Code No: BP301T **PCI** SET - 1

II B. Pharmacy I Semester Supplementary Examinations, May - 2019
PHARMACEUTICAL ORGANIC CHEMISTRY-II

Time: 3 hours Max. Marks: 75

Note: 1. Question Paper consists of three parts (**Part-I**, **Part-II & Part-III**)
2. Answer ALL (Multiple Choice) Questions from **Part-I**
3. Answer any **TWO** Questions from **Part-II**
4. Answer any **SEVEN** Questions from **Part-III**

PART –I

1. (i) Major problem with Friedel crafts alkylation is …… (1M)
(a) Need high temperature
(b) Yields are very low
(c) Poly substitution and side product formation
(d) Cost implications

(ii) --------- as a substituent, activates benzene and gives tribromo derivative on reaction with bromine water gives tribromo derivative. (1M)
(a) -COOH (b) $-NO_2$ (c) –Oh (d) –CN

(iii) Cyclopentadiene is considered as an antiaromatic compound because ……. (1M)
(a) It is colored
(b) It is a flat molecule
(c) It has 4n π electrons
(d) No conjugation in double bonds

(iv) …… is an essential requirement for conducting Friedel crafts reaction. (1M)
(a) High temperature
(b) Moisture free environment in reaction vessel
(c) Polar protic solvent
(d) Long reaction times

(v) …….. is a very good example of a Lewis acid (1M)
(a) HCl (b) HCOOH (c) BF_3 (d) NaCl

(vi) Among the following, ……. is the stronger acid (1M)
(a) Benzoic acid (b) p-fluorobenzoic acid (c) p-toluic acid (d) Napthoic acid

(vii) 1, 2-hydroxybenzene is commonly known as……. (1M)
(a) Hydroxyquinol (b) Resorcinol (c) Catechol (d) Phenol

(viii) …… can form an azodye. (1M)
(a) Aniline (b) isopropylamine (c) diphenylamine (d) N-methylaniline

(xi) Benzenediazonium chloride reacts with …….. to give benzonitrile (1M)
(a) $CaCl_2$ (b) NaCN (c) CuCN (d) $Cd(CN)_2$

(x) Naphthalin upon oxidation with V_2O_5 gives……. (1M)
(a) Benzoic acid (b) Salicylic acid (c) phthalic acid (d) no reaction

(xi) Iodine value of a fixed oil gives information on …….. (1M)
(a) Fatty acid chain length (b) extent of unsaturation in a lipid
(c) Rancidity (d) peroxidation

(xii) Dalda is obtained from …… of fixed oil (1M)
(a) Hydrolysis (b) oxidation (c) saponification (d) hydrogenation

(xiii) …….. is a good example of a saturated fatty acid (1M)
(a) Oleic acid (b) Palmitic acid (c) arachidonic acid (d) oleanolic acid

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(xiv) ……. carbons of anthracene are more reactive towards addition reactions. (1M)
(a) 1,2 (b) 3,4 (c) 6,7 (d) 9, 10

(xv) ……. is not used as a catalyst in Friedel Craft's reaction (1M)
(a) HCl (b) HF (c) H_2SO_4 (d) ZnCl

(xvi) p-hydroxy acetophenone is synthesized easily by……. reaction (1M)
(a) Mannich (b) Kolbe (c) Frie's (d) Claisen

(xvii) Ferric ion reacts with ……. And gives violet color (1M)
(a) Benzene (b) Aniline (c) Phenol (d) Naphthalene

(xviii) Among the given cycloalkanes, ……. has highest stability (1M)
(a) Cyclopropane (b) cyclobutene (c) cyclopentane (d) cyclohexane

(xix) Among the conformations of propane …… has highest internal energy (1M)
(a) Eclipsed (b) Partially eclipsed (c) partially staggered (d) staggered

(xx) Naphthalene reacts with alkaline KMnO4 and gives …. (1M)
(a) Naphthoquinone (b) Benzoic acid (c) phthalic acid (d) salicylic acid

PART –II

2. a) Discuss the orbital picture of benzene. (5M)
   b) Write the reaction and mechanism involved in nitration of benzene. (5M)

3. a) Write a note on structure, properties and uses of phenol. (5M)
   b) Write reactions of aniline. (5M)

4. a) Write the principle, procedure and significance of acetyl value and RM value. (5M)
   b) What is rancidity of fixed oils? Write the tests used for estimating it. (5M)

PART -III

5. Give reasons for the following. (5M)
   (a) Benzene prefers substitution reaction than addition reaction
   (b) Acylation of benzene gives single product but alkylation gives polysubstitution product.

6. Write three methods for preparation of benzoic acid. (5M)

7. Write method of preparation and uses of (5M)
   (a) BHC (b) Sacharin

8. Write synthetic applications of diazonium salts. (5M)

9. Write a note on Bayer's strain theory. (5M)

10. Discuss the structure and uses of triphenylmethane derivatives. (5M)

11. Write methods used for synthesis of anthracene. (5M)

12. Discuss the principle, method and applications of saponification value. (5M)

13. Write reactions of cyclobutane. (5M)