

Exam Date & Time: 02-May-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

BPharm First Semester - End Semester Examination March 2022

PCH-BP104T: Pharmaceutical Inorganic Chemistry

Max. Marks: 75

Pharmaceutical Inorganic Chemistry [PCH-BP104T - S2]

Marks: 75

Duration: 180 mins.

I Multiple Choice Questions (MCQs)

Answer all the questions.

Section Duration: 30 mins

- 1) Standard Lead nitrate solution used in Lead Limit test is of the strength (1)
- | | | | |
|---------|----------|---------|-------|
| 1) 0.1% | 2) 10ppm | 3) 1ppm | 4) 1% |
|---------|----------|---------|-------|
- 2) Lead acetate cotton in the tube traps (1)
- | | | | |
|-------------------------|---------------|-----------------|--------------------------|
| 1) Sulphuric acid fumes | 2) Arsine gas | 3) Arsenous gas | 4) Hydrogen sulphide gas |
|-------------------------|---------------|-----------------|--------------------------|
- 3) Bromide impurity produces following colour opalescence in limit test for chlorides (1)
- | | | | |
|---------------|--------------------|--------------------------|-----------------------|
| 1) Red colour | 2) pale red colour | 3) Intense yellow colour | 4) pale yellow colour |
|---------------|--------------------|--------------------------|-----------------------|
- 4) International Pharmacopoeia is published by (1)
- | | | | |
|--|---------------------------------------|-------------------------------------|------------------------------|
| 1) United States Pharmacopoeial Convention | 2) European Pharmacopoeial Commission | 3) Indian Pharmacopoeial Commission | 4) World health organization |
|--|---------------------------------------|-------------------------------------|------------------------------|
- 5) _____ is the major source of impurities in process of inorganic pharmaceuticals (1)
- | | | | |
|----------------|----------|------------|----------------------|
| 1) acetic acid | 2) water | 3) benzene | 4) Hydrochloric acid |
|----------------|----------|------------|----------------------|
- 6) Thyroid deficiency treated using (1)
- | | | | |
|-----------|--------------------|---------------------|------------------|
| 1) iodine | 2) sodium chloride | 3) milk of magnesia | 4) none of these |
|-----------|--------------------|---------------------|------------------|
- 7) The Mandals paint is (1)
- | | | | |
|--------------------------------------|---------------------------------|--|---|
| 1) 1.25% w/v of iodine in glycerine. | 2) 1.25% w/v of iodine in water | 3) 2.5%w/v each of iodine and KI in alcohol. | 4) 2.5%w/v each of iodine and KI in water |
|--------------------------------------|---------------------------------|--|---|
- 8) Titration of Iodine against thiosulfate is a standard laboratory technique. In connection to the given statement identify the correct one. (1)
- | | | | |
|--|-------------------------------|--|-----------------|
| 1) solutions of I ₂ are prepared in aqueous | 2) I ₂ is oxidized | 3) [S ₂ O ₃] ²⁻ is reduced | 4) No indicator |
|--|-------------------------------|--|-----------------|

	KI because I2 is insoluble in water			during the titration			during the titration			is usually used in this titration
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9) Hydrogen peroxide is assayed by

1)	permanganometry	2)	iodimetry	3)	iodometry	4)	bromometry
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(1)

10) Ferrous Sulphate is assayed by

1)	Iodimetry	2)	Iodometry	3)	Cerimetry	4)	Iodate titration
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(1)

11) How much amount of Sodium Citrate is to be dissolved in sufficient water to produce 1000 ml Oral Rehydration Salt?

1)	1.5g	2)	3.5g	3)	2.9g	4)	2.5g
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(1)

12) Find the amount of water needed to prepare 50ml of isotonic solution of 0.6 g Boric acid. E value of Boric acid is 0.50

1)	40.35ml	2)	33.33ml	3)	16.67ml	4)	15.15ml
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(1)

13) Which of the following is not a Lewis acid?

1)	Boron trifluoride	2)	Aluminium Chloride	3)	Trimethylborane	4)	Triethylamine
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(1)

14) Which statement is not true?

1)	Weak base and its salt is called as basic buffer solution	2)	Buffer capacity has a positive value	3)	The pH of the buffer solution does change on dilution	4)	The pH of buffer solution remains constant
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(1)

15) It is not the cause of Hypermagnesemia

1)	Renal failure	2)	Deficiency of aldosterone hormone	3)	Hypothyroidism.	4)	Diuretic therapy
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(1)

16) Ringers solution contains

1)	Sodium chloride, potassium chloride, calcium chloride	2)	Sodium chloride, potassium hydroxide, calcium hydroxide	3)	Sodium bicarbonate, calcium chloride, potassium acetate	4)	Calcium hydroxide, Sodium acetate, calcium chloride
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(1)

17) Which statement is not true about Ge(Li) semi-conductors

1)	Excellent detectors of beta-rays	2)	Resolution ten times higher than NaI (Th) scintillometers	3)	Need to be cooled by liquid nitrogen	4)	Cumbersome
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(1)

18) Radioisotopes not used to deliver palliative treatment of bone metastases

1)	Strontium-89	2)	Samarium-	3)	Phosphorus-32	4)	Holmium
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(1)

(Sr-89) chloride		153 (Sm- 153)		(P-32) sodium phosphate		66 (26 h)
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- 19) The radius of the nucleus is smaller than the radius of the atom by a factor of (1)

1) 10^2	2) 10^6	3) 10^4	4) 10^8
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- 20) Is used for the diagnosis of pernicious anaemia. (1)

1) Ammonia N 13	2) Chromium 51	3) Iodine 125	4) Holmium 166
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II Long Answers

Answer all the questions.

- 1) 1. a. What are antacids? Classify them with suitable examples. (10)
b. Write on iodine preparations as antimicrobial agent.
- 2) a) How fluorides can be useful in the prevention of dental caries? Give the preparation of Sodium fluoride. (10)
b) How we can determine tonicity of the solution?

III Short Answers

Answer all the questions.

- 1) Enlist any four units of radioactivity. Explain how the property of radiation to cause ionisation of gas can measure radioactivity? (5)
- 2) Explain with chemical equation the principle involved in the Limit test for Iron and Lead (2+3) (5)
- 3) Give a method of preparation and principle involved in the assay and medicinal uses of ammonium chloride. (5)
- 4) 4. Write a note on the following compounds in terms of their chemical nature, preparation and medicinal uses: (5)
a) Potash Alum b) White Vitriol
- 5) Give the preparation, assay, properties and uses of Sodium thiosulphate. What is the mode of action of activated charcoal? (5)
- 6) Explain how the impurities get incorporated in to the pharmaceutical preparations during the inadequate storage? (5)
- 7) Give the preparation, principle involved in the assay and advantages of green vitriol. (5)

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