THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[BPHARM 0921] **SEPTEMBER 2021** **Sub. Code: 2051**

(SEPTEMBER 2020 EXAM SESSION)

B.PHARM. DEGREE EXAMINATION

PCI Regulation 2017 – SEMESTER V

PAPER I – MEDICINAL CHEMISTRY – II

Q.P. Code: 562051

Time: Three hours **Maximum: 75 Marks**

I. Elaborate on: Answer any TWO questions. **(2 x 10 = 20)**

1. a) Classify Anti-neoplastic agents with suitable examples. Explain the mechanism of action and therapeutic uses of antimetabolites.
   b) Write the synthesis and uses of Mechlorethamine and Methotrexate.

2. a) Explain the chemistry of steroids. Write briefly on corticosteroids.
   b) Write a note on Insulin and its preparations.

3. Classify antihistaminic drugs with suitable examples. Explain the chemistry, SAR and mechanism of action of H1-receptor antagonists. Write the synthesis of Diphenhydramine hydrochloride.

II. Write notes on: Answer any SEVEN questions. **(7 x 5 = 35)**

1. Classify antianginal drugs. Write the synthesis and uses of Isosorbide dinitrate.
2. Write the structure and uses of **a)** Thiotepa **b)** Nifedipine **c)** Hydrochlorthiazide **d)** Digoxin **e)** Lidocaine hydrochloride.
3. Explain the SAR of local anaesthetics.
4. Write a note on H2-blockers. Give the structure of Ranitidine and Famotidine.
5. Explain the mechanism of action of biguanides as antidiabetic drugs. Give the structure and uses of Metformin.
6. Write a note on thyroid hormones. Give the structure of L-Thyroxine and L-Thyronine.
7. Write the structure, mechanism of action and medicinal uses of Sildenafil citrate.
8. Explain the physiological function of androgens. Give the structure and uses of Testosterone and Nandralone.
9. Write the synthesis and mechanism of action of Benzocaine.

III. Short answers on: Answer ALL questions. **(10 x 2 = 20)**

1. Write a note on glucosidase inhibitors as antidiabetic agents.
2. What are oral contraceptives? Give the structure and uses of Mifepristone.
3. Give the structure and medicinal uses of Betamethasone.
4. Write the clinical importance of potassium sparing diuretics. Give example.
5. Write the name and mechanism of action of plant products as anticancer agents.
6. Write the structure and uses of Reserpine.
7. Give the structure and uses of Bosentan and Amlodipine.
8. What are the clinical uses of Cholestyramine. Explain its mechanism of action.
9. Write a note on calcium channel blockers.
10. Write the structure and uses of Butamben and Procaine.

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