Code No: BP102T **PCI** SET - 1

I B. Pharmacy I Semester Regular/Supplementary Examinations, February - 2019
PHARMACEUTICAL ANALYSIS-I

Time: 3 hours Max. Marks: 75

Note: 1. Question Paper consists of three parts (**Part-I**, **Part-II & Part-III**)
2. Answer ALL (Multiple Choice) Questions from **Part-I**
3. Answer any **TWO** Questions from **Part-II**
4. Answer any **SEVEN** Questions from **Part-III**

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PART –I

1. (i) Chloride ion can be estimated by using the reagent…….. (1M)
(a) $NaNO_2$ (b) H_2SO_4 (c) $AgNO_3$ (d) $Ca(OH)_2$

(ii) Thermometer is calibrated by using…….. (1M)
(a) distilled water (b) HCl (c) acetic acid (d) cholesterol

(iii) When …….. is dissolved in water, the solution will become basic (1M)
(a) NaCl (b) NH_4Cl (c) NaOAc (d) NH_4OAc

(iv) …….. indicator is used for Strong acid strong base titrations (1M)
(a) Thymol blue (b) bromothymol blue (c) methyl violet (d) methyl orange

(v) …….. is a good example of a primary standard. (1M)
(a) HCl (b) NaOH (c) Oxalic acid (d) $AgNO_3$

(vi) Actual content of a drug in formulation is estimated in… (1M)
(a) Limit test (b) Identification test (c) Assay (d) test for purity

(vii) In complexometric titrations, …… is used for masking Zn^{2+} ion. (1M)
(a) NaCl (b) NaCN (c) NaOH (d) Na_2CO_3

(viii) 0.1M EDTA solution is prepared by dissolving ……. grams of disodium EDTA in 1000mL of water. (1M)
(a) 372 (b) 37.2 (c) 3.72 (d) 0.372

(xi) According to Von Weimarn, particle size of precipitate is directly proportional to …… (1M)
(a) Temperature (b) relative supersaturation (c) rate of mixing (d) Volume

(x) A lipophilic weak base is preferably estimated by using…… titration. (1M)
(a) aqueous (b) non-aqueous (c) complexometry (d) gravimetry

(xi) Oxidation involves…… (1M)
(a) loss of electrons (b) loss of oxygen (c) gain in electrons (d) gain in hydrogen

(xii) A pH meter is an example of… (1M)
(a) a fuel cell (b) reference electrode
(c) ion selective electrode (d) electrolytic cell

(xiii) If a silver strip were immersed in an aqueous solution containing Cu^{2+} ions, what would you expect to happen? (1M)
(a) Ag would be oxidized
(b) Copper would be deposited on the silver strip
(c) No reaction would occur
(d) Cu^{2+} ions would be reduced

(xiv) Which statement is *incorrect* about an electrolytic cell? (1M)
(a) The cell reaction is spontaneous
(b) Reduction occurs at the cathode
(c) The cell includes a battery
(d) The electrodes may be inert (e.g. graphite) or may be involved in the cell reaction.
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(xv) If acidified Potassium Dichromate(VI) ($K_2Cr_2O_7$) acts as oxidizing agent, color changes from (1M)
(a) orange to red (b) orange to green (c) yellow to green (d) yellow to red

(xvi) Which of the following requires formation of insoluble form of analyte? (1M)
(a) polarography (b) voltammetry (c) electrogravimetry (d) conductometry

(xvii) What will be the unit of molar conductivity? (1M)
(a) mho (b) $\Omega^{-1}cm^{-1}$ (c) $\Omega^{-1}cm^2mol^{-1}$ (d) Ω-cm

(xviii) In Conductometric titrations, one of the following is evaluated by calibration with 0.1M potassium chloride (1M)
(a) distance between two electrodes (b) Cell constant
(c) area of cross section of each electrode (d) Platinum wire of electrode

(xix) The Potential at the point on the polarographic wave where the current is equal to one half of the diffusion current is termed as (1M)
(a) Half wave current (b) full wave Current
(c) half wave Potential (d) full wave Potential

(xx) When the potential applied across two electrode is maintained at some constant value, the current is measures and plotted against the volume of the titrant is known as (1M)
(a) Potentiometry (b) Conductometry (c) Polarography (d) Amperometry

PART -II

2. a) Write in brief on indeterminate errors. (5M)
   b) Write in brief on primary standards. (5M)
3. a) Write in detail on strong acid-strong base titrations. (5M)
   b) Write principle and procedure involved in estimation of calcium gluconate. (5M)
4. a) With a neat sketch explain construction of pH meter. (5M)
   b) Write principle and applications of diazotization titrations. (5M)

PART -III

5. Write a note on sources of impurities. (5M)
6. Write the method used for preparation and standardization of 0.1M KMnO4 solution. (5M)
7. Explain the principle, chemistry and significance of limit test for heavy metals. (5M)
8. Write in brief on masking and demasking agents. (5M)
9. Explain the principle, procedure and applications of Volhard's method. (5M)
10. Write in detail on cerimetry. (5M)
11. Explain the construction and working of silver chloride electrode. (5M)
12. Writer short notes on rotating platinum electrode. (5M)
13. Explain the conductometry curves for strong acid week base titrations. (5M)