glutamate dehydrogenase.

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

- a) Microtubule system
- b) CAM plants
- c) Principle and functioning of NMR
- d) Physiological function of isoprenoid compounds

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