

25/11/16

Total No. of printed pages = 5

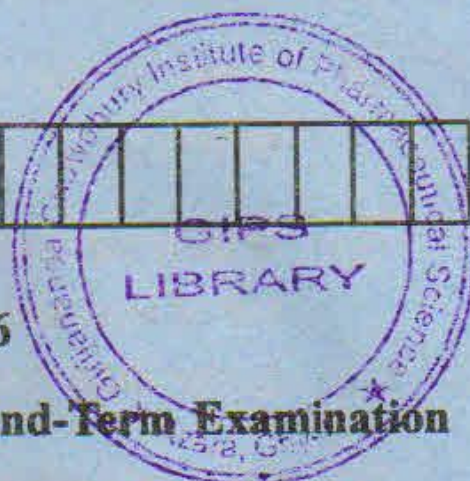
PY 132106

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SCANNED

2016



B. Pharm 1st Semester End-Term Examination

PHARMACEUTICAL CHEMISTRY - 1

(Inorganic)

Full Marks – 100 Pass Marks – 35 Time – Three hours

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

1. Answer the following questions (any six) :

2×6=12

- What do you mean by barium sulphate reagent? State the utility of this reagent.
- What are the hard and soft acids? Give examples.
- What are haematinics? Give an example.
- Give the chemical formula of calamine BP and USP. What are astringents?

[Turn over

- (e) Define Becquerel and Rad.
- (f) What is the clinical utility of sclerosing agents ?
- (g) Which particular reagent is used in the limit test of lead and why citric acid is incorporated in the limit test of iron ?
- (h) Give the composition of Ringer's solution.

2. Answer the following questions. (any six) :
 $3 \times 6 = 18$

- (a) What are the different criteria for selection of antioxidants ?
- (b) Write down the method of preparation and storage of nitrous oxide.
- (c) How silver nitrate is prepared and what percentage of it is used in ophthalmic solution ?
- (d) What are the biological effects of radiation ?
- (e) What do you mean by metabolic acidosis and alkalosis ?

- (f) Outline the three pivotal steps employed in the intervention of diarrhoea in descending order of priority.
- (g) State the Lewis and Arrhenius acid-base concept with examples.
- (h) Write down the preparation and uses of hydrogen peroxide.

3. Answer the following questions. (any *eight*) :

5×8=40

- (a) Write a note on physiological acid-base balance. 5
- (b) Why stannous fluoride is superior to sodium fluoride as anticaries agent ? Write down the method of preparation and properties of stannous fluoride. 1+4=5
- (c) Discuss briefly the biological role of iron, calcium and iodine in human body. 5
- (d) Derive the Henderson-Hasselbach equation for pH of an acidic buffer. 5
- (e) Write down the preparation and uses of hypophosphorous acid. 5

(f) Classify cathartics with example of each class. What are the various applications of cathartics ? $3+2=5$

(g) How does astringent elicit antiperspirant action ? Write a note on povidone iodine. $2+3=5$

(h) What are the various effects of impurities when present in a medicinal substance ? Which topical agent is used in a sunscreen product ? $4+1=5$

(i) How an expectorant exhibits its activity ? Under what conditions emetics are contraindicated ? $2.5+2.5=5$

(j) Discuss the treatment strategies employed in case of cyanide poisoning. 5

4. Answer the following questions. (any three) : $10 \times 3 = 30$

(a) Discuss the preparation, properties and uses of hydrochloric acid and boric acid. $5+5=10$

(b) What do you mean by radionuclide ? Classify them with appropriate examples. Discuss in details about the rays emitted from radioactive substances. $5+5=10$

(c) Classify antidotes and state the mechanism of action of each class. Write down the method of preparation and properties of sodium nitrite. Discuss briefly the treatment strategies followed in case of heavy metal poisoning. $3+3+4=10$

(d) Write down the preparation, properties, uses and storage condition of oxygen. Write a note on respiratory stimulant. $7+3=10$