

Exam Date & Time: 28-Apr-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Pharmaceutical Analysis-I, PQA_BP102T, MARCH 2022

Pharmaceutical Analysis-I [PQA-BP102T]

Marks: 75

Duration: 180 mins.

I Multiple Choice Questions (MCQs)

Answer all the questions.

Section Duration: 30 mins

1) Non indicator method is also called as

1) Mohr's method	2) Volhard's method	3) Fajan's method	4) Gay Lussac's method
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2) Starch iodide paper is prepared by immersing a filter paper in _____ and _____ solution

1) Starch iodide solution	2) Starch and Iodine solution	3) Starch and HCl	4) Starch mucilage and potassium iodide solution
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3) Estimation of Primary aromatic amines can be done by _____

1) Mohr's method	2) Volhard's method	3) Diazotisation method	4) Fajan's method
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4) Modified Mohr's precipitation titration should be carried out in pH range _____

1) 6.6 to 9.0	2) 9.6 to 12.0	3) 6.6 to 8.0	4) 2.6 to 5.0
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5) Slit furnaces can reach temperature up to _____

1) 1000 ⁰ c	2) 850 ⁰ c	3) 1200 ⁰ c	4) 1400 ⁰ c
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6) Potassium nitrate is example for _____

1) Coagulant	2) Sequestering agent	3) Indicator used in complexometric titration	4) Weak-base adsorption indicator
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7) If the complex formed is soluble in water, then it is called as _____

1) Digestion	2) Occlusion	3) Peptization	4) Sequestering Agent
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8) Precipitation will occur if _____

1) Solubility product constant < ionic product	2) Solubility product constant > ionic product	3) Solubility product constant = ionic product	4) Solubility product constant = zero
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9) Free Mordant Black II in solution is _____ in colour

(1)

1) Blue	2) Red	3) Brown	4) Purple
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- 10) Sodium hydroxide is standardized with primary standard potassium hydrogen phthalate as per IP. However, one of the following can also be used to standardize sodium hydroxide (1)

1) Oxalic acid	2) Sulphuric acid	3) Mohr's salt	4) Common salt
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- 11) Absorption of electromagnetic radiation by the drug can be measured in (1)

1) Conductometry	2) Potentiometry	3) Polarography	4) Spectroscopy
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- 12) _____ is the Molarity of solution when 65 g of anhydrous oxalic acid is dissolved in 1000 ml of water (1)

1) 0.7	2) 0.5	3) 0.1	4) 1.0
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- 13) Phenolphthalein isin basic medium (1)

1) Pink	2) Red	3) Yellow	4) Colourless
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- 14) One of the following is an external indicator (1)

1) Potassium ferricyanide	2) Potassium ferrocyanide	3) Starch mucilage	4) Ferroin
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- 15) Thyroid tablets are assayed by (1)

1) Acid base titration	2) Redox titration	3) Precipitation titration	4) Diazotization titration
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- 16) If 60 ml of acid is neutralised by 30 ml of 0.2 N alkali, then the concentration of acid is (1)

1) 0.4N	2) 0.1N	3) 0.3N	4) 0.15N
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- 17) Protogenic solvents are (1)

1) Accept protons	2) Chemially neutral	3) Donate protons	4) Basic in nature
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- 18) Potassium Bromate is a (1)

1) Powerful reducing agent	2) Powerful oxidizing agent	3) Neutralizing agent	4) Precipitating agent
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- 19) The color change of Naphthol Benzoin in ethanoic acid is (1)

1) Yellow to green	2) Green to yellow	3) Colourless to pale pink	4) Red to green
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- 20) Which of the following is used as an indicator in the nalidixic acid? (1)

1) Azo violet	2) Thymol blue	3) Quinaldine Red	4) Thymolphthalein
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II Long Answers

Answer all the questions.

- 1) Explain the methods to reduce the determinate errors. (10)
- 2) Explain the neutralization titration curve for strong acid v/s strong base using suitable graph (10)

III Short Answers

Answer all the questions.

- 1) Explain the mechanism of weak acid adsorption indicator in Fajan's titration in detail with example. (5)
- 2) Discuss any three steps of gravimetric analysis (5)
- 3) Explain in detail about replacement and back complexometric titrations with suitable examples. (5)
- 4) Classify the analytical techniques with examples (5)
- 5) a) Explain the methods to detect the end point and equivalence point in redox titrations.
b) Classify redox indicators with examples. (3+2 marks) (5)
- 6) Explain the principle involved in potassium iodate titration with its molecular reaction. (5)
- 7) Explain the mechanism of working of phenolphthalein as an indicator with the help of Ostwalds theory
Discuss the merits of non-aqueous titrations over aqueous titrations (3+2 Marks) (5)

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