

F/2017/1944

Total Pages : 4

**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) Antiseptics
- b) Extra cellular electrolytes
- c) Antidotes
- d) Saline cathartic
- e) Dental products
- f) Emetics

2. Solve any four of the following: 14

- a) Explain the term Lewis acid and Lewis base giving suitable examples.
- b) What are Antioxidants? Discuss the mechanism of action of inorganic antioxidants.

F/2017/1944

P.T.O.

(2)

- c) Give properties and uses of any two:
 - i) Hydrochloric acid
 - ii) Sodium-metabisulphite
 - iii) Ammonia solution strong
- d) Define Buffers mention the criteria for selection of buffer system.
- e) Write the identification test of the following:
 - i) Calcium
 - ii) Nitrate

3. Solve any four of the following: 14

- a) Define Antacids. Describe the characteristics of an ideal Antacid.
- b) Give the properties and uses of the following:
 - i) Aluminium hydroxide gel
 - ii) Sodium bicarbonate
- c) What are protectives and adsorbents? Write the properties and uses of bismuth subcarbonate.
- d) What is poison? Discuss antidotes used in cyanide poisoning. <http://www.rgpvonline.com>
- e) Write a short note on pharmaceutical gases as inhalants.

4. Solve all of the following: 14

- a) What are Astringents? How are they useful topically? List the compounds of aluminium as astringent.
- b) Define Inhalants. State the storage condition for oxygen and nitrous oxide.

(3)

- c) Write the properties and pharmaceutical uses of the following:
 - i) Precipitated sulphur
 - ii) Iodine
- d) List important preparations of calamine and zinc-oxide and mention their uses.

5. Solve any four of the following: 14

- a) What are Electrolytes? Name the major intra and extracellular electrolytes.
- b) What is meant by oral rehydration therapy?
- c) Write the chemical formulae of the following:
 - i) Potassium citrate
 - ii) Potassium acetate
- d) What is the composition of ORS recommended by UNICEF?
- e) Mention the storage condition of the following:
 - i) Sodium chloride
 - ii) Sodium citrate

6. Solve any four of the following: 14

- a) Explain any four important sources of impurities in pharmaceuticals.
- b) Write the principle for limit test for Iron.
- c) Explain why alcohol is added in "Barium Sulphate Reagent" used for limit test of sulphate.

- d) Give preparation, properties and uses of ferrous sulphate.
- 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 the construction and working of GM counter.
- c) What are the precautions taken during handling and storage of radiopharmaceuticals?
- d) Write only the names of four radionuclides with its uses.
- e) What are radio-opaque contrast medium? Give an account of Barium Sulphate.

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

- a) Dental Products
- b) Topical Agents
- c) Inhalants
- d) Iodine
- e) Chlorinated Lime

