



Name :

Roll No. :

Invigilator's Signature :

CS/B.Pharm/SEM-1/PT-103/2009-10

2009

**PHARMACEUTICAL CHEMISTRY
(INORGANIC CHEMISTRY)**

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following :

10 × 1 = 10

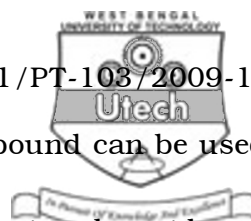
- i) Hydrogen peroxide is generally not used as anti-infective for
- a) Dermatological infection
 - b) Ear infection
 - c) Ophthalmic infections
 - d) Systemic infection.
- ii) Which one of the following combinations of antacid are more common ?
- a) Aluminium and magnesium compounds
 - b) Sodium and magnesium compounds
 - c) Potassium and magnesium compounds
 - d) none of these.

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[Turn over



- iii) Calamine contains
 - a) 98% ZnO
 - b) 99% ZnO
 - c) 95% ZnO
 - d) 2% ZnO.
- iv) Strong iodine contains of iodine.
 - a) 10% w/v
 - b) 11% w/v
 - c) 15% w/v
 - d) 5% w/v.
- v) Strontium chloride acts as a
 - a) Polishing agent
 - b) Desensitising agent
 - c) Antiseptics
 - d) Cementing agent.
- vi) Which of the following electrolytes can be used in metabolic alkalosis ?
 - a) Na acetate
 - b) K acetate
 - c) Na bicarbonate
 - d) Ammonium chloride.
- vii) Which of the following physiological fluids has pH 1.5 – 3.5 ?
 - a) Saliva
 - b) Blood
 - c) Gastric juice
 - d) Urine.
- viii) Which of the following is isotonic with blood ?
 - a) 0.09% w/v NaCl solution
 - b) 0.9% w/v NaCl solution
 - c) 0.09% v/w NaCl solution
 - d) 0.9% w/w NaCl solution.
- ix) The turbidity produced in the limit test of chloride is due to
 - a) Silver chloride
 - b) Barium chloride
 - c) Silver nitrate
 - d) Thioglycollate.
- x) Radioactivity is measured by
 - a) Ostwald detector
 - b) Stalagmometer
 - c) Scintillation counter
 - d) Friabilator.



- xi) Which of the following inorganic compound can be used as sedative ?
- a) Potassium chloride b) Potassium bromide
c) Calcium chloride d) None of these.
- xii) According to I.P. Sterile water for injection should comply
- a) sterility test b) test for pyrogen
c) both of these d) none of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. 3 × 5 = 15

2. What is conjugate acid-base pair ?
"The proton is a Lewis acid as well as Bronsted acid".
Explain. $2\frac{1}{2} + 2\frac{1}{2}$
3. What do you mean by cathartics ? How can you classify cathartics depending upon the mechanism of action ?
Discuss with examples. 1 + 4
4. Differentiate between the following :
- a) Light magnesium carbonate and heavy magnesium carbonate
- b) Antiseptic and disinfectant. $2\frac{1}{2} + 2\frac{1}{2}$
5. What do you mean by the term 'IMPURITY' ? Describe the principle of limit test for arsenic. 5
6. Write a short note on 'ASTRINGENT' as topical agent. 5

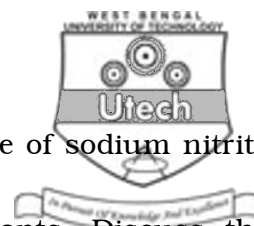
GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. a) Describe the Biological importance of 'IRON'.
b) Give the properties and uses of the following compounds :
- i) Ferrous sulphate
ii) Zinc sulphate
iii) Sodium iodide. 3 + (4 × 3)

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8. a) What are antidotes ? Discuss the role of sodium nitrite as an antidote for cyanide poisoning.
b) Give a general account of antioxidants. Discuss the antioxidant mechanism of hypophosphorous acid.

(2 + 5) + (3 + 5)

9. a) What do you mean by achlorhydria, hypochlorhydria & hyperchlorhydria ?
b) How can you treat the condition of achlorhydria and hypochlorhydria ?
c) What are antacids ? What are the ideal requirements of an antacid ?
d) What is the rationale behind using combined antacid preparations ?
e) Write short note on the following :
i) Aluminium hydroxide gel, IP

OR

- ii) Magnesium trisilicate. $1\frac{1}{2} + 1 + (1 + 3) + 2\frac{1}{2} + 6$

10. Write short notes on the following : $5 + 3 + 3 + 4$

- a) Dentifrice
b) Expectorant
c) Emetics
d) Sterile water for injection.

11. a) What are the major extra and Intra-Cellular Electrolytes ?
b) Discuss the important function of sodium in body.
c) What is replacement therapy ?
d) Write about the different official preparation of sodium chloride.
e) What is meant by oral rehydration therapy ?

$2 + 3 + 3 + 5 + 2$