

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

B. Sc. CARDIOPULMONARY PERFUSION CARE TECHNOLOGY

1402 – PATHOLOGY

I YEAR

UNIT I – CELLULAR ADAPTATION, CELL INJURY AND CELL DEATH .

I. ELABORATE ON

10 MARKS

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

S.no	Questions	Reference	Bloom's Taxonomy
1	Elaborate on the various types of Cellular Adaptation . Discuss the morphological changes and give a clinical example for each type (Atrophy, Hypertrophy, Hyperplasia, Metaplasia).	AUGUST 2014	Analyze
2	Define Cell Injury . Explain in detail the Molecular and Biochemical Mechanisms of irreversible cell injury, focusing on Mitochondrial Damage and Membrane Damage.	APRIL 2016	Analyze
3	Compare and Contrast in detail the morphological features and mechanisms of Apoptosis and Necrosis . Explain the physiological and pathological significance of Apoptosis.	FEBRUARY 2019	Evaluate
4	Describe the sequence of events in Ischemic and Hypoxic Cell Injury . Explain the significance of the "Point of No Return" and list the morphological changes of Reversible Cell Injury .	AUGUST 2017	Analyze
5	Classify and explain the different types of Necrosis with their macroscopic appearance, microscopic features, and common sites of occurrence.	APRIL 2020	Analyze
6	Discuss the role of Free Radicals (Reactive Oxygen Species) in cell injury. Explain the mechanisms by which cells defend themselves against oxidative	AUGUST 2022	Apply

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S.no	Questions	Reference	Bloom's Taxonomy
	stress.		
7	Explain the aetiology, pathogenesis, and morphological features of Pathologic Calcification , differentiating between Dystrophic and Metastatic calcification.	FEBRUARY 2022	Analyze
8	Describe the intracellular accumulations that occur in cells due to metabolic derangements. Illustrate with examples of Lipid and Protein accumulations.	APRIL 2024	Apply
9	Analyze the causes and mechanisms of Atrophy and Hypertrophy . Differentiate between their physiological and pathological forms with suitable examples.	AUGUST 2015	Analyze
10	Define Cellular Aging . Describe the major theories and the associated morphologic and functional changes that occur in the aging cell.	FEBRUARY 2013	Understand

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S.no	Questions	Reference	Bloom's Taxonomy
1	Write notes on Cellular adaptation of growth and disorder.	AUGUST 2011	Understand
2	Write notes on Causes of cell injury.	APRIL 2023	Remember
3	Differentiate between Hyperplasia and Hypertrophy with examples.	AUGUST 2013	Understand
4	Write a note on Barrett's Esophagus as an example of Metaplasia .	APRIL 2015	Apply
5	Briefly explain the mechanism of Apoptosis via the Mitochondrial (Intrinsic) Pathway .	FEBRUARY 2017	Understand
6	Write a note on Fatty Change (Steatosis) in the liver as a form of reversible cell injury.	AUGUST 2018	Understand
7	Enumerate the causes and morphological features of Liquefactive Necrosis .	APRIL 2021	Remember
8	Write a note on the Hallmarks of Irreversible Cell Injury .	AUGUST 2024	Understand
9	Explain the concept and mechanism of Reperfusion Injury .	FEBRUARY 2016	Apply
10	Write notes on Hydropic Swelling (Cloudy swelling) as a reversible cell injury.	APRIL 2019	Understand

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S.no	Questions	Reference	Bloom's Taxonomy
1	Write a short note on Cell death .	AUGUST 2011	Remember
2	Define and give one example of Atrophy .	APRIL 2014	Remember
3	List three common causes of Hypoxia .	AUGUST 2016	Remember
4	What is Caseous Necrosis and what is it characteristic of?	FEBRUARY 2018	Remember
5	Define Metaplasia with a suitable example.	APRIL 2022	Remember
6	Differentiate between Karyolysis , Pyknosis , and Karyorrhexis .	AUGUST 2019	Understand
7	Write three distinguishing features of Apoptotic Bodies .	APRIL 2021	Understand
8	What is the significance of Amorphous Densities in mitochondria?	AUGUST 2023	Understand
9	Define and give one example of Dystrophic Calcification .	FEBRUARY 2015	Remember
10	What is Gangrenous Necrosis and where is it commonly seen?	APRIL 2017	Understand
11	List three examples of chemical agents causing Cell Injury .	AUGUST 2020	Remember
12	Write a short note on the role of Caspases in cell death.	FEBRUARY 2021	Understand

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S.no	Questions	Reference	Bloom's Taxonomy
13	Differentiate briefly between Physiological and Pathological Hyperplasia .	APRIL 2013	Understand
14	What is Lipofuscin ?	AUGUST 2012	Remember
15	Give the definition of Cell Injury .	FEBRUARY 2024	Remember