

**GS-359**

VI Semester B.Sc. Examination, May/June - 2019

MICROBIOLOGY - VIII**Industrial Microbiology and Microbial Technology**

(CBCS) (Fresh+Repeaters) (2016-17 & Onwards/NS-2013-14 & Onwards)

Time : 3 Hours

Max. Marks : 70

Instruction : (1) Answer **all** parts.
(2) Draw diagrams wherever necessary.

PART - A

5x2=10

I. Answer the following :

1. *Agaricus bisporus*
2. Secondary metabolites
3. Edvard Buchner
4. *Zymomonas mobilis*
5. Buffering agents

PART - B

4x5=20

II. Answer **any four** of the following :

6. Explain production of human insulin.
7. Give an account of methane production.
8. Explain the process of distillation in fermentation.
9. Explain sterilization of fermentation media and fermentor.
10. Describe stirred aerated fermentor.

P.T.O.

**PART - C**

III. Answer **any three** of the following :

3x10=30

11. Write a note on regulation of different fermentation process parameters.
12. Explain the production of Vit B₁₂.
13. Describe different purification methods employed in downstream processing.
14. Write a note on surface, submerged and solid state fermentation.
15. Discuss in detail the production of amylase.

PART - D

IV. Answer **in one** line only :

10x1=10

16. Precursors
17. Calcium alginate
18. Metabolic engineering
19. Furfural
20. Buffers
21. GLC
22. Brewing
23. Strain
24. Penicillic acid
25. Pharmaceutical Microbiology