647510 **MSC3MicC314x** **Seat No :_____**

M.Sc. (Micro) Semester - 3 (*CBCS*) Examination

DEC/JAN. - 2020 - [NEW COURSE]

Bioprocess Engineering and Fermentation Microbiology (Core (New))

Time: 1:30 Hours **Marks: 42**

Instructions:

1. Figure to the right indicate marks.
2. There are five questions in the question paper.
3. Answer any three of the following questions.

Q.1 Answer the following (any seven out of Ten) **14**

1. What is advantage of continuous culture?
2. Discuss basic nutrient requirements of industrial media.
3. Mention disadvantage of batch culture in brief.
4. What are the advantages of oxygen transfer rate in waste water treatment?
5. Explain sterilization using filtration method.
6. What is nutritional value of SCP?
7. Mention the industrial application of citric acid.
8. Define Itaconic acid production.
9. Define sauerkraut?
10. Explain types of wines and its alcohol content.

Q. 2 Answer the following (Any Two) **14**

1. Explain growth factors and its importance as source of industrial media.
2. Discuss the advance of continuous culture.
3. Explain the raw material used in Industries.

Q. 3 Answer the following (Any Two) **14**

1. Discuss chemical method used in sterilization.
2. Explain stirred tank bioreactor with labeled diagram.
3. Write a note on batch sterilization

Q. 4 Answer the following (Any Two) **14**

1. Write a note on fermented food as Bread.
2. Write a note on beer production.
3. Explain biosynthesis of glutamic acid & Discuss its application.

Q. 5 Answer the following (Any Two) **14**

1. Discuss the SCP production in detail.
2. Explain production of xanthan gum and its industrial application.
3. Describe the production ergot alkaloids and enlist the application.

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