

341152(41)

B Pharmacy (First Semester) Examination

Nov.-Dec. 2019

(PCI Scheme)

(Pharmacy Branch)

PHARMACEUTICAL ANALYSIS - I

Theory (BP102T)

Time Allowed : Three hours

Maximum Marks : 75

Note : Answer all questions from Section A. Attempt any two questions from section B and seven questions from Section C.

Section - A

(Multiple Choice Questions)

Note : Attempt all questions from MCQs. All questions carry 01 mark each.

1. Choose the correct answer :

20×1=20

(i) API stands for :

(a) Active Pharmaceutical Ion

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PTO

- (b) Active Pharmaceutical Ingredient
 - (c) Active Pharmaceutical Index
 - (d) None of these
- (ii) In a solution of 10% v/v methanol, the amount of water is added :
- (a) 100mL.
 - (b) 110 mL.
 - (c) 90 mL.
 - (d) 10 mL.
- (iii) Random error is also known as :
- (a) Accidental error
 - (b) Determinate error
 - (c) Indeterminate error
 - (d) Both (a) and (c)
- (iv) Which one is useful in non aqueous titration?
- (a) Levelling solvent
 - (b) Differentiating solvent
 - (c) Both (a) and (b)
 - (d) None
- (v) Amphiprotic solvents are both and character.

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- (a) aprotic, protophilic
 - (b) protophilic, protogenic
 - (c) protogenic, aprotic
 - (d) None of these
- (vi) Lesser the pH is the acid.
- (a) weaker
 - (b) stronger
 - (c) both (a) and (b)
 - (d) None of these
- (vii) Which of the following is an example of adsorption indicators?
- (a) Eosin
 - (b) Phenolphthalein
 - (c) Methyl red
 - (d) Ninhydrin
- (viii) Phenolphthalein changes color in :
- (a) Acids
 - (b) Alkalis
 - (c) Water
 - (d) Salt solutions

- (ix) Which one is used as indicator for non aqueous titration?
- (a) Crystal violet
 - (b) Thymol blue
 - (c) Oracet blue B
 - (d) All
- (x) The endpoint for an EDTA titration is usually found by using a indicator.
- (a) metallochromic
 - (b) redox
 - (c) acid base
 - (d) all
- (xi) Titrations based on the use of silver nitrate are called titration.
- (a) argentometric
 - (b) complexometric
 - (c) amperometric
 - (d) conductometric
- (xii) In an acidified solution of Potassium Dichromate (VI) ($K_2Cr_2O_7$), Dichromate ion ($Cr_2O_7^{-2}$) becomes reduced to :

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- (a) Chromate (V) ions
 - (b) Chromium (III) ions
 - (c) Chromium (II) ions
 - (d) Chromium (VI) ions
- (xiii) Oxidation involves :
- (a) Gain in oxygen
 - (b) Loss of hydrogen
 - (c) Reduction
 - (d) Both (a) and (b)
- (xiv) When an acid (H^+) is added to alkali (OH^-), product is :
- (a) Hydroxides
 - (b) Water
 - (c) Salts
 - (d) Hydrogen gas
- (xv) SI unit of conductance is :
- (a) mho
 - (b) Siemens (S)
 - (c) Volt
 - (d) Ampere

- (xvi) Molarity of 10% w/v NaCO_3 solution is :
- (a) 0.09433 M
 - (b) 0.9433 M
 - (c) 10 M
 - (d) None of the above
- (xvii) Which of the following statement is correct :
- (a) Accuracy is directly proportional with errors
 - (b) Accuracy is inversely proportional with errors
 - (c) Accuracy is the measure of error
 - (d) None of the above
- (xviii) Which of the following is used as a primary standard substance for the standardization of secondary standard H_2SO_4 solution?
- (a) NaHCO_2
 - (b) Potassium hydrogen phthalate
 - (c) NaCO_3
 - (d) KMnO_4
- (xix) Displacement reaction occurs when :
- (a) A more reactive non-metal displaces less reactive non-metals

- (b) A more reactive metal displaces a less reactive metal
- (c) Metal lower in reactivity series is added
- (d) Both (a) and (b)
- (xx) The pH of titration mixture for Strong acid - Strong base titration at equivalence point is :
- (a) 4.0
- (b) 2.7
- (c) 7.0
- (d) 9.0

Section - B

(Long Answer Type Question) 2×10=20

Note : Attempt any two questions. Each question carries 10 marks.

2. What do you mean by electrochemical methods of analysis? Write principle, instrumentation and application of conductometry.
3. Define pharmaceutical analysis. Classify the analytical methods used in pharmaceutical industries. Write various scope of pharmaceutical analysis.
4. Explain the theory of precipitation titration. Give an account about the various methods used in precipitation

titration. Write mechanisms and application of adsorption indicators.

Section - C

(Short Answer Type Question) $7 \times 5 = 35$

Note : Attempt any Seven questions. Each question carries 5 marks.

5. Define solution. How will you prepare and standardize 0.1 M NaOH solution?
6. Write down the various sources of analytical errors.
7. Explain the steps involved in gravimetric analysis of barium sulphate.
8. Define and classify redox titration. Explain permanganometry.
9. Give details about electrodes used in potentiometry.
10. Write principle and application of alkalimetry and acidimetry.
11. Define the term indicator. Explain the acid base indicator theory.
12. Give details about metal ion indicators.
13. Write a short note on polarography.