

M.Sc. DEGREE END SEMESTER EXAMINATION - OCTOBER 2025**SEMESTER – 3: PHARMACEUTICAL CHEMISTRY****COURSE: 24P3CPHT09 – DRUG DESIGN AND PHARMACOLOGY***(Regular 2024 Admission))*

Time: Three Hours

Max. Weights: 30

PART A**Answer any 8 questions****Weight: 1**

1. Differentiate between structurally specific and structurally nonspecific drugs with examples. (U, CO1)
2. Define teratogenicity. Explain its pharmacological significance with examples. (U, CO2)
3. Draw the structure of (a) sulfamethoxole (b) nystatin. (U, CO3)
4. What are cardiotoxic drugs? (U, CO3)
5. What are antiarrhythmic drugs? Give one example. (U, CO3)
6. What are ACE inhibitors? Give one example. (U, CO3)
7. What are the therapeutic uses and adverse effects of chloroquine. (U, CO3)
8. Discuss the side effects of using primaquine. (U, CO3)
9. Discuss the synthesis of proguanil. (U, CO4)
10. What are narcotic analgesics? Give one example. (U, CO3)

(1 x 8 = 8)**PART B****Answer any 6 questions****Weight: 2**

11. Explain the mechanism of enzyme catalysis as a drug target. (U, CO1)
12. Define biotransformation of drugs. Explain the factors affecting drug biotransformation. (U, CO2)
13. Outline the synthesis of (a) Dapsone (b) 5-Flucytosine. (U, CO4)
14. Write a short note on anticoagulants. (U, CO3)
15. Define statins and explain the mechanism of action and therapeutic uses by taking lovastatin as example. (U, CO3)
16. Explain the mechanism of action and therapeutic uses of penicillins. (U, CO3)
17. Classify the first-line anti-tubercular drugs with examples and explain their pharmacological actions. (U, CO3)
18. Write a note on COX I and COX II inhibitors. (U, CO3)

(2 x 6 = 12)

PART C**Answer any 2 questions****Weight: 5**

19. Describe the fundamental principles of pharmacokinetics and explain in detail the processes of drug absorption, distribution, metabolism, and excretion. (U, CO1)
20. Explain the receptor theories in pharmacology. Discuss in detail the rate and occupancy theories of drug–receptor interaction. (U, CO2)
21. Explain in detail the mode of action and therapeutic uses of antiviral drugs with reference to four suitable examples. (U, CO3)
22. Discuss in detail the classification of antipyretic and NSAID compounds. (U, CO3)

(2 x 5 = 10)
