PATHOPHYSIOLOGY – PHARM D-II YEAR

QUESTION BANK

QP CODE- 2856

Unit-1.Basic principles of cell injury and adaptation

LONG ESSAYS: **10 MARKS**

1. What are cellular adaptations? Give examples.
2. Explain the various types of cell injury with examples?Discuss the Etiology of cell injury.
3. Describe the pathogenesis of reversible cell injury induced by hypoxia/ ischaemia.
4. Describe the pathogenesis of irreversible cell injury induced by hypoxia/ ischaemia.
5. Explain etiology, Pathogenesis and morphology of reversible cell injury.
6. Explain the causes, pathogenesis and morphology of irreversible cell injury.
7. Explain etiology, pathogenesis and morphology of cell injury.
8. Enlist the etiological agents causing cell injury. Describe the pathogenesis of reversible cell injury induced by hypoxia/ ischaemia.

SHORT ESSAYS: **5 MARKS**

9. What is Cell Injury? Discuss the various factors influencing Cell Injury?
10. What are the various biochemical intracellular accumulations found in Cell Injury?
11. What is Hyperplasia? What is Physiological Hyperplasia and Pathological Hyperplasia?
12. What is Necrosis? Write about the Pathogenesis of Necrosis?
13. Write principles involved in pathogenesis of cell injury by various agents.
14. With the help of a diagram differentiate ultra-structural changes between reversible and irreversible cell injury due to hypoxia/ischemia.
15. Write the mechanism of free radicals induced cell injury.
16. Briefly discuss types of necrosis.
17. Describe the morphology of reversible cell injury[Degeneration]
18. Briefly discuss the morphology of irreversible cell injury
19. Pathogenesis of reversible cell injury.
20. Describe biochemical changes during cell injury.
21. Explain the process of apoptosis.
22. Discuss the role of lipid metabolism in the pathogenesis of fatty liver.
23. Discuss the abnormalities in lipoproteinaemia resulting in fatty liver.
24. Explain in detail glycogen storage diseases with examples
25. What is lipoproteinemia? Classify abnormalities in lipoproteinemia and explain with examples
26. Define and classify Gangrene and write the difference between wet and dry gangrene.
27. Explain pathologic calcification and necrosis.
28. Define hyperlipidemia and discuss the types of hyperlipidemic diseases.

SHORT ANSWERS: **2 MARKS**

29. Define atrophy with example?
30. Define Amyloidosis?
31. What is Ischemia? What is glycogenoses.
32. What is MC Ardle's syndrome?
33. What is Gierke's disease?
34. What is Pompe's disease?
35. What is Hypoxia?
36. Differentiate between Necrosis and Apoptosis.
37. Differentiate between Degeneration and Necrosis.
38. What is hypertrophy? Give one example each for physiological and pathological hypertrophy.
39. What is metaplasia? Give example.
40. Differentiate between metaplasia and dysplasia.
41. Differentiate hypertrophy and hyperplasia.
42. What is Apoptosis?
43. Differentiate between hyperplasia and neoplasia.
44. What is anaplasia?
45. Anaplasia and dysplasia.
46. Difference between necrosis and degeneration.
47. What is Hypertrophy? Give an example each for Physiological and Pathological Hypertrophy?
48. What is Hydropic swelling?
49. Mention the types of necrosis.
50. What is autolysis?
51. Define Pyknosis, Karyorrhexis and Karyolysis.
52. Define hyperlipidemia and mention the types of hyperlipidemic diseases.

Unit-2.Inflammation

LONG ESSAYS: **10 MARKS**

1. What are the various cellular events in acute Inflammation?
2. What are the various chemical mediators of Inflammation?
3. Write in detail the vascular events involved in the process of Inflammation.
4. List out the Chemical mediators and their role in the process of inflammation.
6. Explain the process of wound healing.

SHORT ESSAYS: **5 MARKS**

7. Explain the process of healing by Primary Intention?
8. What is healing by Secondary Intention?
9. What is healing by Granulation tissue formation?
10. Discuss the factors affecting wound healing.

11. Describe the physiological and pathological significance of prostaglandins.
12. Briefly discuss plasma derived mediators of acute inflammation.
13. Explain the pathogenesis of chronic inflammation.
14. Explain the role of autacoids in inflammation.
15. Differentiate between acute and chronic inflammation.
16. Differentiate between regeneration and fibrosis.
17. Explain Granulomatous inflammation.
18. Explain the process of phagocytosis

SHORT ANSWER: **2 MARKS**

19. List out complications of wound healing
20. Role of Histamine in acute inflammation
21. What are cardinal signs of inflammation?
22. Write the differences between transudate and exudate.
23. List of prostaglandins in inflammation.
24. List the factors affecting wound healing.
25. Healing of wounds.
26. What is regeneration and repair?

