



G. PULLA REDDY COLLEGE OF PHARMACY
AUTONOMOUS

Affiliated to **Osmania University** Approved by **PCI** & Accredited by **NAAC**
Mehdipatnam, Hyderabad - 500028. Telangana State.

M. PHARM SECOND SEMESTER (PCI) REGULAR EXAMINATIONS, OCT- 2026

Branch: PHARMACOLOGY

Subject: CLINICAL RESEARCH AND PHARMACOVIGILANCE

QP Code: MPLII04TE26

Time: 03 Hours

Max Marks: 75

Note: Answer Any **FIVE** Questions.

5 X 15 = 75M

S. No	Questions
1	a) Explain the objectives of ICH-GCP and its importance in the conduct of clinical trials. (5) b) Describe the structure, content, and ethical requirements of the informed consent process for human participants. (10)
2	a) Describe cohort, case-control and cross-sectional study designs. (5) b) Apply the principles of randomization, control groups, and blinding to construct an appropriate design for a randomized clinical trial. (10)
3	a) Analyze the responsibilities of the sponsor and Contract Research Organization during clinical trial management. (5) b) Evaluate the essential components of a Clinical Study Report and explain how they support reliable reporting of trial findings. (10)
4	a) Describe the classification and common types of adverse drug reactions. (5) b) Evaluate the principles of ADR management and the importance of severity, seriousness, predictability, and preventability assessment in clinical practice. (10)
5	a) Assess the importance of establishing pharmacovigilance centres in hospitals, industry and national programmes. (7) b) Explain the history, progress and international framework of pharmacovigilance, including the WHO International Drug Monitoring Programme. (8)
6	a) Evaluate spontaneous reporting and active surveillance as methods for generating pharmacovigilance safety data. (7) b) Describe the major regulatory terminologies used in pharmacovigilance and explain their relevance to medication-safety evaluation. (8)
7	a) Assess the role of comparative observational studies and vaccine safety surveillance in detecting safety signals. (7) b) Analyze the steps involved in ADR reporting and the application of Argus and VigiFlow in pharmacovigilance. (8)
8	a) Evaluate the contribution of pharmacoepidemiology and pharmacoeconomics to the safe and rational use of medicines. (7) b) Develop a framework for communicating a newly identified drug-safety signal as a concise safety alert for healthcare professionals. (8)



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M. PHARM SECOND SEMESTER (PCI) REGULAR EXAMINATIONS, OCT- 2026

Branch: PHARMACOLOGY

Subject: PRINCIPLES OF DRUG DISCOVERY

QP Code: MPLII03TE26

Time: 03 Hours

Max Marks: 75

Note: Answer Any **FIVE** Questions.

5 X 15 = 75M

S. No	Questions
1	a. Describe about role of zinc finger proteins in target identification and validation. (8 M) b. Describe about siRNA and antisense oligonucleotides techniques. (7 M)
2	a. Write a note on concept of rational drug design. (8 M) b. Write a note on Pharmacophore mapping (7 M)
3	a. Write a note on 3D QSAR. (7 M) b. Explain in brief about electronic parameters used in QSAR. (8 M)
4	a. Write a note on target identification and validation. (8 M) b. Describe in detail about role of genomics and proteomics in target discovery. (7 M)
5	a. Write a note on types of prodrug design techniques. (8 M) b. Write a note on site specific prodrug delivery techniques. (7 M)
6	a. Explain about the high throughput screening techniques. (8 M) b. Write the concept of combinatorial synthesis and its advantages. (7 M)
7	a. Write a note on hanch analysis. (7 M) b. Describe any two methods of structure prediction. (8 M)
8	a. Describe the types of docking techniques. (8 M) b. Write the types of resins used in solid phase synthesis. (7 M)



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M. PHARM SECOND SEMESTER (PCI) REGULAR EXAMINATIONS, OCT- 2026

Branch: PHARMACOLOGY

**Subject: PHARMACOLOGICAL AND TOXICOLOGICAL SCREENING METHODS
II**

QP Code: MPLII02TE26

Time: 03 Hours

Max Marks: 75

Note: Answer Any **FIVE** Questions.

5 X 15 = 75M

S. No	Questions
1	a) Demonstrate in detail the determination of LD ₅₀ in acute toxicity testing of drugs as per OECD. 10 M b) Define and classify toxicology. 5 M
2	What is reproductive toxicity? Discuss the study design and importance of female reproductive toxicity studies. 15 M
3	Illustrate on the following (a) Dermal irritation studies (b) Skin sensitization studies. 8+7 M
4	Define IND. Explain in detail the studies needed for IND submission. 15 M
5	a) Explain the applications of toxicokinetics. 7 M b) Discuss the importance and principles of safety pharmacology studies. 8 M
6	What is carcinogenesis? Explain the methods of testing the compound for carcinogenicity. 15 M
7	Explain the following a) Genotoxicity studies. 8 M b) Teratogenicity studies. 7 M
8	Elaborate in detail the alternatives to animal toxicity testing. 15 M



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M. PHARM SECOND SEMESTER (PCI) REGULAR EXAMINATIONS, OCT- 2026

Branch: PHARMACOLOGY

Subject: ADVANCED PHARMACOLOGY II

Time: 03 Hours

QP Code: MPLI01TE26

Max Marks: 75

Note: Answer Any **FIVE** Questions.

5 X 15 = 75M

S. No	Questions
1	Explain the mechanism of action, physiological effects and therapeutic uses of thyroid hormones. Discuss the pharmacology of antithyroid drugs.
2	a) Explain the mechanism of action, adverse effects and therapeutic uses of aminoglycosides and quinolones. (8) b) Discuss the mechanisms of resistance developed against antimicrobial agents. (7)
3	a) Classify drugs used in the treatment of tuberculosis and explain their mechanisms of action, adverse effects and therapeutic uses. (10) b) Explain the pharmacological treatment of common protozoal infections with suitable examples. (5)
4	Explain the pharmacotherapy of cancer with special emphasis on alkylating agents, antimetabolites and their major adverse effects and therapeutic applications. (15)
5	a) Explain the cellular and biochemical mediators involved in inflammation and immune responses. (8) b) Explain the mechanism, adverse effects and therapeutic uses of immunosuppressant. (7)
6	a) Classify antiulcer drugs and compare proton pump inhibitors with H ₂ -receptor antagonists. (8) b) Explain the pharmacological management of nausea and vomiting, including the mechanisms and clinical uses of antiemetic drugs. (7)
7	a) Explain the mechanisms by which free radicals are generated and discuss their role in cellular injury. (7) b) Analyze the principles of biological and circadian rhythms and explain the application of chronotherapy in cardiovascular disease and asthma. (8)
8	a) Assess the contribution of oxidative stress and free radicals to the etiopathology of cancer. (7) b) Discuss recent advances in the pharmacological management of Parkinson's disease and explain their therapeutic rationale. (8)