

PARUL UNIVERSITY
FACULTY OF PHARMACY
B. Pharm. Summer 2018 - 19 Examination

Semester: 1**Subject Code: BP 102T****Subject Name: Pharmaceutical Analysis -I****Date: 06/05/2019****Time: 2:00pm to 5:00pm****Total Marks: 75****Instructions:**

1. Figures to the right indicate maximum marks.
2. Make suitable assumptions wherever necessary.

Q.1 Multiple Choice Questions (MCQs) (1 Mark Each)**(20)**

1. Which of the following combinations can't produce a buffer solution?
(a) HNO_2 & NaNO_2 (b) HCN & NaCN
(c) HClO_4 & NaClO_4 (d) NH_3 & NH_4Br
2. In which of the following titrimetric method end point is indicated by occurrence of brick red precipitates?
a) Fajan's method b) Diazotization titration
c) Mohr's method d) All of above
3. Which of the following method is used in measurement of COD?
a) Permanganometry b) Chromatometry
c) Cerimetry d) None
4. What will be the concentration of solution if Weight equal to mol.wt is dissolved in 1 Kg of solvent?
a) 1 Molar b) 1 Molal
c) 1 Normal d) 1 Formal
5. Which of the following reduction reaction?
a) $\text{Ag}^+ + \text{e}^- \leftrightarrow \text{Ag}$ b) $\text{Fe}^{+2} \leftrightarrow \text{Fe}^{+3} + \text{e}^-$
c) $\text{Ce}^{+3} \leftrightarrow \text{Ce}^{+4} + \text{e}^-$ d) All of above
6. An electrochemical method which studies relationship between applied potential difference and Current passing through electrodes is known as
a) Potentiometry b) Conductometry
c) Gravimetry d) Polarography
7. Identify ideal property of precipitates in gravimetry.
a) Easily filtered and washed free of contaminants b) Low solubility
c) Unreactive with constituents of the atmosphere; d) All of above
8. Which of the following is primary standard?
a) KMnO_4 b) NaOH
c) $\text{K}_2\text{Cr}_2\text{O}_7$ d) I_2
9. Spectroscopy is which type of analytical method?
(a) Instrumental (b) Classical
(c) Both (d) None
10. Which figure indicates figure between 25.9 and 26.1?
a) 25.00 b) 26.01
c) 25.01 d) 26.0
11. Electrical conductivity of ion in given solution does not depend on
a) Mobility of Ion b) Charge of Ion
c) Temperature d) none
12. Which of the following is used in standardization of H_2SO_4 ?
a) KHP b) Oxalic acid
c) Na_2CO_3 d) $\text{K}_2\text{Cr}_2\text{O}_7$

13.



Identify correct option for results in above mentioned diagram.

- a) High accuracy High precision b) Low accuracy High precision
c) High accuracy Low precision d) Low accuracy Low precision
14. According to which theory indicators are either weak acid or weak bases?
a) Quinoid theory b) Ostwald's theory
c) Both d) None
15. Which of the following is added for the non aqueous titration of halogen acid salt of weak bases?
a) lead acetate b) bismuth iodide
c) copper sulphite d) mercuric acetate
16. At higher pH values, the glass membrane electrode becomes somewhat responsive to
(a) Na^+ (b) Mg^{+2}
(c) Ca^{+2} (d) Al^{+3}
17. Which is a straight-chain compound and is abundant in potato starch, gives a blue colour with iodine?
a) Amylose b) Amylopectin
c) Both a and b d) none
18. Which of the following is a Strong Electrolytes?
(a) H_2CO_3 (b) HCN
(c) HCl (d) NH_3
19. Non aqueous titration is carried out for....
a) water insoluble drugs b) weakly acidic drugs
c) weakly basic drugs d) all
20. Which of the following drug can be analyzed using diazotization titration?
a) sulphonamides b) β lactum antibiotic
c) NSAIDs d) Cephalosporins

Q.2 Long Answers (any 2 out of 3) (10 Mark Each)

(20)

1. Explain buffers and how they act and derive Henderson hasselbatch equation.
2. Write a note on accuracy and precision with comparison.
3. Enlist different end point detection methods in precipitation titration and explain any two in detail.

Q.3 Short Answers (any 7 out of 9) (5 Mark Each)

(35)

1. Explain titration involving potassium iodate.
2. What is Coprecipitation? Explain various mechanisms for Coprecipitation.
3. Explain conductometric titration of 0.1M CH_3COOH with 0.1M NaOH with conductogram.
4. What are different types of errors? Explain any two sources of errors.
5. Write in detail about Glass membrane electrode with schematic diagram.
6. Explain various solvents used in non aqueous titration.
7. Explain metal ion indicator complex. What are the basic qualities of metal ion indicator?
8. What is principle of Polarography? How analysis can be utilized for quantification of analyte?
9. Explain Iodimetry and Iodometry.