Subject Code: BP501T

PAPER ID-310642

Roll No:

**BPHARM**
**(SEM V) THEORY EXAMINATION 2023-24**
**MEDICINAL CHEMISTRY II – THEORY**

**TIME: 3 HRS** **M.MARKS: 75**

**Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

**1. Attempt *all* questions in brief.** **10 x 2 = 20**

| | |
|---|---|
| a. | Define $H_2$ receptor antagonist with examples. |
| b. | Name any two natural products used as anticancer agents. |
| c. | Discuss the mechanism of action of osmotic diuretics. |
| d. | Write the mechanism of action of digoxin in the treatment of congestive heart failure. |
| e. | What are oral contraceptives? Give examples. |
| f. | Write the uses of sotalol and menadione. |
| g. | Write the structure and uses of any two anticoagulants. |
| h. | Give the structure and uses of thyroid hormones. |
| i. | Write the mechanism of action and uses of metformin. |
| j. | Outline the synthesis of procaine. |

**SECTION B**

**2. Attempt any *two* parts of the following:** **2 x 10 = 20**

| | |
|---|---|
| a. | Define and classify Antihistaminic agents with examples. Outline synthesis, mechanism of action, and uses of Diphenhydramine and Promethazine. |
| b. | Classify diuretics with examples. Explain SAR of thiazides diuretics along with synthesis, mechanism of action and uses of chlorothiazide. |
| c. | Define and classify local anaesthetic agent with examples. Outline the synthesis and mechanism of action of Benzocaine and Dibucaine. |

**SECTION C**

**3. Attempt any *five* parts of the following:** **5 x 7 = 35**

| | |
|---|---|
| a. | Discuss proton pump inhibitor in detail and give structure, mechanism of action and uses of Omeprazole. |
| b. | Classify Anti-hyperlipidaemic agents. Describe in detail about structures and mechanism of action of Clofibrate and Lovastatin. |
| c. | Outline the SAR of dihydropyridines (calcium channel blockers). Give the structure, synthesis, mechanism of action and uses of Methyldopate Hydrochloride. |
| d. | Briefly explain erectile dysfunction and drugs used in it with their mechanism of action. |
| e. | Describe the nomenclature and stereochemistry of steroids. |
| f. | Classify oral hypoglycaemic agents and describe in detail about SAR and mechanism of action of sulfonylureas along with synthesis of tolbutamide. |
| g. | Discuss SAR of Local anaesthetics. Give structure and mechanism of action of Cocaine and Meprylcaine. |

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