

Roll No. ....

5.6.10

Total No. of Questions : 10]

[Total No. of Pages : 02

**B.Pharmacy (Sem. - 1<sup>st</sup>)**  
**PHARMACEUTICAL CHEMISTRY - I**  
**(Inorganic Pharmaceutical Chemistry)**

**SUBJECT CODE : PHM - 1.1.4**

**Paper ID : [D0105]**

[Note : Please fill subject code and paper ID on OMR]

**Time : 03 Hours**

**Maximum Marks : 80**

**Instruction to Candidates:**

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Three** questions from Section - C.

**Section - A**

**Q1)**

**(15 × 2 = 30)**

- a) What is temporary and permanent hard water?
- b) How pKa is related to strength of acids?
- c) What is buffer capacity?
- d) How water for injection is different from bacteriostatic water for injection?
- e) Name the various agents used to treat gastrointestinal disorders.
- f) What are the side effects of magnesium containing antacids? How these effects can be prevented?
- g) Give the uses and examples of protectives and adsorbants.
- h) List the different types of laxatives with examples.
- i) Calculate the number of mEq of NaCl in one litre of a 0.9% w/v solution.
- j) Name the diseased states associated with excess and low levels of sodium and calcium.
- k) What is replacement therapy? Name the various compounds used in this therapy.
- l) What are essential ions? Give four examples.
- m) List the various products to control iron deficiency. Give their structures.
- n) Give therapeutic uses of protectives and anti-microbials.
- o) Give chemical reactions of ZnO in acidic and alkaline media.

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### Section - B

(4 × 5 = 20)

- Q2) Give the mechanism of action of various calcium containing antacids. What are the side effects associated with these agents.
- Q3) Discuss the importance of electrolytes with special emphasis on their role in metabolism.
- Q4) Elaborate on biochemical and physiological roles of iodine.
- Q5) Give a brief account of mineral supplements.
- Q6) What are different kinds of topical agents? Discuss any one category.

### Section - C

(3 × 10 = 30)

- Q7) What is temporary and permanent hard water? Discuss various methods to soften these waters.
- Q8) What are antacids? Give names and formulae of five antacids. What are the side effects associated with antacid therapy? What are the requirements of an ideal antacid?
- Q9) What are the major physiological ions present in body? Give a detailed account of phosphate ions.
- Q10) Discuss the hypotheses to control intestinal iron absorption.

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