

B.Pharma.

(SEM.I) SPL.THEORY EXAMINATION 2011

PHARMACEUTICAL CHEMISTRY-I

(INORGANIC PHARM.CHEM.)

Time: 3 Hours

Total Marks: 80

Note: (1) Paper contains three Sections-Sections A , B and C.

(2) Section A is compulsory.

(3) All parts carry marks as indicated.

SECTION - A

1. Attempt all questions. Give the appropriate answer of the followings: (1 x 16 = 16)

(i) The molecular weight of ammonium chloride is:

- (a) 53.49
- (b) 54.49
- (c) 52.50
- (d) 51.49

(ii) Calcium (${}_{20}\text{Ca}^{47}$) is used as:

- (a) Urinary marker
- (b) Faecal marker
- (c) Both
- (d) None of the above

(iii) The molecular formula of Talc is:

- (a) $3\text{MgO} \cdot 4\text{SiO}_3 \cdot \text{H}_2\text{O}$
- (b) $4\text{MgO} \cdot 4\text{SiO}_3 \cdot \text{H}_2\text{O}$
- (c) $2\text{MgO} \cdot 4\text{SiO}_3 \cdot \text{H}_2\text{O}$
- (d) All of the above

(iv) Which of the following is a chemical antidote?

- (a) Sodium antidote
- (b) Sodium nitrite
- (c) Activated charcoal
- (d) All of the above

(v) Which of the following is a physiological antidote:

- (a) Sodium thiosulphate
- (b) Sodium nitrite
- (c) Activated charcoal
- (d) All of the above

(vi) Zinc sulphate is used externally as:

- (a) Antiseptic
- (b) Astringent
- (c) Both
- (d) None of above

(vii) The molecular weight of sulphur dioxide is:

- (a) 64.06
- (b) 64.09
- (c) 63.90
- (d) 65.00

(viii) The molecular formula of zinc sulphate is:

- (a) $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$
- (b) $\text{ZnSO}_4 \cdot 5\text{H}_2\text{O}$
- (c) $\text{ZnSO}_4 \cdot 6\text{H}_2\text{O}$
- (d) $\text{ZnSO}_4 \cdot 8\text{H}_2\text{O}$

(ix) Hydrogen peroxide is:

- (a) Oxidising agent
- (b) Reducing agent
- (c) Expectorant
- (d) All of the above

(x) Which of the following agent (s) are expectorant?

- (a) Ammonium salt
- (b) Iodine
- (c) Antimony potassium tartrate
- (d) All of the above

(xi) pH of bacteriostatic water for injection USP XVIII:

- (a) 4.5-7
- (b) 5-7
- (c) 4-6

- (d) 6-7
- (xii) Sodium metasilphite is used:
- (a) Antioxidant
 - (b) Expectorant
 - (c) Dentrifices
 - (d) Astrigent
- (xiii) ^{32}P is used as:
- (a) Dermatological purpose
 - (b) Ophthamamic purpose
 - (c) Both
 - (d) None of the above
- (xiv) Radiopharmaceuticals for imaging for liver are:
- (a) $^{99\text{m}}\text{Tc}$
 - (b) $^{113\text{m}}\text{Tc}$
 - (c) Both
 - (d) All of the above
- (xv) Which of the electrolyte is used fo replacementtherapy:
- (a) NaCl
 - (b) CaCl_2
 - (c) KCl
 - (d) All of the above
- (xvi) Magnesium salt is:
- (a) Non-systemic antacid
 - (b) Systemic antacid
 - (c) None of the above

SECTION-B

3. Attempt any six of the following: (4 x 6 = 24)

- (i) Write a note on acid base balance and combination therapy.
- (ii) What are antioxidants? Give the methods of preparation and identification test of Sodium metasilphite.
- (iii) Write a note on cathartics.
- (iv) Discuss the hazards of radiopharmaceuticals.
- (v) Discuss and compare method of preparation and properties of light and heavy

magnesium carbonate.

- (vi) Discuss Werner's theory of co-ordination.
- (vii) Write a note on antidote.
- (viii) Discuss the principle involved in limit test of arsenic.

SECTION – C

3. Attempt any four of the following: (4 x 10 = 40)

- (i) Describe the principle, process and apparatus used in limit test for lead.
- (ii) Describe method of preparation and uses of boric acid and povidone iodine.
- (iii) What are major physiological ions and explain the role of magnesium as Intracellular ions.
- (iv) Write a detailed note on transition elements and their compound of pharmaceutical importance.
- (v) Enumerate the application of radioisotopes in medicine.
- (vi) Write about calcium gluconate and sodium bicarbonate.