

GUJARAT TECHNOLOGICAL UNIVERSITY**Pharm D – 3rd Year • EXAMINATION – WINTER - 2022****Subject Code: 838805****Date: 31/01/2023****Subject Name: Medicinal Chemistry****Time: 10:30 AM TO 01:30 PM****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Give the synthetic scheme for Frusemide and Acetazolamide. 06
(b) Give the structure and identify the heterocyclic ring present in Methotrexate and Nitrofurazone. 04
(c) Give the structure and clinical uses of Prazosin and Ethacrynic acid. 04
- Q.2** (a) Explain the structure activity relationship for sulfonamides. 06
(b) Discuss in detail about folate reductase inhibitors. 04
(c) What are the side effects of sulfonamides and how can they be taken care of? 04
- Q.3** (a) Discuss the structure activity relationship for Thiazide diuretics. 06
(b) Explain the life cycle of malarial parasite and identify the infective and diagnostic stages. 04
(c) Discuss in detail about alkylating agents. 04
- Q.4** (a) Give the structure and clinical uses of Iodipamide, methimazole and norethindrone. 06
(b) Write explanatory note on Prodrugs. 04
(c) Discuss the structure activity relationship for sulfonylureas. 04
- Q.5** (a) Classify anti-arrhythmic agents with suitable examples from each class. 06
(b) Write a detailed note on anti-hyperlipidemic agents. 04
(c) Give the structures of Nifedipine, propranolol, warfarin and metformin. 04
- Q.6** (a) Discuss the chemistry and structure activity relationship for Tetracyclines. 06
(b) Explain the synthesis of Chloramphenicol. Add a note on its uses. 04
(c) Give the structures of Ampicillin, clavulanic acid, cephalexin and cefuroxime. 04
- Q.7** (a) Discuss the structure activity relationship for quinolones. 06
(b) Classify antitubercular agents with suitable examples from each class. 04
(c) Write a detailed note on anti-viral agents including anti-AIDS agents. 04
