

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE -27
MID SEMESTER TEST – AUGUST 2016
M.Sc. MICROBIOLOGY – III SEMESTER
MBDE 9416– Industrial Microbiology

Time: 1hr

Max Marks: 20

- I. Answer any **Three** of the following **2x 3 = 6**
1. Mention two uses of the enzyme Amylase.
 2. Define Impellers. Name the different types of Impellers.
 3. Mention how mutations can be used as a strain improvement technique in fermentation with the help of an example.
 4. Briefly describe drum fermenters.
 5. Mention the applications of a fed batch culture fermentation process.
- II. Answer any **Two** of the following **2x 5 = 10**
6. Write a note on media used and purification of Vitamin B12 production .
 7. Define spargers. Describe the different types of spargers.
 8. Compare batch and continuous sterilization of media. State the advantages of batch sterilization.
- III. Answer the following **1 x 4 = 4**
9. Frothing is a common issue in an industrial process. How can it be detected and resolved?
Give reasons for your answer.