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BP 102 T

Roll No. of candidate | | | | | | | | | | |

2022

B.Pharm 1st Semester (Regular) Examination

PHARMACEUTICAL ANALYSIS– I

Theory

New Regulation (w.e.f 2017 – 18)

Full Marks – 75 Time – Three hours

The figures in the margin indicate full marks for the questions.

1. Answer all : (20 × 1 = 20)

(i) The P^H range for methyl orange is

(a) 3.1-4.4 (b) 1.2-2.6

(c) 5.5-6.9 (d) 8.2-10.1

(ii) The co-ordination number EDTA is

(a) 4 (b) 2

(c) 6 (d) 8

(iii) Pyridine is-

(a) Protophilic solvent (b) Protogenic solvent

(c) Amphiprotic solvent (d) None of the above

(iv) Indicator used in Fajan's method is

(a) Potassium Chloride (b) Iodine

(c) Methyl blue (d) Dichlorofluorescein

(v) End point detection in volhard method involves ?

(a) Common ion effect (b) Fractional Precipitation

(c) Demasking (d) Masking

(vi) Indicator electrode used in polarography is

(a) Dropping mercury electrode (b) Hydrogen electrode

(c) Glass electrode (d) All the above

(vii) Which of the following indicator is used in the titration of a strong acid and weak base?

(a) Phenophthalein (b) Thymol blue

(c) Fluorescein (d) Methyl orange

(viii) Replacement titration is used for

(a) Calcium (b) Magnesium

(c) Zinc (d) None of the above

(ix) The number of gram moles per liter solution is

(a) Molarity (b) Normality

(c) Molality (d) Mole fraction

(x) Molarity and normality is same for which of the following solutes

(a) NaOH (b) $K_2Cr_2O^7$

(c) H_2SO_4 (d) All the above

(xi) The substances which are available in pure form with definite chemical composition are called as

(a) Pure Compound (b) Primary Standard

(c) Secondary Standard (d) Impure Compound

(xii) In silver-silver chloride electrode, the usual strength of KCl is

(a) Zero (b) 0.1 M

(c) 1 M (d) Saturated

(xiii) Which material is used for coating a conductivity cell?

(a) Platinum black (b) Platinum

(c) Copper (d) Iron

(xiv) Atropine is assayed by which method?

(a) Acid base titration (b) Precipitation titration

(c) Non-aqueous titration (d) Complexometric titration

(xv) By convention standard electrode potential is taken as

(a) Oxidation potential (b) Reduction potential

(c) Both (d) None

(xvi) The oxidation state of manganese in $KMnO_4$ is

(a) 8 (b) 4

(c) 2 (d) 7

(xvii) The analytical method that is based on the weight of precipitate is

(a) Acid base titration (b) Complexometric titration

(c) Precipitation titration (d) Gravimetric titration

(xviii) The diffusion current in polarography depends on all of the following except

(a) Capillary diameter (b) Life time of mercury drop

(c) Temperature (d) Charge of the electrolyte

(xix) Find the sentence false about gravimentric titration

(a) It is used for inorganic ions

(b) It is used to assay barium sulphate

(c) It is used to assay alluminium

(d) None of the above

(xx) In volhard method the solution filled in burette is

(a) Silver nitrate (b) Ferric ammonium sulphate

(c) Potasium thiocyanate (d) Potassium chromate

2. Answer *any seven* $(7 \times 5 = 35)$

(a) Discuss about the different types of solvents used in non-aquous titration.

(b) Explain about conductometric titration. Discuss the different advantages and disadvantages.

(c) Write the process to prepare and standardize 0.1 N NaOH.

(d) Write a note on methods minimizing different errors.

(e) Write a note on precipitation titration.

(f) Write the principle and applications of Polarography.

(g) With diagram explain the working of standard hydrogen electrode

(h) State different types of EDTA titration with suitable examples.

(i) Elaborate the design and working of glass electrode.

3. Answer *any two* (2 × 10 = 20)

(a) Explain primary and secondary standards? Write details about different sources of impurities in pharmaceuticals. (5 + 5 = 10)

(b) Write a note on theories of acid-base indicators and add a detail note on neutralization curves. (4 + 6 = 10)

(c) Write in brief about basic principle, theory, types and applications of diazotization titration. (10)
