

S.Y.B.SC. SEM – IV (2014 COURSE) : SUMMER - 2018
SUBJECT: MICROBIOLOGY: APPLIED MICROBIOLOGY (MB-42)

Day: Tuesday
Date: 17/04/2018

S-2018-0723

Time: 03.00 PM TO 05.00 PM
Max. Marks: 40

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 Attempt **ANY TWO** of the following: **(10)**

- a) What are IMViC tests? Give their use in the differentiation of coliform bacteria.
- b) Indicator organisms are useful in determination of the water quality: comment.
- c) Give the use of buffers in fermentation media.

Q.2 Attempt **ANY TWO** of the following: **(10)**

- a) Differentiate between BOD and COD.
- b) Differentiate between oxidation ponds and trickling filters.
- c) Draw a neat labelled diagram of anaerobic sludge digester.

Q.3 Attempt **ANY TWO** of the following: **(10)**

- a) How is water purified by the slow sand filtration method? How is it disinfected further?
- b) What are semisynthetic penicillins? How are they better than natural penicillins?
- c) How are the fermenter and its parts sterilized?

Q.4 Write in short on/ Explain/Define/Enlist **ANY FIVE** of the following: **(10)**

- a) Gradient plate technique
- b) Dual fermentation
- c) Tertiary treatment
- d) Disinfection of water by UV light
- e) Recovery of Penicillin
- f) Waste sulfite liquor
- g) Waterborne bacterial diseases

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