2022/12

SET A

B. PHARM.
THIRD SEMESTER
PHARMACEUTICAL ORGANIC CHEMISTRY-II
BP301T

[USE OMR FOR OBJECTIVE PART]

Duration : 3 hrs. **Full Marks : 75**

(PART-A : Objective)

Time : 30 min. **Marks : 20**

Choose the correct answer from the following: ***1×20=20***

1. Cycloalkanes have same molecular formula as_____
   a. Alkenes b. Alkanes
   c. Alkynes d. Cycloalkenes
2. Angle strain of cyclopropane is
   a. 60^0 b. $109^0\ 28'$
   c. $24^044'$ d. None of these
3. Which of the following compound is most basic?
   a. Aniline b. Nitrobenzene
   c. Benzylamine d. Acetanilide
4. All sigma-bond in benzene lies in on one plane. All bond angles are ....
   a. 90^0 b. 120^0
   c. 118^0 d. 125^0
5. Which of the following reagent is used for nitration reaction of benzene?
   a. Conc. Nitric acid b. Conc. Sulphuric acid
   c. Both a and b d. Hydrochloric acid
6. Benzene reacts with chlorine in presence of $FeCl_3$ catalyst to form
   a. Hexachlorobenzene b. Chlorobenzene
   c. Benzyl chloride d. Hexachlorocyclohexane
7. Phenol on distillation with zinc dust give
   a. Benzene b. Nitrobenzene
   c. Phenylzinc d. Benzoic acid
8. Which of the following is the strongest acid?
   a. Trichloroacetic acid b. Phenol
   c. Acetic acid d. Benzoic acid
9. In chlorination of benzene, $FeCl_3$ is used to generate
   a. Cl^- b. Cl^+
   c. HCl d. Cl_2
10. How many resonances structure are formed for Anthracene?
    a. 1 b. 3
    c. 5 d. 4

11. All carbon in Naphthalene are
    a. Sp hybridised
    b. Sp2 hybridised
    c. Sp3 hybridised
    d. None of the above

12. Alkaline hydrolysis of fats and oils are called
    a. Fermentation
    b. Saponification
    c. Diazotization
    d. Rancidification

13. Liquid oil can be converted to solid fats by
    a. Hydrolysis
    b. Hydrogenation
    c. Saponification
    d. Oxidation

14. Starting materials for the synthesis of phenanthrene are_____
    a. Naphthalene & Succinic anhydride
    b. Naphthalene & phthalic anhydride
    c. Naphthalene & acetic anhydride
    d. Naphthalene & benzene

15. Naphthalene undergoes oxidation with KMnO4 in acidic condition to form
    a. Phthalic acid
    b. Benzoic acid
    c. Tetraline
    d. Phenyl acetic acid

16. Anthracene undergoes electrophilic substitution reaction at
    a. C-1
    b. C-5
    c. C-3
    d. C-9

17. Naphthalene undergoes electrophilic substitution reaction at
    a. C-1
    b. C-3
    c. C-5
    d. C-2

18. Which of the following is not an example of angular polynuclear hydrocarbon
    a. Codeine
    b. Phenanthrene
    c. Anthracene
    d. Morphine

19. Soaps are prepared by hydrolysis of triglycerides using
    a. HCl
    b. H2SO4
    c. NaOH
    d. All of the above

20. Benzene reacts with methyl chloride in presence of FeCl3 to give
    a. Benzonitrile
    b. Benzyl chloride
    c. Toluene
    d. Both b & c

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PART-B : Descriptive

Time : 2 hrs. 30 min. Marks : 35

[Answer any seven (7) questions]

1. Explain in brief Baeyer's strain theory with examples. 5

2. Write the structure and medicinal uses of 2+1.5+1.5=5
a. Resorcinol b. Saccharine c. BHC

3. Write a note on preparation of phenol. 5

4. Write a note on reactions of fatty acids. 5

5. Discuss aromaticity (Huckle's rule) and different structures of benzene. 2.5+2.5=5

6. Write the important reaction of Benzoic acid. 5

7. Define- a. phenol b. benzene c. Fats and oils d. cycloalkanes e. polynuclear hydrocarbon 1+1+1+1+1=5

8. Write a note on effects of substituents on reactivity and orientation of benzene. 5

9. Write a note on qualitative test of phenol. 5

PART-C : Long type questions

[Answer any two (2) questions]

1. Write a note on Synthesis and reactions of naphthalene. 5+5=10

2. Discuss in brief about analytical constants used in fats and oils. 2.5+2.5+2.5+2.5=10

3. Write a note on electrophilic substitution reactions of benzene. 10

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