

**B.SC. (Food Technology) IVth Semester
Examination-2019
Paper – Vth**

[Industrial Microbiology and Enzyme Technology]

Paper Code-(BFT - 205)

Time : 03 Hours]

[Maximum Marks : 60

SECTION- A

Note: Attempt all questions. Each question carries 01 marks.

Choose the correct answer:

- Ginger beer is produced by use of:
 - Lactobacillus bulgaricus
 - Saccharomyces bulgaricus
 - Saccharomgces pyriformis
 - Rhizopus sontii
- Normally bacteria stops division at:
 - 0^oC
 - 5^oC
 - 10^oC
 - 20^oC
- Death of bacteria follows:
 - First order reaction
 - Zero order reaction
 - Second order reaction
 - It does not follow any pattern
- Which of the following is a powerful technique to alter the function of an Enzyme?
 - Directed Evolution
 - DNA shuffling
 - Structural scaffolds
 - None

5. The most widely used bacteria for the production of ethanol is:
- (a) *Zyromas mobilis*
 - (b) *Saccharomyces cerevisiae*
 - (c) *Kluyveromyces fragilis*
 - (d) None

Fill in the blanks:-

- 6. L-Glutamic is industrially produced from
- 7. Citric acid is industrially produced by..... metabolic.
- 8. Penicillin is an example of.....
- 9. The antimicrobial substances "Nisin" produced by.....
- 10. Xanthan is produced by.....

SECTION-B

Note: Attempt any five questions. Each question carries 04 marks.

Write short note on the following:

- 11. Down streaming Process.
- 12. Principle of centrifuge.
- 13. Bacterial polysaccharides.
- 14. Application of pectinase in food industries.
- 15. List various equipments which are use during industrial production of microbial products.
- 16. Explain the synthesis of different aromatic compounds using microbial fermentation.
- 17. Explain the process of SSF for the production of enzymes using bacteria.

SECTION-C

Note: Attempt any three questions. Each question carries 10 marks.

- 18. Write a note on application of enzymes in industry.
- 19. What is Immobilization? Describe different methods of Enzyme Immobilization and their application in food processing.

20. Explain the microbial production of Lactic acid and its down streaming process.
21. What are metabolites? Give a detailed classification of microbial metabolites.

22. What are antibiotics? Name two microorganisms that are used for the industrial production of streptomycin. Explain microbial production process for streptomycin and it's down streaming.
