MODEL PAPER - I

BIOCHEMISTRY

III - Semester

Section - A (short Answer Type) (Any five). 5 x 4 = 20 m

1. High energy compounds.
2. free energy.
3. Substrate level phosphorylation.
4. Ultrastructure of chloroplast.
5. Uncouplers.
6. Coenzymes.
7. LDH (iso-enzymes).
8. Km.

Section - B (Answer all questions) (Essay type) 15 x 4 = 60 m.

9. A) Write an essay on
   1. Energy Transformation.
   2. Phosphate transfer potential

   B) Write a short notes on
   1. cytochrome - structure types and their function.

10. A) Explain ETC complexes and mention the inhibitors of ETC.

    (or)

    B) Write an essay on cyclic and non-cyclic photophosphorylation.

11. A) Write the enzyme classification and nomenclature.

    (or)

    B) Write a short notes on enzyme purification.

12. A) Write essay on factors effecting enzyme catalysis.

    (or)

    B) (i) Write short notes on Allosterism and co-operactivity.

    (ii) Covalent modification - covalent phosphorylation of phosphorylase.

MODEL PAPER-II

SECTION-A

Answer any five questions:- 5 x 4 = 20 M

1. Enthalpy.
2. Endothermic reactions.
3. Half reactions.
4. Standard reduction potentials.
5. Difference between biocatalyst and chemical catalysts.
6. Ultra structure of Mitochondria.
7. PDH complex.
8. ~~Zymogen~~ zymogens.

SECTION-B

Answer all the questions :- 15 x 4 = 60 M.

9. A) Write a essay on oxidative phosphorylation - Theories of chemiosmotic-theory.

(or)

B) (i) Write short notes on $F_0 - F_1$ ATPase.

(ii) ROS (Reactive oxygen species)

10. A) Write a notes on

(i) Redox couplers

(ii) Reductional potentials

(iii) Uncouplers.

11. A) Methods of (or) fundaments of enzyme assay.

(or)

B) Write short notes on

i) Lok-Key model.

ii) Induced-fit model.

12. A) Write essay on enzyme inhibition i) competitive

ii) Non-competitive

iii) Uncompetitive.

(or)

B) Write a essay on enzyme catalysis

i) Acid base catalysis

ii) covalent catalysis

iii) Electrostatic catalysis.

MODEL PAPER-III

SECTION-A

Answer any five questions :- 5×4 = 20M

1. Entropy.
2. Exergonic reactions.
3. Redox reactions.
4. Inhibitors of oxidative phosphorylation.
5. Co-factors.
6. Transition state.
7. Activation of chymotripsinogen.
8. Ribozymes.

SECTION-B

Answer all the questions :- 15×4 = 60 M.

9. A) Write essay on enzymes involved in biological oxidation [oxidases, Dehydrogenases, oxygenases].

(or)

B) Write short notes on

i) Holo enzyme.
ii) Enzyme units.
iii) Activation energy.

10. A) Write a notes on i) Metal ion catalysis
ii) Activation of Trypsinogen
iii) ATP ase

11. A) Explain i) Apo enzyme, Active site
ii) Michaelis Menton equation

(or)

B) classification of enzymes.

12. A) Explain enzyme inhibition
i) Reversible
ii) Irreversible.

(or)

B) Explain enzyme catalysis.