

7120-20-20

(v) Discuss with examples about isoelectric point.

(vi) How will you convert an aldohexose to aldopentose ?

(vii) Discuss the reaction mechanism of Knoevenagel reaction.

(viii) Write the structures of three compounds contain imidazole nucleus.

(ix) Differentiate between quinolone and isoquinoline nucleus.

(x) Discuss about primary structure of protein.

(xi) Discuss about the cyclic structure of D-glucose.

(xii) Write note about chemical properties of fructose.

2. Answer any *eight* from the following questions :

$$5 \times 8 = 40$$

(i) Discuss about the nomenclature of heterocyclic compounds.

(ii) Write a brief note on disaccharides and polysaccharides.

- (iii) Write the method of preparation of imidazole and oxazole.
- (iv) Give the Fischer configuration of D-series of aldoses containing three through six carbon atoms.
- (v) Define mutarotation and outline the mechanism of mutarotation of dextrose.
- (vi) Write down any two general methods of preparation of amino acid.
- (vii) Discuss about oppenaur oxidation.
- (viii) Write down the reactions of quinolone.
- (ix) Differentiate between fats and oils.
- (x) Why pyridine is more basic than pyrrole but less basic than primary amine ?

3. Answer any *three* from the following questions :

10×3=30

- (i) Write the preparation, properties and pharmaceutical importance of either pyridine or pyrimidine.

- (ii) Discuss in detail about the reaction mechanism and synthetic importance of Benzoin condensation and Beckmann rearrangement.
- (iii) Classify amino acids according to acidity and basicity. Write a note on Gabriel's phthalimide synthesis of an alpha-amino acid.
- (iv) Discuss in detail including chemistry about reducing and non-reducing sugars.