

CC 14, CHEMISTRY HONS.

1. Answer all the questions

[1×8=8]

- i. What is alpha amino acid.
- ii. Define allosteric effect of enzymes.
- iii. Give an example of zwitter ion.
- iv. What is glycosidic linkage.
- v. Define saponification value of an oil.
- vi. What is caloric value of food.
- vii. Give an example of basic dye.
- viii. Write the five nitrogen bases present in DNA.

2. Answer any **Eight** questions

[1.5×8=12]

- i. What is active site of an enzyme.
- ii. What is zwitter ion.
- iii. Define renaturation of protein.
- iv. Define catabolism process of biomolecules.
- v. Write the structure of Ibuprofen.
- vi. Define denaturation of protein.
- vii. What is essential and non-essential amino acids.
- viii. Give an example of stereo specificity of an enzyme.
- ix. What is rancidity.
- x. Give an example of purine base of nitrogen.
- xi. Write use of chloramphenicol.
- xii. What is the use of antipyretic drug.

3. Answer any **Eight** the questions

[2×8=16]

- i. Discuss electrophoresis process of amino acid.
- ii. Synthesize a peptide molecule by protecting the N-terminal of the amino acid.
- iii. Discuss denaturation of protein with example.
- iv. Discuss salient features of active site of enzymes.
- v. Write synthesis of uracil.
- vi. Write the difference between catabolism and anabolism process.

- vii. Write synthesis of malachite green.
- viii. Write the synthesis of chloroquine.
- ix. Write the difference between acid value and iodine number.
- x. Discuss uncompetitive enzyme inhibition.
- xi. Discuss the factors affecting enzyme action.
- xii. Write the difference between nucleosides and nucleotides.
- xiii. Discuss the catabolic pathway of fat and protein.
- Xiv. Write the medicinal values of azadirachtin.
- xv. Write the synthesis of Ibuprofen.

4. Answer any **Four** questions

[4×6=24]

- i. Discuss synthesis and applications of methyl orange and congo red.
- ii. Discuss about glycolysis of carbohydrates.
- iii. Discuss solid phase synthesis of peptide.
- iv. Describe two methods of synthesis determination of primary structure of peptides.
- v. Describe tertiary structure of proteins.
- vi. Discuss the mechanism of enzyme action in brief taking trypsin as example.