



AJEENKYA

D Y PATIL UNIVERSITY

End Term Examinations (April 2019)

School : School of Engineering

Program: B.Tech Biotechnology

Course: Biochemical Engineering

Course Code: BTE202

Semester: IV

Total Marks : 50

Duration (min) : 120

Answer any 5 questions.

Each question carries 10 Marks.

1. Rennet is used in dairy and rennet was originally made from calf stomach. Describe the microbial sources of rennet and their types, utility.
2. With reference to starch hydrolysis, enzymatic method is useful than chemical method. Explain this statement with example.
3. Vitamin B12 cannot be synthesized by chemical method. Give reasons and describe the microbial method of B12 synthesis with its utility.
4. Alkaline proteases are used in detergents. Discuss their utility, method of production.
5. Explain in detail a method for determining volumetric gas transfer rate. What are the barriers of gas transfer in fermentation? Discuss.
6. Explain the equation for death kinetics. What are the advantages and disadvantages of batch sterilization? Describe.
7. Describe the role of centrifuge in fermentation with equation.
8. Calculate the height and diameter of a cylindrical fermenter of size 5 liter if H:D is 2:1. If geometric scale is maintained then what will be the height and diameter of a new fermenter of 500 liter volume.
9. Discuss the microbial method of erythromycin synthesis. What is utility of erythromycin?
10. What is the role of chromatography in downstream processing? Explain in detail.