SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

UNIT 1

COURSE NAME: PHARMACOLOGY

TOPIC: ADME

Q.No.	Question	Marks	Bloom's Level	Mapping (Exam/Company with Year)
5-Mark Questions (Short Essays)				
1	Classify routes of drug administration with examples. Explain factors affecting drug absorption via oral route.	5	Apply (A)	TNMGRMU D.Pharm (2023) – Similar classification in descriptive Qs; GPAT (2021) – Application in bioavailability.
2	Define pharmacokinetics. Describe the processes of absorption, distribution, metabolism, and excretion (ADME) with one example each.	5	Understand (U)	GPAT (2019) – ADME overview; Pharma Co. (Sun Pharma, 2022) – Interview on basic PK for QC roles.
3	Explain pharmacodynamics. Discuss drug-receptor interactions, including types of receptors and dose-response relationships.	5	Understand (U)	TNMGRMU Pharm.D (2018) – Receptor mechanisms; GPAT (2020) – Dose-response curve analysis.

4	Describe factors modifying drug action. Illustrate with examples of drug interactions (e.g., synergistic and antagonistic).	5	Analyze (An)	MRB TN Pharmacist (2023) – Practical drug interactions; GPAT (2022) – Factor analysis in polypharmacy.
5	Classify drugs based on chemical structure, mechanism of action, and therapeutic use. Provide examples from analgesics.	5	Apply (A)	GPAT (2017) – Classification Q; Pharma Co. (Cipla, 2021) – Basic categorization in production interviews.
6	Explain bioavailability and bioequivalence. How do first-pass metabolism and formulation factors influence them?	5	Analyze (An)	GPAT (2023) – Bioavailability calculation; TNMGRMU D.Pharm (2022) – Formulation impact.
7	Discuss the sources of drugs (natural, synthetic, semi-synthetic). Explain the role of pharmacology in drug discovery.	5	Understand (U)	GPAT (2018) – Drug sources; Pharma Co. (Dr. Reddy's, 2020) – R&D interview basics.
8	Describe general principles of drug action. Elaborate on spare receptors and maximal efficacy with diagrams.	5	Apply (A)	TNMGRMU Pharm.D (2019) – Efficacy concepts; GPAT (2021) – Spare receptor application.
9	Explain the concept of therapeutic index and margin of safety. How are they calculated and clinically relevant?	5	Evaluate (E)	GPAT (2020) – TI calculation; MRB TN (2023) – Safety in dispensing.

10	Classify adverse drug reactions (ADRs) with examples. Discuss predictability and management strategies.	5	Analyze (An)	GPAT (2019) – ADR types; Pharma Co. (Glenmark, 2022) – Pharmacovigilance interview.
3-Mark Questions (Short Notes/Definitions)				
11	Define pharmacology. Differentiate between pharmacokinetics and pharmacodynamics.	3	Remember (R)	TNMGRMU D.Pharm (2021) – Basic definitions; GPAT (2022) – Differentiation.
12	List four factors affecting drug absorption. Give one example.	3	Remember (R)	MRB TN Pharmacist (2023) – Absorption factors; Pharma Co. (Torrent, 2021) – QC basics.
13	What is a drug receptor? Name two types with examples.	3	Remember (R)	GPAT (2017) – Receptor types; TNMGRMU (2020) – Short note.
14	Explain potentiation with an example from pharmacology.	3	Understand (U)	GPAT (2018) – Interaction example; Pharma Co. (Cadila, 2022) – Interview on synergies.
15	Define half-life (t½) of a drug. How is it clinically useful?	3	Understand (U)	GPAT (2023) – t½ concept; MRB TN (2022) – Dosing intervals.
16	List three sources of drugs with one example each.	3	Remember (R)	TNMGRMU D.Pharm (2019) – Sources list; GPAT (2020) – Natural drugs.

17	What is the significance of plasma protein binding in drug distribution?	3	Understand (U)	GPAT (2021) – Binding effects; Pharma Co. (Sun Pharma, 2023) – PK interview.
18	Differentiate between agonist and antagonist with examples.	3	Analyze (An)	GPAT (2019) – Agonist types; TNMGRMU (2022) – Short differentiation.
19	Explain the role of pH in drug absorption.	3	Apply (A)	MRB TN (2023) – GI pH effects; GPAT (2022) – Ionization application.
20	What is an idiosyncrasy in ADRs? Give an example.	3	Remember (R)	GPAT (2017) – ADR subtypes; Pharma Co. (Dr. Reddy's, 2021) – Safety Q.
21	Define steady-state concentration. Factors influencing it?	3	Understand (U)	GPAT (2020) – Steady-state; TNMGRMU (2021) – Chronic dosing.
22	List three phases of drug action. Briefly explain one.	3	Remember (R)	GPAT (2018) – Phases; MRB TN (2022) – Action stages.
23	What is prodrug? Give two examples.	3	Remember (R)	GPAT (2023) – Prodrug concept; Pharma Co. (Cipla, 2020) – Formulation Q.
24	Explain drug tolerance with types.	3	Understand (U)	GPAT (2019) – Tolerance mechanisms; TNMGRMU (2023) – Opioid tolerance.

25	Describe the blood-brain barrier's role in drug distribution.	3	Apply (A)	GPAT (2021) – BBB application; Pharma Co. (Glenmark, 2022) – CNS drugs.