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JM—07—2025

FACULTY OF SCIENCE AND TECHNOLOGY

M. Pharm. (First Year) (Second Semester) EXAMINATION.

FEBRUARY, 2026

(CBCS PCI)

ADVANCED PHARMACOLOGY-II

Paper MPL-201T

(wednesday, 25-2-2026) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Draw appropriate diagrams or charts wherever necessary.

1. Answer the following : 10×2=20

(*a*) What is hypersensitivity ?

(*b*) Define chemotherapy.

(*c*) Define antibiotic. Give any *two* examples.

(*d*) What are prokinetics ? Give *two* examples.

P.T.O.

(e) Define circadian rhythm.

(f) What are sex hormones ? Give examples.

(g) Classify anti-TB drugs.

(h) Write mechanism of action of cephalosporins.

(i) What is anthelmintic ?

(j) Enlist cellular and biochemical mediators of inflammaion.

2. Answer the following (any *two*) : 2×10=20

(a) Enlist various types of diabetes. Write pharmacology of insulin.

(b) Classify anticancer drugs. Discuss pharmacology of Vinca alkaloids.

(c) Define peptic ulcer. Classify drugs used in its treatment. Write pharmacology of Omeprazole.

3. Answer the following (any *seven*) : 7×5=35

(a) Discuss oral contraceptives.

(b) Write pharmacology of Ampicillin.

(c) Discuss pharmacology of Rifampicin.

(d) Discuss pharmacology of Metronidazole.

(*e*) Discuss role of free radicals in neurodegenerative diseases.

(*f*) Discuss applications of chronotherapy in cardiovascular diseases.

(*g*) Write pharmacology of Streptomycin.

(*h*) Discuss cellular and molecular mechanism of resistance of antimicrobial agents.

(*i*) Classify antifungal drugs. Write pharmacology of Amphotericin B.

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JM—31—2025

FACULTY OF SCIENCE AND TECHNOLOGY

M. Pharm. (Second Semester) EXAMINATION

FEBRUARY/MARCH, 2026

(CBCS PCI)

PRINCIPLES OF DRUG DISCOVERY

Paper MPL-203T

(Monday, 2-3-2026) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Answer to the point only.

(*iii*) Illustrate your answers with neat sketch wherever necessary.

1. Answer the following questions : 10×2=20

(*a*) What are transgenic animals ? Give any *two* examples.

(*b*) What is target identification ?

(*c*) What are protein motifs and folds ?

P.T.O.

(*d*) What is homology modeling ?

(*e*) Define scaffold hopping.

(*f*) What are criteria considered for drug screening by Lipinsk's rule of five ?

(*g*) What is prodrug design ?

(*h*) Classify various types of microarray.

(*i*) What is COMSIA ?

(*j*) What is molecular docking ?

2. Answer any *two* of the following : 2×10=20

(*a*) Explain in detail steps involved in traditional drug discovery.

(*b*) Discuss in detail different methods of protein structure prediction.

(*c*) Discuss about conventional and modern drug discovery.

3. Answer any *seven* of the following : 7×5=35

(*a*) Discuss in brief about target validation.

(*b*) Explain in detail about Hausch and Free Wilson analysis with their relationship.

(*c*) What are the strategies for virtual combinatorial library design ?

(*d*) Discuss about genomic methods for drug target discovery.

(*e*) Discuss about carrier linked and bio-precursor prodrug design.

(*f*) Write a brief note on De NOVO drug discovery.

(*g*) Write comparison of SBDD and LBDD with suitable example.

(*h*) Explain in detail about COMFA.

(*i*) Write a brief note on various types of molecular docking.

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JM—43—2025

FACULTY OF SCIENCE AND TECHNOLOGY

M. Pharm. (First Year) (Second Semester) EXAMINATION

FEBRUARY/MARCH, 2026

(CBCS PCI)

CLINICAL RESEARCH AND PHARMACOVIGILANCE

Paper MPL-204-T

(Thursday, 5-3-2026) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Answer to the point only.

1. Answer the following : 10×2=20

(*a*) What is schedule Y ?

(*b*) Write mission of ICH.

(*c*) Enlist members of clinical trial study team.

P.T.O.

(*d*) What is spontaneous reporting ?

(*e*) What is MedDRA ?

(*f*) Define pharmacovigilance.

(*g*) What is clinical research ?

(*h*) What are algorithms ?

(*i*) How medication safety is evaluated ?

(*j*) What is pharmacoepidemiology ?

2. Answer any *two* of the following : 2×10=20

(*a*) Define adverse drug reactions. Discuss methods of detection and reporting.

(*b*) What is research design ? Discuss various types of study designs.

(*c*) Discuss schedule Y.

3. Answer any *seven* of the following : 7×5=35

(*a*) Explain informed consent.

(*b*) Who is investigator ? Discuss roles and responsibilities of investigator.

(*c*) Discuss principles of biomedical research.

(*d*) Discuss concept of predictability and preventability assessment.

(e) Compare and contranst active and passive surveillance.

(f) Discuss institutional review board.

(g) Write functions of IRB with its composition.

(h) Discuss pharmacoeconomics.

(i) Discuss investigator Brochure.