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Azim Halki Swapara,
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2020

D.Pharm. 1st Year End-Term Examination

PHARMACEUTICAL CHEMISTRY – I

Full Marks – 80

Time – Three hours

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

1. Answer the following questions: (20 × 1 = 20)

(A) Fill in the blanks

- (i) Limit test are qualitative or _____ test designed to identify or control small quantities of impurities.
- (ii) The laughing gas is known as _____.
- (iii) First edition of I.P. was published in the year _____.
- (iv) In limit test of Iron formation of purple colour is due to _____.
- (v) Cathartics are the drugs used to _____.
- (vi) Systemic antacid are soluble, readily absorbed. (True/ False)
- (vii) Synonym of Magnesium sulphate is _____.
- (viii) Kaolin is _____.
- (ix) Homemade ORS constitutes of _____.
- (x) Achlorhydria/Hypochlorhydria is the absence of _____.

(B) Multiple choice questions:

- (i) Impurities in pharmaceutical preparation may be due to following sources
 - (a) Raw material
 - (b) Manufacturing process
 - (c) Chemical instability
 - (d) All of the above
- (ii) Hydrogen peroxide is used as
 - (a) Antiseptic
 - (b) Acidifying agent
 - (c) Protective
 - (d) Antioxidant

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- (iii) P^H of blood is a
- (a) 7.35-7.4 (b) 6.00-6.50
(c) 7.50-8.0 (d) None of the above
- (iv) Caustic soda is the synonym of
- (a) Potassium hydroxide (b) Calcium hydroxide
(c) Sodium hydroxide (d) Magnesium hydroxide
- (v) The hardest substance present in the body
- (a) Dentine (b) Cementum
(c) Enamel (d) None of the above
- (vi) Ferrous sulphate is called
- (a) Green vitriol (b) Blue vitriol
(c) White vitriol (d) None of the above
- (vii) Radioactivity is measured by
- (a) G.M counter method (b) pH meter
(c) Spectrophotometer (d) Volumetric titration method
- (viii) Arsenic limit test is carried out in
- (a) Nessler cylinder (b) Separating funnel
(c) Gutzeit apparatus (d) All of the above
- (ix) Thioglycollic acid is used in
- (a) Sulphate limit test (b) Chloride limit test
(c) Iron limit test (d) Heavy metal limit test
- (x) The principle function of chloride is
- (a) Maintenance of proper hydration
(b) Maintenance of osmotic pressure
(c) Normal electrolytic balance
(d) All of the above

2. Short Answer Questions (Any Six): (6 × 5 = 30)

- (i) Explain about the Geiger-Muller counter with diagram. 5
- (ii) Explain briefly the theories of acid-base concept. 5
- (iii) Define Antacid with examples. Classify them. Write two ideal properties of antacid. (1+2+2=5)

- (iv) Write the chemical formula, synonym, preparation, properties, uses of Hydrochloric acid. 5
- (v) Write a short note on Expectorants and Emetics. (2.5+2.5=5)
- (vi) What are Antiseptic and Disinfectant. Write the mechanism of action of antimicrobials. (2+3=5)
- (vii) Give the composition of oral electrolyte powders and solution as per WHO norms. 5
- (viii) What are anticaries agent. Write the role of fluoride in the treatment of Dental carries. 5
- (ix) Define antioxidant. What are the criteria for a substance to act as antioxidant. (1+4=5)
3. Long Answer Questions (Any Three): (3×10=30)
- (i) What are Radiopharmaceuticals. What are the biological effects of radiation. Write the applications of radioisotopes. (2+4+4=10)
- (ii) Define Limit test and discuss the principle and method of Chloride Limit test. (2+4+4=10)
- (iii) Define Dehydration. What are the causes of Dehydration. Write a note on Intracellular ions. 10
- (iv) Write the various sources of impurities in pharmaceutical chemicals. 10
- (v) Define Inhalants. Write the uses of Carbon dioxide, Oxygen, Nitrous oxide. (1+3+3+3=10)