FIRST YEAR PHARMACY

PHARMACEUTICAL CHEMISTRY - I

(102)

Time : Three Hours *Maximum Marks : 80*

Note : i) Attempt total *six* questions. Question No.1 is compulsory. From the remaining questions attempt any *five*.

ii) Illustrate your answer with neat sketches wherever necessary.

1. Define any five of the following with examples. 10
   a) Antimicrobials
   b) Buffers
   c) Extracellular electrolytes
   d) Expectorants
   e) Antidotes
   f) Dental products

2. Solve any four of the following. 14
   a) Define Acids-Bases as per Arrhenius concept. Give two examples of each.
   b) What are antioxidants? Give mechanism of action of antioxidants with examples.

c) Give properties and uses of any two:
   i) Calcium hydroxide
   ii) Hypophosphorous acid
   iii) Nitrogen

d) Define and classify Buffers. Explain Buffer capacity.

e) Write the identification test of the following.
   i) Carbonate ion ii) Strontium

3. Solve any four of the following. 14

a) Define Antacids. Describe the characteristics of an ideal antacid.

b) Give properties and uses of the following.
   i) Hydrochloric Acid
   ii) Sodium bicarbonate

c) Explain respiratory stimulants with examples. Write the properties and uses of ammonium carbonate.

d) What is poison? Discuss antidotes used in cyanide poisoning.

e) Explain the term saline cathartic. Give properties and uses of magnesium sulfate.

4. Solve any four of the following : 14

a) Define Antimicrobials. Give properties and uses of Hydrogen peroxide.

b) Define Inhalants. State the storage condition for oxygen and nitrous oxide.

c) Define Astringents. Give properties and uses of Aluminium.

d) Explain Anticaries and desensitising agents. Give properties and uses of strontium chloride.

e) Give properties and uses of the following:
   i) Calamine
   ii) Potassium permanganate.

5. Solve any four of the following. 14

a) Explain physiological acid base balance is maintained in the body.

b) What is meant by oral Rehydration therapy?

c) Give synonyms of the following:
   i) Nitrous oxide
   ii) Sodium Chloride
   iii) Ammonium carbonate

d) What is the composition of ORS recommended by UNICEF.

e) Mention the storage condition of the following:
   i) Potassium chloride
   ii) Sodium Citrate.

6. Solve any four of the following. 14

a) Enlist the various sources of impurities in pharmaceutical compounds.

b) Write the principle for limit test of Iron.

c) Enlist the official compounds of calcium.

d) Give preparation, properties and uses of ferrous sulfate.

e) Write the importance of quality control in pharmaceuticals.

7. Solve any four of the following. 14

a) What are the biological effect of radiations?

b) Explain construction and working of G.M. counter.

c) What do you understand by radio-opaque contrast media?

d) Write only the names of four radionuclides with its.

e) What are the precautions taken during handling and storage of radiopharmaceuticals?

8. Write short notes on any four of the following: 14

a) Chlorinated lime.

b) Topical Agents

c) Antimony Potassium Tartrate

d) Iodine

e) Principle for limit test of chloride.