## (A) Define the following terms: (40%)

1) Apotosis and necrosis
2) Bohr effect
3) Monoclonal antibody and polyclonal antibody
4) Endergonic and exogonic reactions
5) Satellite DNA
6) Radioautography
7) Substrate-level phosphorylation
8) Restriction fragment length polymorphisms (RFLPS)
9) Glyoxysome
10) Constitutive and inductive enzymes

## (B) Answer the following questions: (60%)

1) a) Define competitive, non-competitive and uncompetitive enzyme inhibitions. (10%)
   b) Give the applications of these various inhibitions in drug design for disease therapy. (5%)

2) Draw a diagram to show the Cori cycle for the transportation of lactate produced in muscle. (10%)

3) Describe the biosynthesis pathway and physiological functions of nitric oxide (NO) in cells. (10%)

4) Draw a general diagram to show how a foreign DNA is inserted and expressed in bacteria by using a plasmid vector. (10%)

5) Describe the structure, actions and functions of G proteins. (15%)