

MEDICINAL CHEMISTRY – II (BP501T)

GUESS PAPER (Based on Repeated University Questions)

SECTION A – Attempt all questions (10 × 2 = 20)

- a) Enlist histamine receptors.
- b) Write the structure of Promethazine.
- c) Define antineoplastic agents.
- d) Write the mechanism of action of Sildenafil.
- e) Give uses of Chlorothiazide.
- f) Define oral contraceptives with examples.
- g) Write uses of Digoxin in congestive heart failure.
- h) Draw the structure of Captopril.
- i) Write the mechanism of action of Metformin.
- j) Give examples of calcium channel blocking agents.

SECTION B – Attempt any TWO (2 × 10 = 20)

- a) Classify local anaesthetics. Explain SAR of local anaesthetics with synthesis and mechanism of action of Procaine.
- b) Classify diuretics with examples. Explain SAR of thiazide diuretics along with synthesis and mechanism of action of Chlorothiazide.
- c) Classify antidiabetic agents. Explain SAR and mechanism of action of sulfonylureas along with synthesis of Tolbutamide.

SECTION C – Attempt any FIVE (5 × 7 = 35)

- a) Write the mechanism of action of antimetabolites. Give structure and adverse effects of Methotrexate.
- b) Draw the structure of Acetazolamide with its mechanism of action.
- c) Write the synthesis and uses of Furosemide.
- d) Give a note on gastric proton pump inhibitors with examples.
- e) Explain the mechanism of action and uses of Mercaptopurine.
- f) Illustrate the mechanism of action of Methyldopa hydrochloride.
- g) Discuss the mechanism of action and synthesis of Warfarin.

Question Repetition Chart (2019–2025)

Topic / Question	Repeated in Years
Local Anaesthetics (SAR + Procaine)	2020–2025 (Every year)
Thiazide Diuretics (SAR + Chlorothiazide)	2020–2025 (Every year)
Sulfonylureas (Tolbutamide)	2021–2025
Antimetabolites / Methotrexate	2020–2025
Acetazolamide	2020, 2022–2025
Warfarin	2021–2025
Methyldopa	2021–2025
Proton Pump Inhibitors	2020, 2022–2025