

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

B. Sc. CARDIOPULMONARY PERFUSION CARE TECHNOLOGY

1411 – PHARMACOLOGY

II YEAR

UNIT II – DRUGS ACTING ON RESPIRATORY TRACT

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 the drugs used in Bronchial Asthma. Discuss in detail the mechanism of action, therapeutic uses, and adverse effects of Selective Beta-2 Agonists (SABAs & LABAs) .	APRIL 2026	Analyze
2	Discuss the role of Inhaled Corticosteroids (ICS) in the long-term management of chronic respiratory diseases. Explain their detailed cellular and molecular mechanism of action.	AUGUST 2025	Analyze
3	Elaborate on the mechanism of action, pharmacokinetics, and clinical utility of Methylxanthines (e.g., Theophylline) . Discuss the necessary monitoring and toxicity management.	FEBRUARY 2024	Analyze
4	Compare and contrast the pharmacological management of Bronchial Asthma versus Chronic Obstructive Pulmonary Disease (COPD) , specifically focusing on the use of bronchodilators.	APRIL 2024	Evaluate
5	Define and classify Anti-tussive agents (Cough Suppressants) . Discuss the mechanism of action, therapeutic uses, and potential misuse of Opioid Antitussives .	AUGUST 2023	Understand
6	Discuss the mechanism of action, side effects, and clinical indications for newer anti-inflammatory	FEBRUARY 2023	Apply

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

B. Sc. CARDIOPULMONARY PERFUSION CARE TECHNOLOGY

S.no	Questions	Reference	Bloom's Taxonomy
	agents like Leukotriene Receptor Antagonists (e.g., Montelukast) and Mast Cell Stabilizers .		
7	Describe the various drug delivery systems used for pulmonary medications (e.g., pMDI, DPI, Nebulizers). Discuss the technique and benefits of inhaled drug delivery.	AUGUST 2022	Analyze
8	Define Mucolytics and Expectorants . Discuss their mechanism of action (with examples) and their specific role in treating diseases like cystic fibrosis or bronchitis.	APRIL 2022	Understand
9	Elaborate on the pharmacology of Anticholinergic Agents (Muscarinic Antagonists) . Compare the role of Short-Acting (SAMA) vs. Long-Acting (LAMA) agents in respiratory care.	FEBRUARY 2020	Analyze
10	Discuss the pharmacological approach to treating Status Asthmaticus (acute severe asthma). Detail the sequence and rationale for the use of emergency medications.	AUGUST 2018	Apply

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 primary clinical use of Montelukast .	AUGUST 2024	Understand

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

B. Sc. CARDIOPULMONARY PERFUSION CARE TECHNOLOGY

S.no	Questions	Reference	Bloom's Taxonomy
2	Differentiate between the mechanism and utility of Ipratropium and Tiotropium .	APRIL 2023	Analyze
3	Discuss the common adverse effects of Inhaled Corticosteroids and the measures to minimize them.	FEBRUARY 2022	Apply
4	Write notes on the mechanism and therapeutic significance of Omalizumab .	AUGUST 2021	Apply
5	Explain the difference between an " asthma reliever " and an " asthma controller " drug, giving one example of each class.	APRIL 2020	Understand
6	Write notes on the clinical use and adverse effects of Codeine as an antitussive.	FEBRUARY 2019	Understand
7	Discuss the mechanism of action and indications for N-acetylcysteine (NAC) .	AUGUST 2017	Understand
8	Differentiate between LABA and SABA based on onset and duration of action, giving one example for each.	APRIL 2016	Analyze
9	Write notes on the importance of Therapeutic Drug Monitoring (TDM) for Theophylline.	FEBRUARY 2015	Apply
10	Briefly explain the pharmacology and clinical application of Roflumilast in COPD.	AUGUST 2014	Apply

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

B. Sc. CARDIOPULMONARY PERFUSION CARE TECHNOLOGY**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 three Short-Acting Beta-2 Agonists (SABAs) .	AUGUST 2026	Remember
2	What is the mechanism of action of Zileuton ?	APRIL 2025	Remember
3	Give two common adverse effects of inhaled Salbutamol .	FEBRUARY 2025	Remember
4	Define Expectorant and give one example.	AUGUST 2024	Remember
5	What is the risk of using LABA as monotherapy in asthma?	APRIL 2024	Understand
6	Name two Long-Acting Muscarinic Antagonists (LAMAs) .	FEBRUARY 2023	Remember
7	State the major mechanism of action of Inhaled Corticosteroids .	AUGUST 2021	Understand
8	What is the therapeutic use of Bromhexine ?	APRIL 2021	Remember
9	Name the two components commonly found in an asthma combination inhaler .	FEBRUARY 2020	Remember
10	Give two side effects of Dextromethorphan .	AUGUST 2019	Remember
11	Which anti-asthma drug acts by stabilizing the mast cell membrane?	APRIL 2018	Remember
12	State the reason why Theophylline has a	FEBRUARY	Understand

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

B. Sc. CARDIOPULMONARY PERFUSION CARE TECHNOLOGY

S.no	Questions	Reference	Bloom's Taxonomy
	narrow therapeutic index.	2018	
13	What is the role of Leukotrienes in the pathogenesis of asthma?	AUGUST 2016	Understand
14	Name two non-opioid central acting antitussive agents .	APRIL 2015	Remember
15	Give two advantages of administering drugs via the inhalation route .	AUGUST 2012	Understand