

PARUL UNIVERSITY
FACULTY OF PHARMACY
B. Pharm. Winter 2019 - 20 Examination

Semester: 2

Subject Code: BP202T

Subject Name: Pharmaceutical Organic Chemistry-I

Date: 22/11/2019

Time: 2.00pm to 5:00 pm

Total Marks: 75

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. Amines which are bonded with alkyl group are

a) Primary amines	b) Quaternary amines
c) Secondary amines	d) Tertiary amines
2. What is the correct formula of salicylic acid?

a) $C_7H_5O_3$	b) $C_7H_4O_3$
c) $C_7H_6O_3$	d) $C_6H_6O_3$
3. The [4+2]-cycloaddition of a conjugated diene and a dienophile is:

a) Diels-Alder reaction	b) Aldol condensation
c) Electromeric effect	d) Benzoin condensation
4. Which molecule is an example of a ketone?

a) Ethanal (Acetaldehyde)	b) Propan-2-one (Acetone)
c) Propanamide	d) Ethanoic anhydride (Acetic anhydride)
5. What is IUPAC name of Aniline?

a) Aminobenzene	b) Nitrobenzene
c) Methoxybenzene	d) None
6. Which is the correct order of stability for carbocation

a) $3 > 1 > 2$	b) $3 > 2 > 1$
c) $1 > 2 > 3$	d) $3 > 1 < 2$
7. In Markownikoff's rule a following compound is from 2-Methylbut-2-en as major product

a) 2-Bromo-2-Methylbutane	b) 2-Bromo-3-Methylbutane
c) 3-Bromo-2-Methylbutane	d) 3-Bromo-3-Methylbutane
8. Benzoic acid having the molecular formula

a) $C_7H_6O_2$	b) $C_6H_7O_2$
c) $C_7H_5O_2$	d) $C_7H_6O_3$
9. Condensation between two different aldehydes is called as:

a) Aldol Condensation	b) Benzoin Condensation
c) Cross aldol condensation	d) Carbylamine reaction
10. Citric acid is used in

a) Culinary preparation	b) Flavoring agent
c) Natural preservative	d) All of above
11. Benedict's reagent contains_____.

a) $KMnO_4$	b) $CuSO_4$
c) Sodium citrate	d) b, c both
12. If electron withdrawing substituents are added in carboxylic acid.....

a) Increase acidity	b) Decrease acidity
c) Increase basicity	d) Decrease basicity
13. Correct IUPAC name of $HCOOH$ is

a) Methanoic acid	b) Formic acid
c) Methanol	d) Ethanoic acid
14. Tollen's test is used for_____

a) Carboxylic acid	b) Alcohols
c) Aldehydes and ketones	d) Aliphatic amines

15. SN_2 reactions involving chiral electrophiles usually proceed with:
- | | |
|---|-------------------------------|
| a) Retention of configuration | b) Inversion of configuration |
| c) Equal amount of inversion and retention of configuration | d) None of above |
16. Ethyl alcohol is used as
- | | |
|--------------------|-----------------|
| a) Medical solvent | b) Antiseptic |
| c) Antidote | d) All of above |
17. What is correct structure of Chloroform
- | | |
|--------------------|-------------------|
| a) CHCl_3 | b) CCl_4 |
| c) CO_2 | d) CH_4 |
18. The functional group of aldehyde is:
- | | |
|------------------------|------------------|
| a) $-\text{CHO}$ | b) COOH |
| c) $\text{C}=\text{O}$ | d) COOR |
19. Chlorobutanol used as _____
- | | |
|------------------|-----------------|
| a) Antibacterial | b) Fungicidal |
| c) Preservative | d) All of above |
20. In cannizzaro reaction, HCHO reacts in presence of:
- | | |
|------------------------|-------------------------|
| a) Conc. NaOH | b) Conc. NaCl |
| c) Conc. HCl | d) Conc. HNO_3 |

Q.2 Long Answers (any 2 out of 3) (10 Mark Each)

(20)

1. Give a brief note on Aldol condensation and Perkin condensation with examples.
2. Write a note on Elimination reactions.
3. Write a short note on SN_1 reaction with kinetics, and order of reactivity of alkyl halides.

Q.3 Short Answers (any 7 out of 9) (5 Mark Each)

(35)

1. Give structure and write uses of Ethanolamine and Amphetamine.
2. Explain in brief about allylic rearrangement.
3. Write short notes on Structural Isomerism of organic compounds.
4. Write a note on basicity of aliphatic amines in brief with examples.
5. Write a note on Benzoin condensation.
6. Give a brief account on SP^2 hybridization in alkanes.
7. Write a note on Markonikoffs and Antimarkonikoffs orientation.
8. Describe briefly Diel's-Alder reaction with mechanism.
9. Brief note on acidity of carboxylic acids & effect of substituents on acidity.