Seat Number

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Sm-19

BP-102-T

Pharmaceutical Analysis-I

(711102)

P. Pages : 2

Time : Three Hours **Max. Marks : 75**

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Draw a well labelled diagram wherever necessary.
5. Numbers to the right indicate full marks.

1. A) Choose the correct alternatives from the following and rewrite the complete sentence with answer. **1x10=10**

a) 1M H_2SO_4 = ---------- H_2SO_4.

i) 2M ii) 1N
iii) 2N iv) 0.5N

b) Primary standard used in standardization of sulfuric acid is ------ as per IP.

i) Sulfuric acid
ii) PHP
iii) Anhydrous sodium carbonate
iv) Sodium bicarbonate.

c) Conductance of hydrogen ion at 25°C is ----------.

i) 198 ii) 76
iii) 349 iv) 58

d) EDTA forms six ---------- with metal cations makes EDTA or hexadentate ligand.

i) Ionic bond, divalent
ii) Covalent bond, divalent
iii) Covalent bond tetravalent
iv) Co-ordinate covalent bond, tetravalent

e) In polarography, the instrument used is called as ---------- and the current voltage curve recorded is called as ---------.

i) Polarography, polarogram ii) Polarograph, polarogram
iii) Polarogram, polarograph iv) Polarogram, polarography.

f) The linear relationship between diffusion current (id) & the concentration of electroactive species is shown by -
   i) Nernst equation ii) Henderson - Hasselbalch equation
   iii) Ilkovic equation iv) Half wave potential equation.

g) $KMnO_4$ is used as ----------.
   i) Self indicator ii) External indicator
   iii) Internal indicator iv) Suitable indicator.

h) When titrating a strong acid with a strong base, the equivalence point will be -------.
   i) Below a pH 7.0 ii) Above a pH 7.0
   iii) At pH 7.0 iv) Either at above or below pH 7.0

i) Benzene is -------- solvent.
   i) Aprotic ii) Protophilic
   iii) Protogenic iv) Amphiprotic

j) Which of the following can be used to determine the end point in a complexometric titration?
   i) Redox indicator ii) Adsorption indicator
   iii) Metallochromic indicator iv) Specific indicator

B) Answer the following. **2x5=10**
   a) What is Ostwald's ripening? Give its significance.
   b) Give Nernst equation.
   c) Differentiate between iodimetry & iodometry
   d) Why dibutyl phthalate is added in the assay of NaCl injection?
   e) Draw a well labelled diagram of glass electrode.

2. Answer **any two** of the following. **10x2=20**
   a) Discuss in brief titration curve of SA Vs SB and SB Vs WB titration with suitable indicator.
   b) Describe in detail about conductometric titrations.
   c) Explain Mohr's and Volhard's methods.

3. Answer **any seven** of the following. **5x7=35**
   a) Write a note on diazotization titration.
   b) How will you prepare and standardize 0.1N NaOH as per IP.
   c) Define limit test. Give principle, reaction and procedure involved in limit test for chloride.
   d) Give the principle, working and construction of dropping mercury electrode.
   e) Discuss various types of solvents used in non aqueous titration.
   f) Enlist different steps in gravimetric analysis & explain any two of them.
   g) Comment on masking and demasking agents.
   h) Write note on errors in measurement.
   i) Enlist and explain factors affecting solubility & precipitation.

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