13/11/23   GCU

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B.Pharm Semester Examinations

PHARMACEUTICAL INORGANIC CHEMISTRY-THEORY

Course Code: BP104T

Full Marks – 75   **Time –3 hours**

The figure in the margin indicates full marks for the questions.

1. Multiple choice questions: (1×20=20)

    I. Dithizone is used to detect-
        a) Arsenic
        b) Lead
        c) Iron
        d) Sulphate

    II. Bentonite is an example of
        a) Stimulant purgative
        b) Osmotic laxative
        c) Lubricant laxative
        d) Bulk purgative

    III. BF_3 is _____ according to _____ theory.
        a) Base, Arrhenius
        b) Acid, Lewis
        c) Acid, Bronsted-Lowry
        d) All of the above

    IV. Plasmolysis occurs due to
        a) Hypotonic solution
        b) Isotonic solution
        c) Hypertonic solution
        d) All of the above

    V. pH of stomach is
        a) 5.4 -7.4
        b) 7.4 – 7.8
        c) 1.5 – 3.5
        d) 4.5 – 8.0

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VI. Expectorant is
    a) Increase fluidity
    b) Reduce viscosity
    c) Increase volume of fluids
    d) All of the above

VII.   Most abundant electrolyte in the body is.
    a) K^+: Intracellular, Na^+: Extracellular
    b) Cl^-: Intracellular, K^+: Extracellular
    c) PO^{-4}: Intracellular, Ca^{+2}: Extracellular
    d) Na^+: Intracellular, K^+: Extracellular

VIII.   Ringer injection is
    a) $NaCl$, KCl, $CaCl_2$
    b) $NaCl$, $LiCl$, $CaCl_2$
    c) $NaCl$, $CaCO_3$, $CaCl_2$
    d) KCl, $LiCl$, $CaCl_2$

IX. Emetic centre is located in-
    a) Cerebellum
    b) Cerebrum
    c) Medulla oblongata
    d) Basal ganglia

X. Pyrodoxineis
    a) Haematinics
    b) Emetics
    c) Expectorants
    d) Antidote

XI. Lugol's solution is-
    a) Potassium iodide and aqueous iodine solution
    b) Potassium iodide and strong iodine solution
    c) Potassium iodide and weak iodine solution
    d) Iodine tincture

XII.   In sodium thiosulphate preparation SO_2 is passed through
    a) Sodium sulphite
    b) Sodium sulphide
    c) Sodium sulphate
    d) Sulphur

XIII.   Which of the following radiations possess more ionising power?
    a) γ-rays
    b) β-rays
    c) α-rays
    d) X-rays

XIV.   Sodium nitrite is used as antidote for-
    a) Co poisoning
    b) P poisoning

      c) Cu poisoning

      d) CN poisoning

XV.   The β-particle is similar to-

      a) Hydrogen nuclei

      b) Electron

      c) Proton

      d) Helium nuclei

XVI.   Soda alum is an example of-

      a) Acidifier

      b) Anatacid

      c) Laxative

      d) Astringent

XVII. $CaOCl(Cl).H_2O$ is –

      a) Baking soda

      b) Bleaching powder

      c) Caustic soda

      d) Washing soda

XVIII. H_2O_2 is not prepared from-

      a) BaO_2

      b) H_2SO_4

      c) Na_2SO_4

      d) NaOH

XIX.   Ammonium chloride is an example of

      a) Expectorant

      b) Cathartics

      c) Antacids

      d) Anticaries

XX.   Hormone that regulates the levels of Calcium ion in plasma is-

      a) Calcitonin

      b) ADH

      c) Parathyroid hormone

      d) Both i&ii

2. Short answer type questions (Any seven) (*Within 250 words*)   (5×7=35)

   I. Define impurities. Explain the effect of the impurities.

  II. Write in detail about the limit test of iron.

 III. Explain the concepts of acid and base with example.

 IV. Derive the Handerson-Hassalbach equation.

  V. Classify cathartics with examples.

 VI. Write in detail about the mechanisms by which antimicrobial acts.

 VII. What is caries? What is the role of fluoride in dental health?

VIII. Explain antacids and give its classifications.

IX. Mention the properties of α, β, and γ rays.

X. What are haematinics? Write in brief about IP limit, properties, preparation, assay and use of any one haematinic.

3. Long answer questions (Any two)(*Within 500 words*)   (10×2=20)

I. Define poison and antidote? Give an account on the classifications of antidotes. Which chelating agents are used as antidotes?Give an account on the treatment of cyanide poisoning.

    [2+4+1+3]

II. Elaborate the different units of radioactivity? Mention the various methods used to measure radioactivity. Give a detail account of any one method.   [2+3+5]

III. Define buffer? What are the properties of buffer? A buffer solution is made by dissolving CH_3COOH and CH_3COONa in water.

  a) Write an equation that shows how this buffer neutralizes theadded acid.

  b) Write an equation that shows how this buffer neutralizes the added base.

  c) Calculate the pH of this buffer if it contains 0.20 M CH_3COOH and 0.40 M CH_3COO^-. The Ka for CH_3COOH is 1.8×10^{-5}. (-log 1.8×10^{-5} = 4.74, -log 2=-0.301

    [2+3+1+1+3]