Unit 1 A: Basic Principles of Cell Injury and Adaptation

I. Short answer Questions (write all questions with example):

1. Define homeostasis.
2. What are the types of feedback systems?
3. Give two causes of cellular injury.
4. Define atrophy.
5. What is hypertrophy?
6. Mention any two morphological changes seen in cell injury.
7. Define metaplasia and dysplasia.
8. What is cellular adaptation?
9. Define cell swelling.
10. What is intracellular accumulation?
11. Mention two causes of calcification.
12. Define enzyme leakage.
13. What is apoptosis?
14. Differentiate between acidosis and alkalosis.
15. Name two symptoms of electrolyte imbalance.
16. Define adaptation.
17. What is hyperplasia?.
18. Mention any two causes of atrophy.
19. Give two examples of physiological hypertrophy.
20. Define mitochondrial damage.
21. What is nuclear pyknosis?
22. What is dystrophic calcification?
23. Define feedback inhibition.
24. What is the difference between metaplasia and dysplasia?
25. Define necrosis.
26. What are the types of intracellular accumulations?
27. What is the difference between dystrophic and metastatic calcification?
28. Define karyolysis.
29. What is coagulative necrosis?
30. Mention two compensatory mechanisms of electrolyte imbalance.
31. Define feedback inhibition
32. Define pathophysiology.
33. Define cell injury.
34. Components of feedback system.
35. Principle of cell injury.
36. Principle of cell adaptation.

37. Pathogenesis
38. Cell membrane damage.
39. Ribosome damage.
40. Nuclear damage.
41. Reversible cell injury
42. Irreversible cell injury
43. Cellular effects of enzyme leakage.
44. Systemic effects of enzyme leakage.

II. Long answer question (Draw diagram or flowchart and examples for all questions):

1. Homeostasis and its regulation.
2. Types and components of feedback systems
3. Causes of cellular injury.
4. Pathogenesis of cellular injury (cell membrane, mitochondrial damage, ribosomal damage, nuclear damage).
5. Morphological changes in reversible and irreversible cell injury.
6. Adaptive changes: atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia
7. Intracellular accumulations
8. Enzyme leakage
9. Cell swelling.
10. Calcification
11.Cell death Acidosis and alkalosis.
12. Electrolyte imbalance.
13. Apoptosis and necrosis