

DIPLOMA IN PHARMACY (FIRST YEAR)
PHARMACEUTICAL CHEMISTRY – I
(102)

Time : Three Hours

Maximum Marks : 80

- Note :** (i) All questions are compulsory.
(ii) Answer each next main question on a new page.
(iii) Figures to the right indicate full marks.

1. Attempt any *five* questions of the following : 20
- (a) Define the following terms :
 - (i) ~~Asfringents~~
 - (ii) ~~Antidotes~~
 - (iii) ~~Expectorants~~
 - (iv) ~~Antacids~~
 - (b) Classify the topical agents with examples.
 - (c) Write the principle for the limit test of chloride.
 - (d) Write the formula of ORS according to WHO and UNICEF.
 - (e) Enlist the official compounds of calcium.
 - (f) Write a note on inhalants.
 - (g) Explain protectives with examples. Write the uses of titanium dioxide.

P. T. O.

2. Attempt any *three* of the following : 4 each

(a) Write the principle for the limit test of arsenic with diagram.

(b) What are the various sources of impurities in pharmaceutical compounds ?

(c) Write the specifications of Nessler's cylinder.

(d) Write the principle for the limit test of Iron.

(e) Write the importance of quality control in pharmaceuticals.

3. Attempt any *three* of the following : 4 each

(a) Explain major intra and extra cellular electrolytes. Write the properties and uses of sodium chloride and potassium chloride.

(b) Explain how the physiological acid-base balance is maintained in the body.

(c) Write the properties and uses of sodium acetate and ammonium chloride.

(d) Explain respiratory stimulants with examples. Write the properties and uses of one respiratory stimulant.

(e) Explain inhalants with examples. Write the properties and uses of nitrogen.

4. Attempt any *three* of the following : 4 each

(a) Enlist the official compounds of Iron. Write the properties and uses of ferrous sulphate.

- (b) Write the names of official compounds of Iodine. Write the properties and uses of any *one* official compound of Iodine.
- (c) Write the preparation, properties and uses of calcium gluconate.
- (d) Classify dental products with examples.
- (e) Define saline cathartics with examples. Write the properties and uses of sodium potassium tartarate.
5. Attempt any *three* of the following : 4 each
- (a) Define radioactivity and explain the properties of α , β and γ radiations.
- (b) What do you understand by radio-opaque contrast media ? Write the preparations, properties and uses of Barium Sulphate.
- (c) Explain the construction and working of G. M. Counter.
- (d) What are the precautions taken during handling and storage of radio-pharmaceuticals.
- (e) Write the medicinal applications of radio-pharmaceuticals.
6. Attempt any *three* of the following : 4 each
- (a) Write the physico-chemical properties of the following compounds :
- (i) Boric acid
- (ii) Sodium bisulphite
- (iii) Magnesium oxide

(b) Write the uses of the following compounds :

- (i) Sodium nitrite
- (ii) Magnesium trisilicate
- (iii) Zinc oxide

(c) Write the uses and storage condition of the following :

- (i) Hydrogen peroxide
- (ii) Potassium permanganate
- (iii) Ammoniated mercury

(d) Write the identification test of the following ions :

- (i) Ammonium
- (ii) Antimony
- (iii) Barium

(e) Write the identification test of the following ions :

- (i) Mercury
- (ii) Iodide
- (iii) Iron