Unit-3.Diseases of Immunity

LONG ESSAYS: **10 MARKS**

1. What are the different types of hypersensitivity reactions? Describe the Type 1 hypersensitivity reaction.
2. Define autoimmunity and Classify autoimmune disease and describe the mechanism of autoimmunity.
3. What is allograft? What are the various mechanisms involved in the rejection of allograft?
4. Discuss in detail the pathogenesis of HIV infection.

SHORT ESSAYS: **5 MARKS**

3. Write a note on MHC antigens.
4. Briefly discuss components of immune systems.
5. Briefly explain the mechanism of immune tolerance.
6. Write a note Type II hypersensitivity reaction.
7. Write a note Type III hypersensitivity reaction.
8. Write a note Type IV hypersensitivity reaction.
9. Discuss the mechanism of allograft rejection.
10. Differentiate between cell mediated and humoral immunity
11. Describe the Type 1 hypersensitivity reaction.
12. Describe the pathogenesis of HIV infection
13. Describe the mechanism of autoimmunity.

SHORT ANSWERS: **2 MARKS**

14. Define autoimmunity with examples.
15. Draw and label AIDS virus.

16. What is the biological significance of hypersensitivity?
17. Bring out the differences between B & T lymphocytes.
18. What is Autograft?
19. What is Isograft?
20. What is Allograft?
21. What is Xenograft?
22. What is Myasthenia gravis?
23. What is SLE?
24. What is Rheumatoid arthritis?
25. What is Sjogren's syndrome

Unit-4.Cancer

LONG ESSAYS: **10 MARKS**

1. Write the mechanism of invasion of tumour.
2. Define metastasis; briefly discuss the routes of metastasis.
3. Discuss the pathogenesis of cancer.
4. What is carcinogenesis. Explain the various types of carcinogenesis.

SHORT ESSAYS: **5 MARKS**

5. Characteristics of Tumor cells
6. Explain promotion of carcinogenesis.
7. Explain sequential stages in chemical carcinogenesis.
8. Discuss the pattern of spread of cancer.
9. Write the difference between benign and malignant tumour.
10. Briefly discuss the mechanism of viral oncogenesis.
11. Classify malignant tumours
12. Briefly outline the molecular mechanism of cancer.
13. Explain histological diagnosis of tumors.
14. Write a note on staging and grading of cancer.

SHORT ANSWER: **2 MARKS**

15. What is Neoplasia
16. How doesRadiation causes carcinogenesis
17. Write four contrasting features of benign and malignant tumour.
18. Define Carcinogenicity.
19. What is Tumor? Classify
20. Give two examples each for direct and indirect acting carcinogens.
21. Mention any two human cancers and its associated viral infection in etiology.
22. How do you grade cancer.
23. What are the different stages of cancer?
24. Give examples for radiation induced malignancies.

25. What is Ames test?
26. What is cancer cachexia?
27. Mention any two tumour markers and respective cancer.

Unit-5. Shock

SHORT ESSAYS: **5 MARKS**

1. Discuss the various stages of Shock?
2. Discuss the etiology and pathogenesis of shock.
3. Discuss the mechanism involved in stages of shock.
4. Explain the mechanism of cardiogenic shock.
5. Explain the mechanism of Hypovolemic shock and its management.
6. Explain the end organ changes involved in shock.

SHORT ANSWER: **2 MARKS**

7. Define shock, Mention the types of shock.
8. Enlist the clinical features of decomopensated shock.
9. What is early or compensated shock?
10. What is progressive or decompensated shock?
11. What is Irreversible shock?
12. Write the mechanism of septic shock
13. Write the mechanism of cardiogenic shock.

Unit-6.Biological effects of radiation

SHORT ESSAYS: **5 MARKS**

1. What are various effects of Radiation?
2. How does UV radiations affect the biological system? Explain
3. Explain the biological effects of radiation

SHORT ANSWER: **2 MARKS**

4. Enlist types of Ionizing and Nonionizing radiations?
5. Mention the toxic effects of radiations.
6. What is Radiation sickness
7. Write the Therapeutic applications of Radiations.
8. Write the biological effects of radiation.

Unit-7.Environment and Nutritional diseases

SHORT ESSAYS: **5 MARKS**

1. Explain the pathology of obesity.
2. Write the sources, functions and deficiency disorders ofwater soluble vitamins.
3. Explain the causes and metabolic changes of starvation.
4. Explain the etiology and metabolic changes of obesity.
5. Explain the pathogenesis of protein calorie malnutrition.
6. Write the sources, functions and deficiency disorders offat soluble vitamins.

