12425
03 Hours / 80 Marks

0806

Seat No. | | | | | | | | |

Instructions – (1) All Questions are *Compulsory.*
(2) Answer each next main Question on a new page.
(3) Illustrate your answers with neat sketches wherever necessary.
(4) Figures to the right indicate full marks.
(5) Assume suitable data, if necessary.
(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any EIGHT of the following: **16**

a) Define:
   i) Buffer ii) Buffer capacity.
b) Enlist any four tests for purity.
c) Explain the terms:
   i) Achlorhydria ii) Astringents.
d) Write molecular formula, synonym and uses of Boric Acid.
e) Mention four important properties of antioxidants.
f) Explain with diagram extracellular and intracellular fluids.
g) Define laxatives with examples.
h) Define error and explain types of errors.
i) Classify Antacids with examples.
j) Explain the terms:
   i) Radioisotopes ii) Half life.
k) What do you mean by significant figure and Precision?
l) Name two inorganic compounds used as:
   i) Electrolyte replenisher ii) Antiseptics.

2. Attempt any FOUR of the following: **12**

a) Explain Arrhenius theory for Acid and Base with example. Give its limitations.
b) Give molecular formula and uses of (Any three):
   i) Zinc oxide ii) Talc
   iii) Titanium dioxide iv) Caustic soda.
c) Define Antacid. Explain why they are used in combination.
d) Discuss various disorders of Acid-Base balance. What is the advantage of using sodium lactate over sodium bicarbonate in the treatment of metabolic acidosis.
e) What are G.I. agents? Classify with examples.
f) Give molecular formula and uses of:
   i) Sodium Potassium Tartarate ii) Calcium Carbonate.

3. Attempt any FOUR of the following: **12**

a) Define limit test. Explain principle of limit test for chloride with reaction and role of reagents used.
b) What is the role of Iron in human body? Name official compounds of iron with molecular formula.
c) Define Antidote. Classify them with examples.

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Marks

d) Why providone Iodine is preferred to elemental iodine? Give its properties and uses.

e) Give formulae of ORS mentioned by WHO and UNICEFF. Mention direction for use.

f) How dental carries is produced? Name various dental products with example.

4. Attempt any FOUR of the following: **12**

a) Give synonym and use of (any three) –
   i) Magnesium sulphate ii) Chlorinated lime
   iii) Muriatic acid iv) Baking soda.

b) Explain with reaction principle involved in limit test for iron. Mention role of reagents used.

c) Classify Antioxidants with example and give their mechanism of action.

d) What are Radio-opaque contrast media? Give formula and properties of Barium sulphate.

e) Define mEq/lit. Calculate number of mEq/lit of sodium chloride in one liter of 0.9% w/v solution.

f) Name any three official compounds of calcium. Mention their molecular formula.

5. Attempt any FOUR of the following: **12**

a) What are the effects of impurities on pharmaceutical substances?

b) Mention inorganic compound used (Any three)
   i) Scabies ii) Vomiting
   iii) Dandruff iv) Conjuctivitis.

c) Give chemical formula and use of –
   i) Ammonium carbonate ii) Ammonium chloride
   iii) Potassium Iodide

d) Mention various allotropic forms of sulphur. Give properties and use of any two.

e) Name the apparatus used in limit test of Arsenic. Draw well labelled diagram with specifications.

f) Give important properties of α, β and γ rays.

6. Attempt any FOUR of the following: **16**

a) Give chemical formula and use of:
   i) Silver nitrate ii) Calcium gluconate
   iii) Stanous fluoride iv) Potassium permagnate.

b) Describe identification test of (Any two):
   i) Calcium ii) Sulphate
   iii) Chloride iv) Acetate.

c) Draw diagram with construction and working of G.M. Counter.

d) Mention storage condition, labelling and use of:
   i) Oxygen ii) Carbon dioxide

e) Define volume strength of Hydrogen Peroxide. Calculate volume strength of 27.5% w/v solution of hydrogen peroxide.

f) Give reactions of Boric acid when –
   i) Heated at 100°C, 160°C and above.
   ii) Treated with Glycerine.