

B. N. BANDODKAR COLLEGE OF SCIENCE, THANE
FIRST TERM-END EXAMINATION- OCTOBER - 2011

S.Y.B.Sc

BIOTECHNOLOGY : PAPER 1

Duration 2 hrs		Max Marks-60
N.B.	1) All Questions are compulsory. 2) Figures to right indicate full marks.	Marks
Q.1)	A Define 1 Barophilic organisms 2 Antifoam agents 3 Sampling	3
Q.1)	B Answer the following (any three) 1 Describe phases of bacterial growth 2 Explain flow cytometry and membrane filtration method. 3 Write a short note on types of Spargers with their role. 4 Explain inoculum development at industrial level. 5 Explain Aeromicrobiological pathway.	12
Q2)	A Define the following 1 Unbalanced growth 2 Conjugate vaccines 3 Growth rate	3
Q2)	B Answer the following: (any three) 1 How would you derive n (no of generations) for bacteria growing by geometric progression? 2 How would you carry out Continuous culture? 3 Explain in brief plate count method 4 Write a note on Monoclonal Antibodies 5 Explain the effect of oxygen on bacterial growth	12
Q 3)	A Give two examples of following 1 Aerobic spore formers 2 Limnetic habitat 3 Airborne diseases	3
Q 3)	B Answer the following (any three) 1 Explain life zones in a lake. 2 Describe Biological containment.	12

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- 3 Write a note on microbiological analysis of potable water.
- 4 How would you enumerate bacteria in air?
- 5 Explain marine water with respect to microorganisms.

- Q4) A Give Role of 3
- 1 Baffles
 - 2 Impeller
 - 3 Fermenter
- Q4) B Answer the following (Any Three) 12
- 1 Describe various parts of a typical fermenter.
 - 2 Explain role of carbon, nitrogen and growth factors in media formulation for fermentation.
 - 3 Explain sterilization of liquid wastes.
 - 4 Discuss methods of sterilization of fermenter.
 - 5 How would you control the foam problem occurred in fermentation?
