summer-2023

09/5/23

Seat Number | | | | | | |

PANKH-50

BP-301-T

Pharmaceutical Organic Chemistry-II

(723301)

Total Pages : 5]

Time : 3 Hours **Max Marks : 75**

Note : (1) *All* questions are compulsory.

(2) Figures to the right indicate full marks.

1. (A) Multiple Choice Questions (each 1 mark) : 10

(*i*) Benzene is a :

(*a*) Aliphatic Compound

(*b*) Azomatic Compound

(*c*) Heterocyclic Compound

(*d*) None of the above

(*ii*) Benzene undergoes :

(*a*) Substitution reaction (*b*) Addition reaction

(*c*) Elimination reaction (*d*) None of these

(*iii*) Phenol is less acidic than :

(*a*) Ethanol

(*b*) *o*-nitrophenol

(*c*) *o*-Methylphenol

(*d*) *o*-Methoxyphenol

P.T.O.

(*iv*) Electron withdrawing substituents :

(*a*) Stabilised the phenoxide ion and increase acidity of phenol

(*b*) Stabilise the phenoxide ion and decrease the acidity of phenol

(*c*) Stabilise the phenoxide ion and neutralise the acidity of phenol

(*d*) None of the above

(*v*) Hoffman's degradation reaction is used for the synthesize of :

(*a*) Secondary aromatic amine

(*b*) 1° aromatic amine

(*c*) 3° aromatic amine

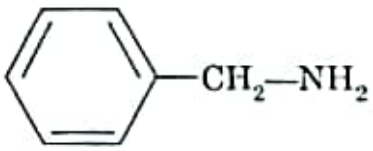
(*d*) None of the above

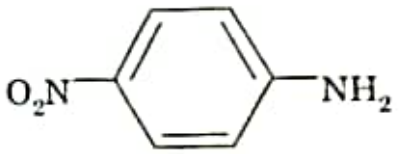
(*vi*) Carboxyl group in aromatic acid is :

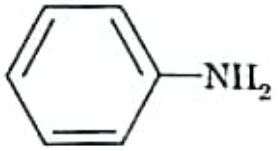
(*a*) *o*-directing (*b*) *m*-directing

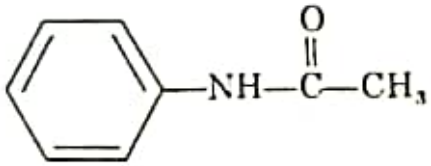
(*c*) *p*-directing (*d*) None of these

(*vii*) Which of the following is more basic ?

(*a*) 

(*b*) 

(*c*) 

(*d*) 

(*viii*) Saponification is done :

(*a*) By alkali hydrolysis (*b*) By acids

(*c*) By salts (*d*) All of these

(*ix*) Rancidity of lipids containing food is due to :

(*a*) Hydrogenation of unsaturated fatty acid

(*b*) Reduction of fatty acid

(*c*) Oxidation of fatty acid

(*d*) Dehydrogenation of saturated fatty acid

(*x*) Naphthalene on oxidation with $KMnO_4$ in acidic medium gives :

(*a*) Phthaldehyde

(*b*) Aliphatic anhydride

(*c*) Phthalic acid

(*d*) Phthalonic acid

(B) Solve the following (each question 2 marks) : 10

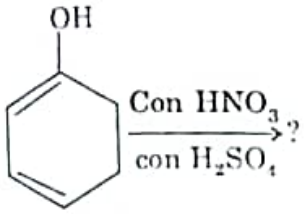
(1) What is Resonance ? Give an example.

(2) Draw the structure of DDT, Saccharin, Cresol and Naphthalene.

(3) What is Saponification ?

(4) Give the medicinal uses of phenol and naphthalene.

(5) Complete the reaction :



2. Solve any *two* (each question 10 marks) : 20

(a) Explain in detail aromatic electrophilic substitution reaction.

(b) Write notes on :

(i) What is the effect of electron withdrawing group on the acidity of phenol ?

(ii) Write a note on rancidity of oils.

(c) Explain Bayer's strain theory with limitation.

3. Solve any *seven* (each question 5 marks) : 35

(a) Explain aromaticity in detail.

(b) Write a note on basicity of aromatic amines.

(c) Explain Haworth synthesis of naphthalene.

(d) Write a note on Sachse Mohr's theory.

(e) Explain different analytical constant of fats and oils.

(f) Explain Friedal-Craft alkylation along with limitation.

(g) Give the *two* chemical reactions of anthracene.

(h) Give the method of preparation of aromatic acids.

(i) Acidity of aromatic acid increases with electron withdrawing group. Give its application.