Graphic Era HILL UNIVERSITY
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University under section 2(f) of UGC Act, 1956

Sessional II(odd semester) Examination,October 2025

Roll no.....

Name of the Course and semester: B. Pharm. Isem
Name of the Paper: Pharmaceutical Analysis-I
Paper Code: BP-102T
Time: 1.5-hour Maximum Marks: 30

Note:
(i) This question paper contains three sections.
(ii) All the questions are compulsory.

Section-A

Q1. Multiple choice questions (attempt all questions) 10×1= 10 Marks

1. EDTA titrations mainly belong to which class? CO3
a. Acid–base
b. Redox
c. Complexometric
d. Precipitation

2. A masking agent is used to CO3
a) Precipitate the analyte
b) Form a stable, non-titrable complex with an interfering ion
c) Oxidize the analyte
d) Change the oxidation state of EDTA

3. Demasking refers to: CO3
a) Back-titration step
b) Releasing a previously masked ion to allow its subsequent titration
c) Changing indicator midway
d) Increasing ionic strength

4. Gravimetric analysis is based on: CO3
a) Volume
b) Potential
c) Mass of a compound of known stoichiometry
d) Color intensity

5. Co-precipitation refers to: CO3
a) Precipitation of analyte only
b) Carry-down of impurities with precipitate by inclusion/occlusion/adsorption
c) Loss of analyte during washing
d) Volatilization upon ignition

6. In diazotisation, the reagent is typically: CO3
a) Sodium nitrite in acid at 0–5 °C
b) Potassium permanganate at 60 °C
c) Sodium thiosulfate in base
d) Ferric chloride in ethanol

7. A common endpoint detection in diazotisation titration is: CO3
a) Internal azo dye formation always
b) External starch–iodide paper (blue color in excess nitrite)
c) Ferric alum red color
d) Chromate red-brown

8. To minimize co-precipitation, one should: CO 3
a) Precipitate hot, from dilute solution, with slow addition and digestion
b) Precipitate cold and fast
c) Use highly supersaturated conditions
d) Avoid washing

9. Post-precipitation means: CO 3
a) Formation of a new precipitate after the main precipitate has formed.
b) Re-dissolution of precipitate
c) Breakage of crystals by stirring
d) Adsorption of indicator

10. The correct sequence in precipitation gravimetry is: CO3
a) Filtration → precipitation → digestion → ignition → weighing
b) Precipitation → digestion (aging) → filtration/wash → drying/ignition → weighing
c) Digestion → ignition → precipitation → filtration
d) Precipitation → ignition → wash → weighing

Section B

Q2. Short type (attempt any **two**questions) 2×5= 10Marks

1. Difference between masking and demasking agents. CO 3
2. Classify metal ion indicators. CO 3
3. Explain the process of gravimetry. CO 3

Section-C

Q3. Long type (attempt any **one** questions) 1×10= 10 Marks

1. Classify different types of precipitation titrations and their applications. CO 3
2. Discuss Complexometric titrations in detail and its application in estimation of magnesium sulphate. CO 3