

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

B. Sc. CARDIOPULMONARY PERFUSION CARE TECHNOLOGY

1411 – PHARMACOLOGY

II YEAR

UNIT I – HYPERLIPIDEMICS

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 Hypolipidemic Drugs. Discuss the mechanism of action, pleiotropic effects, therapeutic uses, and major adverse effects of HMG-CoA Reductase Inhibitors (Statins) .	AUGUST 2025	Analyze
2	Describe the metabolism of lipoproteins, focusing on the role of LDL, VLDL, and HDL. Explain how the major classes of hypolipidemic drugs influence these lipoproteins.	APRIL 2023	Understand
3	Compare and contrast the pharmacological actions, indications, and adverse effects of Statins and Fibrates . When is combination therapy using these two classes justified?	FEBRUARY 2024	Evaluate
4	Discuss the detailed pharmacology of Fibrates (e.g., Fenofibrate) . Explain their mechanism of action via PPAR-alpha agonism and their specific role in treating hypertriglyceridemia.	AUGUST 2022	Analyze
5	Elaborate on the mechanism of action and clinical utility of newer anti-hyperlipidemic agents like PCSK9 Inhibitors (e.g., Alirocumab). Discuss their role in familial hypercholesterolemia.	APRIL 2024	Apply
6	Discuss the therapeutic profile of Niacin (Nicotinic Acid) . Detail its mechanism for lowering LDL and	FEBRUARY 2021	Analyze

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S.no	Questions	Reference	Bloom's Taxonomy
	raising HDL, and elaborate on its major dose-limiting adverse effect and its management.		
7	Describe the treatment goals for different types of hyperlipidemia (e.g., Type IIa, Type IV). Justify the selection of the first-line drug therapy for primary prevention of cardiovascular disease (CVD).	AUGUST 2023	Evaluate
8	Discuss the pathophysiology of Atherosclerosis . Explain how statins, in addition to lowering cholesterol, act to stabilize the plaque and prevent plaque rupture.	APRIL 2020	Understand
9	Define Myopathy and Rhabdomyolysis associated with statin therapy. Discuss the risk factors (including drug-drug interactions) and the monitoring guidelines (e.g., CK levels) to prevent this serious side effect.	FEBRUARY 2018	Apply
10	Describe the mechanism of action and adverse effects of Bile Acid Binding Resins (Sequestrants) . Discuss their combination use with other hypolipidemic drugs.	AUGUST 2019	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 uses of Ezetimibe .	APRIL 2024	Apply

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S.no	Questions	Reference	Bloom's Taxonomy
2	Discuss the pleiotropic effects of Statins .	AUGUST 2014	Understand
3	Briefly explain the pharmacology and adverse effects of Gemfibrozil .	FEBRUARY 2022	Understand
4	Write notes on the management of statin-induced myopathy .	APRIL 2021	Apply
5	Discuss the mechanism and clinical significance of Reverse Cholesterol Transport (RCT) and the role of HDL.	AUGUST 2016	Understand
6	Write a note on the use of Omega-3 Fatty Acids (Fish Oils) in the management of severe hypertriglyceridemia.	FEBRUARY 2020	Apply
7	Differentiate between a high-intensity and a moderate-intensity statin regimen, providing one example of each.	APRIL 2018	Analyze
8	Explain the mechanism by which Bile Acid Sequestrants can interfere with the absorption of other drugs.	AUGUST 2017	Understand
9	Write notes on the adverse effect of Niacin flushing and the measures taken to mitigate it.	FEBRUARY 2019	Apply
10	Briefly describe the structure and function of Very Low-Density Lipoproteins (VLDL) and how they are primarily targeted by drug therapy.	APRIL 2016	Understand

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S.no	Questions	Reference	Bloom's Taxonomy
1	Name three HMG-CoA reductase inhibitors (Statins).	AUGUST 2025	Remember
2	What is the mechanism of action of Ezetimibe ?	APRIL 2024	Remember
3	Name the enzyme inhibited by Statins.	FEBRUARY 2024	Remember
4	Give two serious adverse effects of Statins.	AUGUST 2023	Remember
5	What is the primary target lipoprotein of Fibrates ?	APRIL 2023	Understand
6	Name two Bile Acid Sequestrants .	FEBRUARY 2022	Remember
7	What is the effect of Niacin on HDL cholesterol levels?	AUGUST 2022	Understand
8	Define Hyperlipidemia .	APRIL 2021	Remember
9	State two contraindications for Statin therapy.	FEBRUARY 2021	Remember
10	What is the mechanism of action of a PCSK9 inhibitor ?	AUGUST 2020	Understand
11	Name the primary protein targeted by Ezetimibe.	APRIL 2020	Remember
12	Give two uses of Fenofibrate .	FEBRUARY	Remember

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S.no	Questions	Reference	Bloom's Taxonomy
		2019	
13	Why are Statins usually administered at bedtime?	AUGUST 2018	Understand
14	Name a common drug used to manage Niacin-induced flushing.	APRIL 2017	Remember
15	Which class of hypolipidemics is contraindicated in severe hypertriglyceridemia?	FEBRUARY 2017	Understand
