

Total No. of printed pages = 4

Bina Chowdhury Central Library  
Girijananda Chowdhury University  
Hatkhowapara, Azara, Ghy-17

**ER 20-12T**

Roll No. of candidate

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**2023**

**D.Pharm. 1<sup>st</sup> Year (Regular) End-Term Examination**

**PHARMACEUTICAL CHEMISTRY**

Full Marks – 80

Time – Three hours

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

1. Answer *all* the following. (20 × 1 = 20)
- (a) Fill in the blanks :
- (i) The gas that stains mercuric chloride paper yellow in the limit test for Arsenic is \_\_\_\_\_
  - (ii) Argentometric titrations utilise \_\_\_\_\_ as titrant.
  - (iii) Imipramine hydrochloride is used as an \_\_\_\_\_
  - (iv) Largactil is the popular brand name of an antipsychotic called \_\_\_\_\_
  - (v) Antimalarial drug Quinidine acts by the mechanism of \_\_\_\_\_
  - (vi) Solutions of sulphacetamide are used locally in infections of the \_\_\_\_\_
  - (vii) \_\_\_\_\_ is the cis isomer of platinum (II) complex.
  - (viii) Ketoconazole belongs to \_\_\_\_\_ Class of drugs.
  - (ix) 1,1 Dimethyl biguanide is the chemical name of \_\_\_\_\_
  - (x) A solution of accurately known concentration is called \_\_\_\_\_ solution.

**[Turn over**

- (b) Answer the following questions (one word) :
- (i) Write the chemical formula for nitrous oxide.
  - (ii) Name a gastro-intestinal adsorbent.
  - (iii) Name one alpha-adrenergic blocker having vasodilator effect.
  - (iv) Which sedative has the popular brand name of Calmpose/Valium?
  - (v) Write one example of a clinically useful narcotic antagonist.
- (c) Multiple choice Questions :
- (i)  $\alpha$ -adrenergic antagonist drug
    - (1) Tamosulosin
    - (2) Bethanicol
    - (3) Tolteradine
    - (4) Trosipium
  - (ii) The first edition of IP got published in
    - (1) 1956
    - (2) 1955
    - (3) 1965
    - (4) 1985
  - (iii) Which of the following anticonvulsant is a sodium channel blocker?
    - (1) Clonazepam
    - (2) Gabapentine
    - (3) Carbamazepine
    - (4) Vigabetrine
  - (iv) Essential structural unit for the antihelmintic activity of mebendazole is?
    - (1) Imidazole
    - (2) Benzimidazole
    - (3) Benzoyl group
    - (4) Methyl carbonates
  - (v) Albucid is a brand name for
    - (1) Sulphacetamide
    - (2) Sulphadimidine
    - (3) Suiphadiazine
    - (4) Sulphaphenazol



2. Answer any *ten* of the following : (10 × 3 = 30)

- (a) Describe the principle with chemical reactions involved in the limit test for chloride.
- (b) Write formulation and brand name of propofol.
- (c) Write chemical name (IUPAC) and chemical structure of Metformin and Glibenclamide.
- (d) Write about the mechanism of the following antitubercular drugs :
  - (i) Ethambutol
  - (ii) Rifampicin
- (e) Write preparation of oral iron with examples.
- (f) Classify antidepressant agents with proper example of drugs in each group.
- (g) Write about the insulin preparations.
- (h) Classify antibiotics with proper examples for each group.
- (i) Mention the color of medicinal gases cylinder with their uses :
  - (i) oxygen
  - (ii) nitrous oxide
  - (iii) carbon dioxide.
- (j) What is DOTS therapy?
- (k) Write briefly about the drugs acting on ANS.

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3. Answer any *six* of the following : (6 × 5 = 30)

- (a) What are haematinics? Write the formulations, market preparations, storage conditions and uses of ferrous sulphate.
- (b) What is sedatives and hypnotics? Write the differences between sedatives and hypnotics. Write chemical (IUPAC) name and structure of Diazepam.
- (c) Write the chemical name (IUPAC) AND chemical structure of :
  - (i) Propranolol
  - (ii) Captopril.
- (d) What do you mean by antiviral agents? Write storage, formulation and brand name of any three antiviral agents.

- (e) What do you mean by anti-neoplastic agents? Classify anti-neoplastic agents with example.
- (f) Briefly describe the uses, storage & stability, formulations and brand names of Procainamide hydrochloride, lidocaine, sotalol.
- (g) Explain the below agents with proper example :
- (i) Dentifrices
  - (ii) Polishing agents
  - (iii) Anticaries agents
  - (iv) Desensitizing agents
  - (v) Abrasive
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