

Total No. of printed pages = 4

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2022

B.Pharm. 1st Semester (Regular) Examination
PHARMACEUTICAL INORGANIC CHEMISTRY
(Theory)

New Regulation (w.e.f. 2017 - 18)

Full Marks - 75

Time - Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following : (MCQ) (20 × 1 = 20)
- (i) Dithizone is used in the limit test of
- (a) Lead (b) Sulphates
(c) Chlorides (d) Iron
- (ii) The chemical formula of Borax is
- (a) $\text{Na}_2\text{B}_5\text{O}_6$ (b) $\text{Na}_2\text{B}_4\text{O}_6$
(c) $\text{Na}_2\text{B}_4\text{O}_7$ (d) $\text{Na}_2\text{B}_5\text{O}_7$
- (iii) Which of these is used in the treatment of Cyanide poisoning?
- (a) $\text{Na}_2\text{B}_4\text{O}_7$ (b) $\text{Na}_2\text{S}_2\text{O}_3$
(c) Na_2SO_3 (d) $\text{Na}_2\text{S}_4\text{O}_7$
- (iv) The basic difference between Magnesium carbonate heavy and Magnesium carbonate light is
- (a) The basic chemical formula
(b) Difference in the number of moles of Magnesium hydroxide
(c) Difference in the water of crystallization
(d) All of these

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- (v) Which of these can be used as Saline cathartics?
- (a) Sodium potassium tartrate
 - (b) Magnesium sulphate
 - (c) Potassium tartrate
 - (d) All of these
- (vi) Hydrogen peroxide is prepared from
- (a) Barium peroxide
 - (b) Sodium peroxide
 - (c) Both of these
 - (d) None of these
- (vii) Which of these is the chemical formula of Bleaching powder?
- (a) Ca(OH)_2
 - (b) CaOCl_2
 - (c) CaCl_2
 - (d) CaO
- (viii) Barium sulphate is essentially used as
- (a) Emetic
 - (b) Astringent
 - (c) Contrast media
 - (d) All of these
- (ix) $\text{KAl(SO}_4)_2 \cdot 12\text{H}_2\text{O}$ is the chemical formula of
- (a) Talc
 - (b) Alum
 - (c) Kaolin
 - (d) Borax
- (x) Green vitriol is the synonym of
- (a) Zinc sulphate
 - (b) Copper sulphate
 - (c) Ferrous sulphate
 - (d) Potassium permanganate
- (xi) The chemical formula of Calamine is
- (a) ZnO
 - (b) ZnS
 - (c) ZnSO_4
 - (d) Zn(OH)_2
- (xii) Silver nitrate is essentially used in the identification of
- (a) Carbonates
 - (b) Chlorides
 - (c) Sulphates
 - (d) Nitrates
- (xiii) Sodium hydroxide is prepared from
- (a) Na_2CO_3
 - (b) NaHCO_3
 - (c) Na_2SO_4
 - (d) NaCl
- (xiv) Which of these compounds is used as desensitizing agent?
- (a) Zinc oxide
 - (b) Calcium carbonate
 - (c) Zinc chloride
 - (d) Calcium phosphate

- (xv) Astringents are used in
- (a) Treating diarrhea
 - (b) Promote healing
 - (c) As deodorants
 - (d) All of these
- (xvi) Which of these is used to minimize the action of glass container on Milk of Magnesia
- (a) Silver nitrate
 - (b) Citric acid
 - (c) Paraffin wax
 - (d) Tartaric acid
- (xvii) Titanium dioxide commonly used in
- (a) Vanishing cream
 - (b) Sunscreen Cream
 - (c) Ophthalmic Cream
 - (d) Aqueous calamine cream
- (xviii) The chemical formula of Purified talc is
- (a) $Mg_6(Si_2O_5)_4$
 - (b) $Mg_6(Si_2O_5)_5$
 - (c) $Mg_6(Si_2O_5)_6$
 - (d) $Mg_6(Si_2O_5)_7$
- (xix) Barium sulphate reagent contains
- (a) Barium chloride, sulphate free alcohol, potassium sulphate
 - (b) Sodium chloride, sulphate free alcohol, potassium sulphate
 - (c) Silver chloride, sulphate free alcohol, potassium sulphate
 - (d) Barium chloride, sulphate free alcohol, sodium sulphate
- (xx) The chemical formula of the anti-oxidant Hypophosphorous acid
- (a) H_3PO_3
 - (b) H_3PO_4
 - (c) H_3PO_2
 - (d) H_3PO_6

2. Answer any *seven* questions :

(7 × 5 = 35)

- (a) Write the units of radioactivity with their assigned values.
- (b) Discuss the different types of errors.
- (c) Write a note on the mechanism of action of topical antimicrobial agents.
- (d) Write briefly about different Iodine preparations with their percentages.
- (e) Define Limit tests and write their importance. What is the role of Thioglycolic acid in Limit test of Iron? (2.5 + 2.5 = 5)

(f) Write the preparation of Aluminium Hydroxide gel. Why antacids are usually made of combinations instead of a single compound? (3 + 2 = 5)

(g) Describe the Gutzeit apparatus with labelled diagram.

(h) Why is Electrolyte replacement therapy required? Write the composition of the Formulae III ORS as recommended by WHO. (1 + 4 = 5)

(i) What is the role of sodium thiosulphate in Cyanide poisoning? Define anticaries agents with examples. (2.5 + 2.5 = 5)

3. Answer any *two* questions : (2 × 10 = 20)

(a) Discuss in detail the about the techniques which are used to measure radioactivity. (10)

(b) Write in detail about the principle and reactions of the limit tests of Sulphates and Lead. (5 + 5 = 10)

(c) Write the method of preparation and uses of: (Any *two*) (2 × 5 = 10)

(i) Potassium permanganate

(ii) Calcium chloride

(iii) Boric acid