

Roll No.

--	--	--	--	--	--	--	--	--	--

B.PHARM.

1ST YEAR, I SEM.) EXAMINATION

PHARMACEUTICAL ANALYSIS-I

Time : 3 Hours]

[Max. Marks : 70

Note: Attempt all question as per Instructions.

1. Attempt All questions :

[1×14=14

- (i) Saturated solution is defined as ____
 - (a) All the solutes dissolves
 - (b) A clear solution
 - (c) Some solutes settles down & no more dissolution
 - (d) No More solutes dissolves on heating.
- (ii) In co-precipitation, occlusion means---of impurities
 - (a) Adsorbtion
 - (b) Entrapment
 - (c) Both
 - (d) None
- (iii) ____ is an example of self indicator
 - (a) KMnO_4
 - (b) Oxalic acid
 - (c) Ceric sulphate
 - (d) All
- (iv) ____ is used as an indicator on iodine titrations
 - (a) starch
 - (b) KMnO_4
 - (c) Ferroin
 - (d) Dipherytamine
- (v) The colour of acid base indicator depends on-
 - (a) Dilution
 - (b) Concentration
 - (c) pH
 - (d) MW
- (vi) Absolute error is ____
 - (a) Observed value- ture value
 - (b) Observed value
 - (c) Observed value+ture value
 - (d) True value

(vii) Titrimetry involves

- (a) Weight of solution (b) Composition of solution
- (c) volume of solution (d) Nature of solution

(viii) ___ theory is based on colour changes of the indicator depending upon its structure.

- (a) Quinonoid (b) Ostwald
- (c) Dilution (d) None

(ix) A substance is said to be reduced if it ___

- (a) gains electron (b) gains proton
- (c) loses electron (d) None

(x) In iodometric titrations _

- (a) Iodine solution is added in titration flask
- (b) Iodine liberates during reaction

- (c) Iodine is non-reactive (d) None

(xi) ___ affects thermogravimetry

- (a) Furnace (b) Sample characteristics atmosphere

- (c) Crucible geometry (d) All

(xii) In ___ technique a change in weight of a substance is recorded as a function of temperature

- (a) TGA (b) DTA
- (c) Ignition (d) Incineration

(xiii) ___ is an example of acid -base titration

- (a) $\text{KIO}_3, \text{Na}_2\text{S}_2\text{O}_3$ (b) $\text{I}_2, \text{As}_2\text{O}_3$
- (c) HCl, NaOH (d) $\text{AgNO}_3, \text{NaCl}$

(xiv) ___ factor affect solubility of precipitate

- (a) Common ion affect (b) Solvent
- (c) Temperature (d) All of above

2. Attempt any four questions of the following. [3.5×4=14]

- (a) Theory of indicators used in titrimetric analysis .
- (b) Salt hydrolysis
- (c) Iodimetry
- (d) Arrhenius theory of acids and Bases.
- (e) pH

Q.3 Attempt any two parts [7×2=14]

- (a) Explain Mohr's method
- (b) Discuss neutralization curves of acid and base.
- (c) Write applications of Titrimetric analysis

Q.4 Attempt any two parts [7×2=14]

- (a) Discuss advantages and disadvantages of gravimetric analysis.
- (b) Write a note on different methods of expressing concentration
- (c) Write a note on mixed indicators.

Q.5 Attempt any one parts [14×1=14]

- (a) Explain precipitation titration and its principle. Explain various factors affecting solubility of precipitate
- (b) Discuss various steps involved in gravimetric analysis.

Roll No.

--	--	--	--	--	--	--	--	--	--

B.PHARM.

1st YEAR, I SEM EXAMINATION

PHARMACEUTICAL CHEMISTRY-I (ORGANIC CHEMISTRY-I)

Time : 3 Hours]

[Max. Marks : 70

Note: *Attempt all question as per Instructions. Draw well labeled diagram wherever necessary.*

1. Attempt All questions :

[1×14=14

- (i) A compound reacts with steam in presence of sulphuric acid to give isopropyl alcohol, the compound could be.
 - (a) Alkane
 - (b) Alkyn
 - (c) Alkene
 - (d) Altene
- (ii) Ethylene is obtained from ethyl bromide by-
 - (a) Simple heating
 - (b) hydrolysis
 - (c) Dehydrohalogenation
 - (d) Nucleophilic substitution.
- (iii) In chlorination of alkanes, first step in which chlorine free redical is formed, is called as.
 - (a) Initiation
 - (b) Activation
 - (c) Propagation
 - (d) Termination
- (iv) Which of the following reaction can be used to prepare alkanes.
 - (a) Wurtz
 - (b) Wolf-kishner
 - (c) Kolbe's electrolysis
 - (d) All of these.
- (v) LPG is mainly mixture of-
 - (a) Methane+ Ethane
 - (b) Acetylene+ Oxygen
 - (c) Butane+Isobutane
 - (d) Acetylene+ Hydrogen.

- (vi) Which of the following have highest boiling point.
- | | |
|--------------|----------------|
| (a) n-Octane | (b) Isopentane |
| (c) n-Butane | (d) Neopentane |
- (vii) How many isomers of possible for pentane?
- | | |
|-------|-------|
| (a) 2 | (b) 3 |
| (c) 4 | (d) 5 |
- (viii) Which molecular formula indicates 2,2,4-trimethyl hexane.
- | | |
|-----------------|-----------------|
| (a) C_9H_{20} | (b) C_9H_{18} |
| (c) C_8H_{18} | (d) C_8H_{16} |
- (ix) A primary amine can be identified by.
- | | |
|----------|--------------------|
| (a) HCl | (b) $CHCl_3$ |
| (c) NaOH | (d) $CHCl_3 + KOH$ |
- (x) which of the following does not react with acyl chloride to form an amide.
- | | |
|--------------|---------------|
| (a) Ammonia | (b) 1° amine. |
| (c) 2° amine | (d) 3° amine |
- (xi) When acetylene is passed through a iron tube at 400° C it gives.
- | | |
|--------------|-----------------|
| (a) Benzene | (b) Toluene |
| (c) O-xylene | (d) Mesitylene. |
- (xii) Ozonolysis of 2-butene gives.
- | | |
|-----------------|--------------------|
| (a) Formic acid | (b) Propanoic acid |
| (c) Acetic acid | (d) Butanoic acid. |
- (xiii) Alkyl halide undergo
- | | |
|---|-------------------------------------|
| (a) Electrophilic substitution reaction | (b) Electrophilic addition reaction |
| (c) Nucleophilic substitution reaction | (d) Nucleophilic addition reaction. |

- (xiv) Ethanol on heating with Con. Sulphuric acid at 170° C gives.
- | | |
|-------------------|------------------------------|
| (a) Ethylene | (b) Ethyl hydrogen phosphate |
| (c) Diethyl ether | (d) diethyl sulphate. |

2. Attempt any *Four*. [3.5×4=14]

- Inductive Effect
- Atomic and molecular orbitals
- sp^3 hybridization and geometry of methane molecule
- enantiomers and diastereomers.
- conformational isomerism.

3. Attempt any *Two* of the following. [7×2=14]

- Resonance
- Discuss the R&S system of nomenclature
- Discuss elimination reactions in detail.

4. Attempt any *Two* of the following. [7×2=14]

- Write a note on alkynes & dienes.
- Give the method of preparation and properties of alkyl halide.
- Write a note on fisher projection formula.

5. Answer any *One*. [14×1=14]

- Discuss the covalent bond fission carbocation, carbanion and free radical in detail with special reference to their stability.
- What are the alkenes and alkynes.give their method of preparation and chemical properties along with mechanism.
