28[u]14/ASTU/1st Sem.(Reg.)

Total No. of printed pages = 6

PY 132106

Roll No. of candidate | | | | | | | | | | |

2014

B. Pharm 1st Semester End-Term Examination

PHARMACEUTICAL CHEMISTRY – I

(Inorganic Chemistry)

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

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

Answer the following questions.

1. Answer any *ten* questions : 1×10=10

   (a) The limit test of sulphate is based on the reaction between soluble sulphates and ..... .

   (b) Why dilute HCl is added for the limit test of chloride ?

   (c) Write the definition of acid and base according to Arrhenius.

   (d) What do you mean by acidosis and alkalosis ?

[Turn over

(e) What is buffer capacity ?

(f) Sodium bicarbonate is an example of ..... antacid.

(g) What is acid neutralising capacity ?

(h) The chemical formula of Plaster of Paris is ..... .

(i) What is sclerosing agent ?

(j) What are expectorants and emetics ? Give examples.

(k) Write any two units of radioactivity.

(l) Nuclides having same number of protons but different numbers of neutrons are termed as ..... .

2. Answer any *ten* questions : 2×10=20

(a) Write down the principles for the limit test of chloride.

(b) What is barium sulphate reagent ? Why dilute nitric acid is used for the limit test of sulphate ?

(c) Write down the principle of Lead according to I.P and B.P.

(d) Write down the importance of acid and base in pharmacy.

(e) What are the different types of acidifiers ? Explain them.

(f) Write down the different types of antacids with proper examples.

(g) Distinguish between cathartics, purgatives and laxatives with proper examples.

(h) What is an anti-infective agent ? What are the different categories of anti-infective agent ? Explain them.

(i) Write the role of fluoride in preventing dental caries.

(j) Write the biological role of copper.

(k) What is heavy metal poisoning ? Write its therapy.

(l) Explain the different types of electrolytes in replacement therapy.

3. Answer any *ten* questions : 10×3=30

(a) What are the different parameters that are required for test of purity of inorganic pharmaceuticals ?

(b) Write down the principles for the limit test of iron. Write the function of Thioglycollic acid in the limit test of iron.

(c) Discuss Bronsted-Lowry concept of acid and base. Outline the limitations.

(d) What is a buffer solution ? Explain different types of buffer solution. Explain the different properties of buffer solution.

(e) Discuss the role of buffer in pharmacy.

(f) Write the ideal characters of an antacid. Why combination of antacid is essential ? Explain with proper example.

(g) Write down the role of sodium and potassium in the physiological process of body.

(h) Discuss the mechanism of oxidation and halogenations.

(i) Write short notes on anticaries agent and dentifrice.

(j) What is an antidote ? Explain different types of antidotes.

(k) Write a short note on respiratory stimulants.

(l) Discuss the biological role of zinc.

4. Answer any *five* questions : 5×4=20

(a) Derive Henderson-Hassalbach equation for the pH of acidic and alkaline buffer. What are psysiological buffer and pharmaceutical buffer solution ?

(b) Write down the preparation, properties and uses of boric acid.

(c) What are astringents ? Write the mechanism of action of astringents. Discuss their properties.

(d) Write short note on inhalents and anaesthetics.

(e) Write the preparation, properties and uses of calcium carbonate.

(f) What is electrolyte combination therapy ? Explain different categories of electrolyte combination products.

(g) Write a note on complexing and chelating agent.

5. Answer any *four* questions : 4×5=20

(a) Discuss different types of sources of impurities with suitable examples.

(b) Write a note on physiological acid base balance.

(c) Classify topical agents. Write the preparation, properties and uses of talc and titanium dioxide.

(d) What are protectives and adsorbents ? Write the preparation, properties and uses of bismuth subcarbonate.

(e) Write a note on pharmaceutical aid.

(f) Write the construction and working of GM counter.