

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

B. Sc. CARDIOPULMONARY PERFUSION CARE TECHNOLOGY

1411 – PHARMACOLOGY

II YEAR

UNIT I – HEMATINICS : DRUGS ACTING ON BLOOD

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 Anticoagulants. Discuss in detail the mechanism of action, monitoring parameters, and management of overdose for Unfractionated Heparin (UFH) .	AUGUST 2024	Analyze
2	Compare and contrast Warfarin and Direct Oral Anticoagulants (DOACs) . Your discussion should include mechanism of action, onset of action, monitoring, drug interactions, and specific antidotes.	APRIL 2023	Analyze
3	Define Fibrinolysis . Classify Fibrinolytic agents (Thrombolytics) and describe the detailed pharmacology, indications, and complications of a second-generation agent like Alteplase .	FEBRUARY 2025	Apply
4	Discuss the detailed mechanism of action, therapeutic uses, and management of Heparin-Induced Thrombocytopenia (HIT) . Name the drugs used to manage HIT.	AUGUST 2023	Analyze
5	Classify Antiplatelet drugs. Describe the pharmacology of agents that inhibit the P2Y₁₂ receptor (e.g., Clopidogrel, Ticagrelor) including their uses and adverse effects.	APRIL 2022	Apply
6	Describe the steps involved in the Coagulation Cascade . Explain how both Heparin and Warfarin	FEBRUARY 2020	Understand

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S.no	Questions	Reference	Bloom's Taxonomy
	interfere with this cascade to exert their anticoagulant effect.		
7	Elaborate on the pharmacology of Low Molecular Weight Heparin (LMWH) . Discuss its advantages over UFH and its specific role in preventing Venous Thromboembolism (VTE).	AUGUST 2022	Apply
8	Define Antifibrinolytic Agents . Classify them and explain their mechanism of action, indications, and clinical use in the context of cardiovascular surgery (e.g., cardiopulmonary bypass).	APRIL 2024	Analyze
9	Discuss the clinical indications and administration protocols for emergency reversal of Warfarin anticoagulation, focusing on the use of Vitamin K and Prothrombin Complex Concentrates (PCCs) .	FEBRUARY 2018	Evaluate
10	Describe the mechanism of action, therapeutic uses, and toxicity profile of Aspirin and other Cyclooxygenase (COX) inhibitors in preventing arterial thrombosis.	AUGUST 2021	Analyze

II.WRITE NOTES ON**5 MARKS****REFERENCE – THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER**

S.no	Questions	Reference	Bloom's Taxonomy
1	Write notes on the mechanism of action and clinical indications of Rivaroxaban (a Direct Factor Xa Inhibitor).	APRIL 2024	Understand

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S.no	Questions	Reference	Bloom's Taxonomy
2	Briefly explain the pharmacogenetics of Warfarin and the importance of INR monitoring .	FEBRUARY 2019	Understand
3	Write notes on the mechanism of action and side effects of Streptokinase .	AUGUST 2019	Apply
4	Differentiate between Heparin and LMWH based on their mechanism of action and pharmacokinetic properties.	APRIL 2021	Analyze
5	Discuss the mechanism of action and clinical use of Glycoprotein IIb/IIIa Inhibitors (e.g., Abciximab).	FEBRUARY 2023	Apply
6	Write notes on the role and clinical applications of Tranexamic Acid in reducing perioperative bleeding.	AUGUST 2012	Understand
7	What are fibrin-specific and non-fibrin-specific thrombolytics? Give two examples of each.	APRIL 2020	Remember
8	Write notes on the mechanism of action and the specific antidote for Dabigatran (a Direct Thrombin Inhibitor).	FEBRUARY 2022	Apply
9	Briefly explain the concept of anticoagulation bridging and the role of LMWH in this process.	AUGUST 2020	Understand
10	Write notes on the major bleeding complications associated with anticoagulant therapy and their immediate management principles.	APRIL 2018	Apply

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S.no	Questions	Reference	Bloom's Taxonomy
1	Define Anticoagulant and give two examples of injectables.	APRIL 2024	Remember
2	What is the primary antidote for Heparin overdose?	FEBRUARY 2017	Remember
3	Name three examples of Direct Factor Xa Inhibitors (DOACs) .	AUGUST 2023	Remember
4	State the mechanism of action of Ticagrelor .	APRIL 2022	Remember
5	What is the significance of the International Normalized Ratio (INR) ?	FEBRUARY 2020	Understand
6	Define Fibrinolytic and give one example.	AUGUST 2021	Remember
7	Give two clinical indications for the use of Warfarin .	APRIL 2019	Remember
8	State the specific mechanism of action of Dabigatran .	FEBRUARY 2025	Understand
9	Name the antidote for Dabigatran overdose.	AUGUST 2022	Remember
10	What is the major limitation of Streptokinase ?	APRIL 2017	Understand
11	State two advantages of LMWH over UFH.	FEBRUARY 2021	Understand
12	What is the mechanism of action of	AUGUST	Understand

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S.no	Questions	Reference	Bloom's Taxonomy
	Aminocaproic Acid (EACA)?	2018	
13	Name two drugs used to treat Heparin-Induced Thrombocytopenia (HIT) .	APRIL 2020	Remember
14	What is the role of Cilostazol in managing peripheral arterial disease?	FEBRUARY 2024	Understand
15	Give the common name and primary mechanism of action of Ticlopidine .	AUGUST 2017	Remember