

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY
LONERE - RAIGAD - 402 103
Winter Semester Examination - December - 2019

Branch: B. Pharm. Second Year

Semester: III

Subject: Pharmaceutical Organic Chemistry-II (BP301T)

Marks: 75

Date: 17/12/2019

Time: 3hrs

- Instructions:** i) All questions are compulsory
ii) Figures to the right indicate full marks
iii) Draw the diagrams or flow charts wherever necessary.

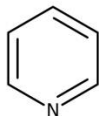
Q. No.1 Multiple Choice Questions (MCQs) = 20 x 1 = 20

(Answer all the questions)

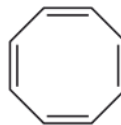
- 1) The Bond angle between carbon atoms in cyclohexane is-----
 - a) 60°
 - b) 90°
 - c) 120°
 - d) 109.28°
- 2) Anthracene undergoes electrophilic substitution reactions mainly at -----
 - a) C-1
 - b) C-2
 - c) C-9
 - d) C-1 & C-2
- 3) Phenanthrene on reduction in presence of Na in isopentanol gives-----
 - a) 9,10 –dihydrophenantherne
 - b) 1,2 –dihydrophenantherne
 - c) 3,4 –dihydrophenantherne
 - d) None of the above
- 4) The most stable conformation of cyclohexane is the -----
 - a) Haworth
 - b) Chair
 - c) Boat
 - d) Newmann
- 5) Fats and oils are -----
 - a) Diesters of glycerol
 - b) Diesters of glycol
 - c) Monoesters of glycerol
 - d) Triesters of glycerol
- 6) Naphthalene undergoes nitration with $\text{HNO}_3/\text{H}_2\text{SO}_4$ at $50-60^\circ\text{C}$ to give mainly-----
 - a) 1- Nitronaphthalene
 - b) 2- Nitronaphthalene
 - c) 1, 2 Dinitronaphthalene
 - d) 1, 8- dinitronaphthalene
- 7) Which of the following compound is aromatic



a)



b)



c)



d)

- 8) Liquid oil can be converted in to solid fats by -----.
- a) Saponification b) Hydrolysis
c) Hydrogenation d) Oxidation of double bond
- 9) Phenol on reaction with excess of Bromine water to give-----.
- a) bromobenzene b) m-bromophenol
c) ortho and p-bromophenol d) 2,4,6 tribromophenol
- 10) Which of the following acid is weaker than Benzoic acid?
- a) p-nitrobenzoic acid b) p-methylbenzoic acid
c) p-chlorobenzoic acid d) o-chlorobenzoic acid
- 11) The degree of unsaturation of fat can be determined by means of its -----.
- a) Iodine number b) Saponification number
c) Acetyl number d) Ester number
- 12) The carbon atoms in a benzene ring are :
- a) sp³ hybridised b) sp hybridized c) sp² hybridised d) None of the above
- 13) Phenols can be synthesized by the -----methods.
- a) Dow's process b) From cumene c) From coal tar d) All of the above
- 14) Benzene undergoes substitution reaction more easily than addition reaction because:
- a) It has a cyclic structure b) It has double bonds
c) It has six hydrogen atoms d) There is delocalization of electrons
- 15) Highly unsaturated oil exposed to air, they undergo oxidation and polymerization to form----
- a) Drying oil b) Rancid oil c) Hardening oil d) Saponification
- 16) Anthracene on oxidation gives-----.
- a) Pthalic acid b) Benzophenone c) Benzoic acid d) Anthraquinone
- 17) Benzene reacts with acetic anhydride in presence of AlCl₃ to form:
- a) Benzophenone b) Acetophenone c) Phenylacetate d) Chlorobenzene
- 18) Aniline on reaction with acetic anhydride gives-----.

- a) N-methylaniline
b) p-aminoacetophenone
c) Acetanilide
d) m-aminoacetophenone

19) Which of the following compound is more reactive?

- a) Cyclohexane b) Cyclopentane c) Cyclopropane d) Cycloheptane

20) Benzene reacts with Conc.HNO₃ in presence of Conc.H₂SO₄ to give nitrobenzene, this is an example of ----.

- a) Electrophilic substitution b) Electrophilic addition
c) Nucleophilic substitution d) Nucleophilic addition

Q. No.2 Long Answers (Answer 2 out of 3) = 2 x 10 = 20

A] Discuss Aromaticity and Resonance in Benzene. Explain any two Electrophilic Substitution Reactions with Example.

B] Give Synthesis, Reactions and Medicinal uses of Phenanthrene and Anthracene.

C] Explain Principle, Procedure involved in Determination of Saponification Value. Give Significance of Reichert Meissl (RM) value.

Q. No.3 Short Answers (Answer 7 out of 9) = 7 x 5 = 35

A] Explain the Structure and Uses of DDT and Saccharine.

B] Discuss Baeyer strain Theory of Stability of cycloalkanes.

C] Give the structure and synthesis of triphenylmethane.

D] What are fats and oil? Give significance of iodine value and ester value.

E] Explain the effect of substituent on the acidity of aromatic acids/benzoic acid.

F] What are aryldiazonium salts and give its applications.

G] Give qualitative tests for phenols, give structure and uses of cresol and resorcinol.

H] Give halogenations reaction and reamer-tiemann reaction for phenol.

I] Explain Friedel-Crafts alkylation and acylation reaction of benzene.

----- END OF PAPER -----