



## BRAINWARE UNIVERSITY

Term End Examination 2023

Programme – D.Pharm-2022

Course Name – Pharmaceutical Chemistry – Theory

Course Code - ER20-12T

( Year I )

Full Marks : 80

Time : 3:0 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 20=20

1. Choose the correct alternative from the following :

(i) Identify correct answer: Acetic acid and alcohols are

- |                        |                        |
|------------------------|------------------------|
| a) Aprotic solvent     | b) Protophilic solvent |
| c) Amphiprotic solvent | d) Protogenic solvent  |

(ii) Identify correct answer: This method involves the titration of halides in an acidic medium

- |                  |                    |
|------------------|--------------------|
| a) Fajans method | b) Volhards method |
| c) Mohrs method  | d) None of these   |

(iii) Select which of the following is Vinca alkaloid

- |                   |                 |
|-------------------|-----------------|
| a) Mercaptopurine | b) Methotrexate |
| c) Vinblastine    | d) Doxorubicin  |

(iv) Identify which of the following is a synthetic androgenic anabolic steroid

- |                   |                   |
|-------------------|-------------------|
| a) Dromostanolone | b) Mercaptopurine |
| c) Methotrexate   | d) None of these  |

(v) Identify which of the following is Folate antagonist

- |                 |                     |
|-----------------|---------------------|
| a) Methotrexate | b) Busulfan         |
| c) Trimetrexate | d) Both (a) and (c) |

(vi) Identify correct answer: Examples of Systemic antacids is

- |                        |                       |
|------------------------|-----------------------|
| a) Calcium Carbonate   | b) Sodium Bicarbonate |
| c) Magnesium Hydroxide | d) Aluminium salts    |

(vii) Identify the correct option. Thiopentone belongs to which class of barbiturates

- |                  |                       |
|------------------|-----------------------|
| a) Long acting   | b) Short acting       |
| c) Medium acting | d) Ultra-short acting |

- (viii) Magaldrate contains combination of  
a)  $\text{Al(OH)}_3 + \text{Mg(OH)}_2$   
b)  $\text{CaCO}_3 + \text{Mg(OH)}_2$   
c)  $\text{Al(OH)}_3 + \text{CaCO}_3$   
d)  $\text{NaOH} + \text{Al(OH)}_3$
- (ix) Astringents refers to  
a) Fat precipitation  
b) carbohydrate precipitation  
c) Protein Precipitation  
d) Mineral Precipitation
- (x) The degree of agreement between measured value and accepted true value  
a) Precision  
b) Accuracy  
c) Range  
d) Average deviation
- (xi) Identify correct answer: Which of the following is beta blocker class  
a) Spironolactone  
b) Propranolol  
c) Frusemide  
d) All of the above
- (xii) Identify the correct option from the following: Ideal Antacid works in pH range  
a) ph 3-4  
b) ph 4-6  
c) ph 5-7  
d) ph 8-9
- (xiii) Identify the correct option from the following: The role of citric acid in the limit test of Iron is  
a) Alkaline media  
b) Acidic media  
c) Prevent precipitation  
d) Increase precipitation
- (xiv) Identify correct answer: Which of the following is Potassium sparing diuretic  
a) Spironolactone  
b) Bumetanide  
c) Frusemide  
d) All of the above
- (xv) Identify correct answer: Which of the following drug is 2nd generation hypoglycaemic agent of sulfonylurea class  
a) Glibenclamide  
b) Pioglitazone  
c) Repaglinide  
d) Metformin
- (xvi) Identify the correct option. Halothane is the \_\_\_\_\_ form of general anesthetic  
a) Inhalational  
b) Intravenous  
c) Both of them  
d) None of these
- (xvii) Identify correct answer: Limit test for arsenic is based on which test  
a) Gutzeit test  
b) Fehlings test  
c) Benedicts test  
d) None of these
- (xviii) Select the correct option. Chemical name of Atenolol is \_\_\_\_\_  
a) 1-(isopropylamino)-3-naphthalen-1-yloxypropan-2-ol  
b) (4-(4-amino-6,7-dimethoxyquinazolin-2-yl)piperazin-1-yl)(furan-2-yl)methanone  
c) 2-(4-(2-hydroxy-3-(isopropylamino)propoxy)phenyl)acetamide  
d) None of these
- (xix) Select the correct option. Which agents can reproduce the action of the acetylcholine by directly interacting with the receptors  
a) Cholinergic blocking agents  
b) Cholinergic agents  
c) Adrenergic antagonist  
d) None of these
- (xx) Identify correct answer: Limit test of iron is based upon reaction of Fe with which compound in a solution buffered with ammonium citrate  
a) Thioglycollic acid  
b) Acetic acid  
c) Sodium hydroxide  
d) Thioglyconate



**Group-B**

(Short Answer Type Questions)

3 x 10=30

*Answer all the questions*

2. Explain the principle involved in the limit test of iron. Also explain the role of thioglycolic acid in limit test of iron (3)
3. Discuss about complexometric titration and give the full name of EDTA with structure (3)
4. Describe antacids and classify them with suitable examples in each case (3)
5. Explain the properties, storage and uses of Silver Nitrate (3)
6. Explain ACE inhibitors and write a short note on Captopril with its structure (3)
7. Classify NSAID with suitable examples (3)
8. Describe Protectives and adsorbents with their use (3)
9. Define the following: Haematinics, Gastro intestinal agents, Topical agents, Dental products, Medicinal gases, Systemic alkalosis (3)
10. Describe one drug each from Propionic acid derivative and Salicylates derivative along with the structure (3)
11. Classify Anti tubercular drugs mentioning the generations (3)

**OR**

Illustrate the structure of the following: Diazepam, Haloperidol, Phenytoin, Gabapentin (3)

**Group-C**

(Long Answer Type Questions)

5 x 6=30

*Answer all the questions*

12. Describe Epinephrine (5)
13. Explain about Hypoglycaemic agents and Classify Oral hypoglycaemic agents with suitable examples (5)
14. Classify antibiotics with examples with a detailed focus on Penicillin-G (5)
15. Describe Phenytoin with structure (5)
16. Explain Acetylcholine with structure (5)
17. Explain Amitriptyline Hydrochloride with structure (5)

**OR**

Explain Propranolol with structure (5)

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