

B.N. BANDODKAR COLLEGE OF SCIENCE, THANE

FIRST END EXAMINATION OCTOBER 2011

S.Y.BSc.

BIOTECHNOLOGY PAPER- III

Duration 2 hrs

Max Marks-60
Marks

- N.B. 1) All Questions are compulsory.
2) Figures to right indicate full marks.
- Q.1) A Write short notes on: (any three) 12
1 Competitive Inhibition
2 Isozyme Regulation
3 Schematically explain amphibolic nature of EMP.
4 State Beer Lamberts law and mention limitations of colorimeter
5 Distinguish between paper chromatography and TLC.
- Q.1) B Define the following 3
1 Enzyme Inhibition
2 Denaturation of enzyme
3 Catabolism
- Q2) A Answer any two of the following 12
1 Explain the effect of enzyme concentration and pH on the rate of enzyme reaction
2 Describe the work of Michealis and Menten in enzyme kinetics
3 Describe Feed-back mechanism with suitable examples
- Q2) B Explain the following terms (any three) 3
1 V_{max}
2 Activator
3 Optimum temperature
4 K_m
- Q 3) A Answer the following (any two) 12
1 Explain Glycolysis pathway schematically.
2 Write a note on energy yield of TCA cycle
3 Distinguish between Glycolysis and TCA

P.T.O.

- Q 3) B Give enzyme name involved in following reaction (any three) 3
- 1 Succinate to Fumarate
 - 2 Fructose-6-phosphste to Fructose-1,6-diphosphste
 - 3 PEP to Pyruvate
 - 4 OAA + Acetyl CoA to Citrate
- Q.4) A Write about any three of the following: 12
- 1 Principle and applications of gel filtration.
 - 2 Principle and procedure of TLC
 - 3 Principle and procedure of paper chromatography
 - 4 Describe the components of column chromatography with a diagram.
 - 5 What is R_f value and state its significance
- Q.4) B Answer the following 3
- 1 Principle of Ion-exchange chromatography
 - 2 Principle of Adsorption chromatography
 - 3 Define chromatography
