

BACHELOR OF SCIENCE (CBCS-2018 COURSE)
S. Y. B. Sc. Sem-IV : WINTER- 2022
SUBJECT : MICROBIOLOGY : APPLIED MICROBIOLOGY

Day : Thursday

Time : 02:00 PM-05:00 PM

Date : 8/12/2022

W-18390-2022

Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw well labelled diagrams **WHEREVER** necessary.
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- Q.1** Attempt **ANY TWO** of the following: **(12)**
- a) What are crude media? Describe any two examples in detail.
 - b) Comment on- Sterilization of fermentation medium.
 - c) Discuss the various parts of fermenter with the help of a diagram.
- Q.2** Attempt **ANY TWO** of the following: **(12)**
- a) Draw a flow sheet for the production of streptomycin.
 - b) What are the various steps used in secondary screening of industrially important cultures?
 - c) Differentiate between batch and fermentation fenestration.
- Q.3** Attempt **ANY TWO** of the following: **(12)**
- a) Describe the test used to differentiate fecal and nonfecal coliforms.
 - b) Give methods to treat water to convert it into potable water.
 - c) Write in detail the inoculum and fermentation medium used in the production of penicillin.
- Q.4** Attempt **ANY THREE** of the following: **(12)**
- a) What is activated sludge? Give its significance.
 - b) Describe the recovery process for streptomycin.
 - c) Discuss the role of antifoaming agent used in fermentation process.
 - d) Write a note on semisynthetic penicillins.
- Q.5** Write short notes on **ANY FOUR**. **(12)**
- a) MPN.
 - b) Buffers
 - c) Diseases transmuted through water.
 - d) Water treatment by halogens.
 - e) Oxidation ponds.

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