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PPM—07—2025

FACULTY OF SCIENCE & TECHNOLOGY

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

JUNE, 2025

ADVANCED PHARMACOLOGY-II

Paper MPL 201T

(Wednesday, 18-06-2025)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (i) Figures to the right indicate full marks.

(ii) *All* questions are compulsory.

(iii) Draw appropriate diagrams or charts wherever necessary.

1. Answer the following :

10×2=20

(a) Enlist hormones secreted by the endocrine or ductless glands.

(b) Define chemotherapeutic agents.

(c) What is immunopharmacology ?

(d) Write therapeutic uses of Octreotide.

P.T.O.

- (e) What are prokinetics ? Give *two* examples.
- (f) Define circadian rhythm.
- (g) What is apoptosis ?
- (h) Define cancer.
- (i) Distinguish between hormones and autocoids.
- (j) Enlist cellular and biochemical mediators of inflammation.

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

- (a) Define hypersensitivity. Discuss various allergic or hypersensitivity reactions.
- (b) What is peptic ulcer ? Discuss pharmacology of Ranitidine.
- (c) Write pharcotherapy of Asthma.

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

- (a) Discuss about generation of free radicals.
- (b) Define chronopharmacology. Write its applications in cardiovascular disease.
- (c) Discuss actions of growth hormone.
- (d) Discuss actions of corticosteroids.

- (e) Classify antiemetics. Write pharmacology of ondansetron.
- (f) Discuss irritable bowel syndrome.
- (g) Write pharmacology of penicillin.
- (h) Discuss oral contraceptives.
- (i) How resistance to antimicrobial agents take place ?

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PPM—19—2025

FACULTY OF SCIENCE AND TECHNOLOGY

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

JUNE, 2025

PHARMACOLOGICAL & TOXICOLOGICAL SCREENING METHODS-II

Paper-MPL 202T

(Friday, 20-06-2025)

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) Define IND.

(b) What is ICH ?

(c) Write importance of drug development.

(d) What is GLP ?

(e) What is Ames test ?

(f) Give importance of safety pharmacology.

P.T.O.

(g) Define reproductive toxicology studies.

(h) Define schedule.

(i) Define sub-acute toxicity studies.

(j) Define genotoxicity studies.

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

(a) What is Toxicokinetics ? Discuss on toxicokinetic evaluation in preclinical studies and write applications of toxicokinetic studies.

(b) What is IND ? Give its importance and write on list of studies needed for IND submission.

(c) Write on male reproductive toxicity studies and teratogenicity studies (Segment-II) in detail.

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

(a) Discuss genotoxicity studies

(b) Write on Inhalation studies as per OCED guidelines.

(c) Give the application of toxicokinetic studies and add a note on saturation kinetics.

(d) Write a note on HERG assay.

- (e) Write on origin, concept and importance of safety pharmacology.
- (f) Write a note on alternative methods to animal toxicity testing.
- (g) Write a note on dermal irritation and dermal toxicity studies.
- (h) Define toxicology and explain its various types.
- (i) Give OCED principles of good laboratory practice (GLP).

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PPM—31—2025

FACULTY OF SCIENCE & TECHNOLOGY

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

JUNE, 2025

PRINCIPLES OF DRUG DISCOVERY

MPL203T

(Monday, 23-06-2025)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

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

(ii) Draw neat labelled diagram wherever necessary.

(iii) Figures to the right indicate full marks.

1. Answer the following :

10×2=20

(a) Mention the properties of lead.

(b) What are the objectives of rational drug design ?

(c) What is lead ?

(d) Enumerate the different methods for traditional drug design.

P.T.O.

- (e) What do you mean by Denovo drug design ?
- (f) What are CoMFA & CoMSIA methods ?
- (g) What is molecular docking ?
- (h) What are Hansch analysis ?
- (i) What is the rational behind prodrug design ?
- (j) Write the application of molecular docking.

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

- (a) Classify the detection methods in high throughput screening. Write the importance and application of high throughput screening.
- (b) Give details about the concept of pharmacophore mapping and pharmacophore based screening.
- (c) Enumerate the different methods used for generating libraries in combinational chemistry. Explain any *one* method in detail.

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

- (a) Write the application of NMR and X-ray crystallography in protein structure.
- (b) Write the type and component of docking and give a brief explanation of flexible docking.

- (c) Write the basic concepts of rational drug design methods and its importance.
- (d) Describe the levels, domains, motifs and folds of protein structure with suitable diagram.
- (e) Give in detail about the validation role of Genomics and Proteomics.
- (f) Write the basic steps involved in In Silico drug discovery. Give in detail on docking on docking scoring and reverse docking.
- (g) Discuss the economics of modern drug discovery.
- (h) Explain in brief the role of the following in drug discovery :
- (1) SiRNA
 - (2) Antisense oligonucleotide.
- (i) What is drug likeness screening ? Add a note on Lipinski rule of Five for drug likeness.

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PPM—43—2025

FACULTY OF SCIENCE & TECHNOLOGY

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

EXAMINATION JUNE, 2025

CLINICAL RESEARCH AND PHARMACOVIGILANCE

MPL204T

(Wednesday, 25-06-2025)

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) Define pharmacoepidemiology.

(b) Enlist objectives of pharmacovigilance.

(c) What is safety pharmacology ?

(d) Enlist types of adverse drug reaction.

(e) What are different types of clinical trials ?

P.T.O.

- (f) Write functions of IRB.
- (g) What is informed consent form ?
- (h) What is cross-sectional study ?
- (i) Enlist different perspectives of pharmacoconomics.
- (j) Define adverse drug reaction with example.

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

- (a) Explain in detail about schedule Y.
- (b) Elaborate the roles and responsibilities of investigator and contract research organisation.
- (c) Write in detail about international classification of disease.

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

- (a) Explain safety pharmacology and write its importance.
- (b) Elaborate international non-proprietary names for drugs.
- (c) Write in detail about statistical methods for evaluating medication safety data.
- (d) Explain various types of ADR in detail.

- (e) Write a note on ICH guidelines for pharmacovigilance.
- (f) Write pharmacovigilance methods in ADR reporting.
- (g) Explain types and design of clinical trials.
- (h) Explain all terminologies of adverse medications related events in ADR.
- (i) Write a note on clinical trial documentation.