

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. SEMESTER-VII • EXAMINATION – WINTER -2021

Subject Code: 2270003**Date: 29/11/2021****Subject Name: Pharmaceutical Chemistry-IX (Medicinal Chemistry-III)****Time: 10:30AM to 01:30PM****Total Marks: 80****Instructions:**

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

- Q.1** (a) Define antifungal agents. Explain mechanism of action of various classes of antifungal agents. **06**
- (b) Give synthesis and IUPAC name of: (Any two) **05**
 i). Sulphacetamide ii). Isoniazid iii). Clotrimazole
- (c) Give SAR on Aminoglycoside antibiotics. **05**
- Q.2** (a) Define and classify anticancer agents with at least three drug names and one structure of each category. **06**
- (b) Give SAR on fluoroquinolones. **05**
- (c) Write synthesis and IUPAC name of chloramphenicol. **05**
- Q.3** (a) Give synthesis and uses of: (Any three) **06**
 i). Amantadine ii). Thiotepea iii). Primaquine iv). Chlorambucil
- (b) Write in detail degradation of penicillin. **05**
- (c) Share your knowledge about antiamoebic agents. Give synthesis of metronidazole **05**
- Q.4** (a) Define and classify antimalarial agents with at least three drug names and one structure of each category. **06**
- (b) Write a detailed note on anthelmintic agents. Give synthesis of albendazole. **05**
- (c) Write a detailed note on MDR-TB and XDR-TB. **05**
- Q.5** (a) Give SAR on Tetracyclines. **06**
- (b) Write a detailed note on antiHIV agents. **05**
- (c) Match the followings: (Drug-Heterocyclic ring-Category) **05**
- | A). Drug | B). Heterocyclic ring | C). Category |
|-----------------------|-----------------------|-------------------------|
| 1). Sulphamethoxazole | a). Benzimidazole | i). Antifungal |
| 2). Ketoconazole | b). Pyrazine | ii). Antimalarial |
| 3). Pyrazinamide | c). Furan | iii). Anticancer |
| 4). Mebendazole | d). Pyrazole | iv). Antibacterial |
| 5). Fluorouracil | e). Quinazoline | v). Antiviral |
| | f). Pyrimidine | vi). Anthelmintic |
| | g). Oxazole | vii). Antimycobacterial |
- Q. 6** (a) Write in detail about Hansch Linear Free Energy relationship model of QSAR. **06**
- (b) Write a detailed note on computer aided drug design. **05**
- (c) Give a note on different lipophilic parameters of QSAR. **05**
- Q.7** (a) Give an informative note on molecular modeling. **06**
- (b) Write a detailed note on lead identification **05**
- (c) Write a detailed note on parallel synthesis with well labeled diagram. **05**