

B. N. BANDODKAR COLLEGE OF SCIENCE, THANE
SECOND TERM-END EXAMINATION- MARCH - 2012

S.Y.B.Sc

MICROBIOLOGY : PAPER II

Duration 2 hrs	Max Marks-60
N.B. 1) All Questions are compulsory. 2) Figures to right indicate full marks.	Marks
Q.1) A Answer the following 1 Give structure of ATP. 2 What is coenzyme? 3 What is Km?	3
Q.1) B Answer the following: (any three) 1 Give a note on competitive inhibitor with example. 2 What is the free energy concept? 3 Give short note on cofactors. 4 Justify EMP is an amphibolic pathway. 5 Explain constitutive pathway with the help of suitable example.	12
Q2) A Answer the following: 1 What is ΔS ? 2 What is redox potential? 3 What is exothermic process?	3
Q2) B Attempt of the following: (any Three) 1 Justify ATP as energy currency of the cell. 2 Explain the process of photophosphorylation in photosynthesis. 3 What is $\sim P$? Give note on high energy rich compounds. 4 What is oxidative phosphorylation? Explain it with example. 5 Give details of mechanism of ATP synthesis during the process of respiration	12
Q 3) A Answer the following: (any three) 1 Explain with structures and enzymes $OAA + Acetyl\ CoA \rightarrow Fumarate$ 2 Discuss the amount of ATP production in a TCA cycle 3 Distinguish between EMP and TCA cycle 4 Explain with structures and enzymes $Glucose\ 6-Phosphate \rightarrow PEP$ 5 Explain anaplerotic reactions with suitable examples and give their role.	12

P.T.O

- Q 3) B Give structure of following 3
1 Malate
2 alpha- Keto glutarate
3 2-PGA
- Q 4) A Answer the following(Any Three) 12
1 How enzymes are classified? Give example of each.
2 Discuss- The effect of [S] on enzyme activity.
3 What are Allosteric enzymes? Give example.
4 Explain the MWC model.
5 Explain the Ping-Pong mechanism of enzyme regulation.
- Q.4) B Answer in one sentence. 3
1 What is enzyme saturation effect?
2 Name the enzyme that catalyzes removal of group from substrate without addition or removal of water.
3 What is Q_{10} ?
