

## **M.Sc. (FINAL) EXAMINATION, 2018**

### **CHEMISTRY**

**Paper : Sixth : CH-502 (Recent Trends in Life Science)**

**Time Allowed : Three Hours**

**Maximum Marks**

#### **UNIT-I**

1. How do you classify macro and micro metal ions associated biological systems ? Describe their role in biological processes
2. Write notes on:
  - (a) DNA Polymerisation
  - (b) Glucose storage

#### **UNIT-II**

3. (a) Discuss the function of metalloproteins in electron transport processes.  
(b) Describe the mechanism of enzyme action with reference to carboxypeptidase A.
4. Write short notes on :
  - (a) Identification of active sites by the use of inhibitors.
  - (b) Enzyme modification by site-directed mutagenesis.

#### **UNIT-III**

5. Describe the various techniques and methods of immobilization of enzymes. What are the applications of immobilized enzymes ?
6. Write notes on:
  - (a) Mechanism of reactions catalysed by NADP
  - (b) Synthetic enzymes.

#### **UNIT-IV**

7. What do you understand by multiple equilibria with reference to biopolymer interactions ? Discuss the various types of binary processes in biological systems.
8. Write notes on :
  - (a) Helix coil transition
  - (b) Hydrolysis of ATP

#### **UNIT-V**

9. Enumerate various experimental techniques of evaluating molecular weight of biopolymers. Discuss any two techniques in detail
10. Write notes on :

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- (a) Membrane equilibrium.
  - (b) Irreversible and thermodynamic treatment of membrane transport.