

(Affiliated to the Tamil Nadu Dr M.G.R Medical University, Chennai)

B. Sc. CARDIOPULMONARY PERFUSION CARE TECHNOLOGY

1411 – PHARMACOLOGY

II YEAR

UNIT IV – DRUG INTERACTIONS

I. ELABORATE ON

10 MARKS

REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER

S.no	Questions	Reference	Bloom's Taxonomy
1	Classify Drug Interactions based on their mechanism (Pharmacokinetic and Pharmacodynamic). Discuss in detail the four major types of Pharmacokinetic interactions.	AUGUST 2024	Analyze
2	Discuss the concept of Cytochrome P450 (CYP450) Enzyme Induction and Inhibition . Elaborate on the clinical consequences of these interactions, giving examples of a potent CYP inducer and a potent CYP inhibitor.	APRIL 2025	Analyze
3	Describe in detail the mechanism and clinical significance of Drug Interactions at the Absorption Level . Discuss factors like chelation, alteration of pH, and altered motility, providing relevant examples.	FEBRUARY 2024	Understand
4	Elaborate on Pharmacodynamic Drug Interactions . Differentiate between Additive/Synergistic and Antagonistic interactions, providing specific examples for each type and their corresponding clinical outcomes.	AUGUST 2024	Analyze
5	Discuss the critical drug interactions of Warfarin . Detail the mechanism (e.g., enzyme inhibition, protein binding displacement) by which drugs like Amiodarone or NSAIDs affect its anticoagulant action.	APRIL 2023	Evaluate

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S.no	Questions	Reference	Bloom's Taxonomy
6	Describe the mechanism and clinical significance of drug interactions involving Protein Binding Displacement . Explain why displacement is most critical for drugs with a high plasma protein binding and a narrow therapeutic index.	FEBRUARY 2023	Analyze
7	Discuss the interactions that affect drug Excretion (Renal) . Detail the mechanisms involving active tubular secretion and altered urinary pH, citing examples like Probenecid-Penicillin interaction.	AUGUST 2023	Understand
8	Discuss the severe consequences of the Monoamine Oxidase Inhibitor (MAOI) interaction with Tyramine-rich foods or sympathomimetic drugs . Explain the underlying pharmacological mechanism (Hypertensive Crisis).	APRIL 2022	Apply
9	Describe the general strategies used for minimizing and managing adverse drug interactions in a clinical setting. Discuss the role of therapeutic drug monitoring (TDM) and dosage adjustment.	FEBRUARY 2021	Apply
10	Elaborate on the mechanism and potential toxicity of the drug interaction between Digoxin and other agents, such as Quinidine and Diuretics.	AUGUST 2020	Analyze

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S.no	Questions	Reference	Bloom's Taxonomy
1	Write notes on the " Grapefruit Juice Effect " on drug metabolism.	APRIL 2024	Understand
2	Discuss the significance of Pharmacogenetics in determining the occurrence and severity of drug interactions.	AUGUST 2022	Understand
3	Write notes on the mechanism and clinical risk of the interaction between NSAIDs and Anticoagulants (Warfarin) .	FEBRUARY 2022	Apply
4	Differentiate between synergism and potentiation in the context of drug interactions, with examples.	APRIL 2021	Analyze
5	Discuss the common drug interaction causing Serotonin Syndrome .	AUGUST 2021	Apply
6	Write notes on the clinical relevance of First-Pass Metabolism in drug interactions.	FEBRUARY 2020	Understand
7	Explain the mechanism of interaction between Antacids and Tetracyclines .	APRIL 2020	Understand
8	Write notes on the concept of a Narrow Therapeutic Index (NTI) and its significance in drug interactions.	AUGUST 2019	Understand
9	Discuss the mechanism of interaction between Metronidazole and Alcohol (Disulfiram-like reaction) .	FEBRUARY 2019	Apply

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S.no	Questions	Reference	Bloom's Taxonomy
10	Briefly explain the interaction between Digoxin and Loop Diuretics and its cardiac consequences.	APRIL 2018	Analyze

III.WRITE SHORT NOTES ON**3 MARKS****REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER**

S.no	Questions	Reference	Bloom's Taxonomy
1	Name two drugs that are CYP450 Enzyme Inhibitors .	AUGUST 2026	Remember
2	What is a Drug-Food Interaction ?	APRIL 2025	Remember
3	Give one example of a Synergistic interaction.	FEBRUARY 2024	Remember
4	State one reason why elderly patients are more susceptible to drug interactions.	AUGUST 2024	Understand
5	Name two drugs that are significantly affected by Protein Binding Displacement .	APRIL 2023	Remember
6	Define Antagonism in pharmacology.	FEBRUARY 2023	Remember
7	Give two clinical consequences of Enzyme Induction .	AUGUST 2022	Understand
8	What is the main clinical risk of the Warfarin-Aspirin interaction?	APRIL 2022	Remember
9	State the general mechanism of a Drug Interaction at the Excretion Level .	FEBRUARY 2021	Understand

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S.no	Questions	Reference	Bloom's Taxonomy
10	Name a drug interaction that causes Hypertensive Crisis .	AUGUST 2021	Remember
11	Give two factors affecting drug Absorption .	APRIL 2020	Remember
12	What is the mechanism of the MAOI-Tyramine interaction?	FEBRUARY 2020	Understand
13	Define Pharmacokinetic Interaction .	AUGUST 2019	Remember
14	Give one example of a drug that alters urinary pH.	APRIL 2018	Remember
15	What is the risk associated with combining Sildenafil (Viagra) and Nitrates ?	FEBRUARY 2017	Understand