

T.Y.B.SC. SEM – VI (CBCS - 2016 Course) : SUMMER - 2019

SUBJECT: MICROBIOLOGY BIOTECHNOLOGY

Day: Friday
Time: 12/04/2019

S-2019-0906

Date: 03.00 P.M. To 06.00 P.M
Max. Marks: 60

N.B.:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.

Q.1 Answer **ANY TWO** of the following (12)

- a) Describe the protoplast fusion technique as a method for strain improvement.
- b) Explain the classical fermentation method for production of citric acid.
- c) What is biological assay? Describe the use of biological assay for detection and assay of fermentation product.

Q.2 Answer **ANY TWO** of the following (12)

- a) Describe Ames test and write its importance.
- b) Write the following for production of amylase. i) Name of Organism used ii) Production Media iii) Environmental parameters iv) Fermenter.
- c) What are auxotrophic mutants? Give the use of auxotroph for production of secondary metabolites with suitable example.

Q.3 Answer **ANY TWO** of the following (12)

- a) Define the term pyrogen. Explain the method for pyrogen testing.
- b) Describe in brief about patenting in India.
- c) Explain with suitable example any one method of genetic manipulation for strain improvement

Q.4 Write short notes on **ANY THREE** of the following (12)

- a) Secret Processes.
- b) Wines.
- c) Secondary Metabolite Production.
- d) Chemical Assay.

Q.5 Answer **ANY FOUR** of the following (12)

- a) Write the flow sheet to describe classical fermentation of lysine.
- b) What is distillers yeast? Write the method for production of distillers yeast.
- c) Discuss any one chromatographic method as a tool for detection of fermentation product.
- d) What is a toxicity? How is toxicity testing done?
- e) Write the use of Resistant Mutants in stain improvement.
- f) What is Baker's Yeast? Write the flow sheet for its large scale production.

* * * *