Seat No: **Enrollment No:** 

# PARUL UNIVERSITY

## **FACULTY OF PHARMACY**

#### B. Pharm. Winter 2018-19 Examination

Semester: 3 Date:27/11/2018

Subject Code: BP301T Time: 02:00pm to 05:00pm **Total Marks: 75** 

Subject Name: Pharmaceutical Organic Chemistry II - Theory

# **Instructions:**

1. Figures to the right indicate maximum marks. 2. Make suitable assumptions wherever necessary.

### **Q.1 Multiple Choice Questions (MCQs)** (1 Mark Each)

(20)

- 1. The reagents which are used in the Friedel-crafts alkylation to produce electrophile:
  - a) AlCl<sub>3</sub>,CH<sub>3</sub>Cl

b) AlCl<sub>3</sub>,CH<sub>3</sub>Cl<sub>2</sub>

c) AlCl<sub>3</sub>,CH<sub>2</sub>Cl

- d) AlCl<sub>4</sub>,CH<sub>3</sub>Cl
- 2. Which of the following agents is used in order to make nitrobenzene from benzene with nitric acid?

a) FeCl<sub>3</sub>

b) NaOH

c) Conc.H<sub>2</sub>SO<sub>4</sub>

- d) Toluene
- What is the IUPAC name of Toluene? 3.
  - a) Aminobenzene

b) Nitrobenzene d) None of these

- c) Methylbenzene
- 4. Phenol have the acidic property due to: a) Phenoxide
- b) ) Alkoxide

c) Carboxylate

- d) None of these
- Delocalisation of  $\pi$  electron result in: 5.
  - a) Resonance

b) Hyperconjugation

c) Metamerism

- d) Inductive effect
- 6. In chlorination of benzene FeCl<sub>3</sub> is used to generate:
  - a) Cl

b) Cl<sup>+</sup>

c) Cl<sub>2</sub>

- d) HCl
- 7. When phenol is treated with neutral FeCl3 solution it develops:
  - a) Violet color

b) Yellow color

d) Nothing happens

c) Green color

- 8. Chemically fats & oils are:
  - a)Triglycerides

b)Triphenolic

c)Trialcholic

- d)None of the above
- 9. The smaller the saponification value the higher will be the:
  - a)Molecular weight

b)Saturation

c)Rancidity

- d)Oxidation
- 10. Copper Chromite used as a catalyst in the following reaction:
  - a) Hydrogenolysis

b) Hydrolysis

c) Drying

- d) Hydrogenation
- 11. Polyalkylation is related with the following reaction of Benzene:
  - a) Nitration

b) Sulphonation

c) Friedel-crafts alkylation

- d) Friedel-crafts acylation
- 12. Naphthalene having the molecular formula of:
  - a)  $C_{10}H_9$

b)  $C_{10}H_8$ 

c)  $C_9H_{10}$ 

- d)  $C_9H_8$
- 13. The reason for aromatic amines basic property:
  - a)Nitrogen lone pair

b)Hydrogen ion

c)Benzene ring

- d)Carboxylate ion
- 14. Naphthalene give Phthalic acid after oxidation reaction with:
  - a)KMnO<sub>4</sub>

b)HNO<sub>3</sub>

c)H<sub>2</sub>SO<sub>4</sub>

d)None of the above

15. The main source of polynuclear hydrocarbons are: a) Biogas & Petroleum b) Natural gas c) Petroleum d) Coal tar & Petroleum 16. Number of milligram of KOH required to saponify one gram of a fat or oil is called as: a)Saponofication number b)Iodine number c)Acid value d)Acetyl value 17. Methylphenol is also known as: a) Cresol b) Catechol d) Chloramine c) Resorcinol 18. Following are the examples of Polynuclear hydrocarbons EXCEPT: a)Naphthalene b)Phenanthrene c)Anthracene d)Phenol 19. Aromatic Acids have the acidic property due to: a) Carboxylate ion b) Nitrogen lone pair c) Benzene ring d) Hydrogen ion 20. The fatty acids which having only single bond in their structure: a) Saturated b) Unsaturated c) Polyunsaturated d) None of the above Q.2 Long Answers (any 2 out of 3) (10 Mark Each) (20)1. Explain Electrophilic aromatic substitution reaction for Friedel-crafts alkylation with its limitations. 2. Define Cycloalkanes with examples & explain Bayer's theory and its limitations. 3. Define Polynuclear hydrocarbons and write the synthesis with chemical reaction of Naphthalene. Q.3 Short Answers (any 7 out of 9) (5 Mark Each) (35)1. Write down the procedure and significance of Saponification & Acid value. 2. Write down the structure and use of DDT and Resorcinol 3. Discuss Orbital picture and Resonance of benzene. 4. Write down the various preparations for Phenol. 5. Write down the structure and use of Saccharin and Chloramine. 6. Explain Various Criteria for Aromaticity with Huckle rule. 7. Write down the structure & synthesis of Anthracene. 8. Write down the structure and use of Diphenylmethane and BHC. 9. Explain in brief about various Chemical properties of Fats & oils.