SHORT ANSWER: **2 MARKS**

7. Name two fat soluble vitamins and their function.
8. Enlist Water soluble vitamins.
9. Enlist Vitamin-D deficiency disorders.
10. Differentiate between Marasmus and Kwashiorkor.
11. Write the Complication of obesity.
12. What is Scurvy?
13. Enlist Air pollutants and its effects.
14. Write the symptoms of Carbon monoxide poisoning.
15. Write the effects of cigarette smoking.
16. Explain Toxic effects produced by SO_2?
17. Explain the Toxic effects produced by NO?
18. What is megaloblastic anemia
19. Write the causes, signs and symptoms of Rickets.
20. What are the effects of protein calorie malnutrition

Unit-8.Pathophysiology (etiology, pathogenesis, signs and symptoms) of common diseases/disorders

LONG ESSAYS: **10 MARKS**

1. Define hypertension. Discuss the pathogenesis of essential hypertension.
2. Define angina pectoris. Briefly discuss types and pathogenesis of angina.
3. Write a note on myocardial infraction and its clinical diagnosis.
4. What is Atherosclerosis? Explain the pathogenesis involved in Atherosclerosis
5. Explain the pathogenesis of peptic ulcer disease.
6. What are metabolic disorders? Explain pathogenesis of diabetes mellitus.
7. Write in detail pathogenesis of Parkinsonism.
8. Describe the etiology, pathogenesis and diagnosis of Asthma
9. Explain the pathogenesis of Stroke.
10. Explain the various types of Angina and its implications on ECG.

SHORT ESSAYS: **5 MARKS**

11. Explain depression and mania.
12. Write a note on pneumonia.
13. Write the pathogenesis of Angina pectoris.
14. Write the cause and pathogenesis of Parkinsonism.
15. Explain the pathogenesis and clinical symptoms of Asthma.
16. Write a note on risk factors of atherosclerosis.
17. Define infarction. Briefly write the morphology and clinical significance of infarction.
18. Write about the development of irritating bowel syndrome.
19. Explain the development of alcoholic liver disease and cirrhosis.
20. Explain Pathogenesis of peptic ulcer.
21. Explain Pathogenesis of tuberculosis.
22. Describe the Pathophysiology of hypertension.
23. Describe the pathogenesis of schizophrenia.
24. Explain the pathogenesis and clinical symptoms of CCF.
25. Describe the pathophysiology of chronic renal failure.
26. Explain the pathophysiology of congestive cardiac failure.
27. Explain the pathological role of renin angiotensin aldosterone system.
28. Describe the pathogenesis of type 2-diabetes mellitus.
29. With the clinical symptoms, explain the pathogenesis of Parkinsonism.
30. Explain the pathogenesis of Asthma
31. Explain peptic ulcer and inflammatory bowel disease.
32. What are the pathological changes in asthma?
33. Explain Pathogenesis of acute renal failure.

SHORT ANSWERS: **2 MARKS**

34. Symptoms of schizophrenia.
35. What is peptic ulcer?
36. Write the difference between depression and mania.
37. Define Angina. Mention the types.
38. Complications of Diabetes mellitus.
39. Define atherosclerosis give two major acquired risk factors.
40. Define IBD give two examples.
41. Symptoms of Parkinsonism.
42. What is CCF?
43. Name the cause for acute renal failure.
44. What are different stages of alcoholic liver disease?
45. What is COPD?
46. Write the signs and symptoms of Hyperthyroidism.
47. Write the signs and symptoms of Hypothysroidism,
48. What is Goiter? Mention the clinical symptoms,
49. What is Thyroiditis?
50. Write about lung functions tests for diagnosis of Asthma.

Unit-9.Pathophysiology (causative organisms, mode of transmission, pathogenesis, signs and symptoms) of infectious diseases

SHORT ESSAYS: **5 MARKS**

1. Describe the pathology of sexually transmitted diseases.
2. With the clinical symptoms explain the pathogenesis of syphilis.
3. Explain the etiology, pathogenesis, signs and symptoms of Malaria.
4. Explain the etiology, pathogenesis, signs and symptoms of Tuberculosis.
5. Explain the etiology, pathogenesis, signs and symptoms of Leprosy.
6. Explain the etiology, pathogenesis, signs and symptoms of Pneumonia.

SHORT ANSWERS: **2 MARKS**

7. Name the causative organism for Amoebic and bacterial dysentery.
8. Name the causative organism for Urinary tract infection.
9. Enlist the types of pneumonia.
10. Name the causative agent, mode of transmission, signs and symptoms for Typhoid.
11. Name the causative agent, mode of transmission, signs and symptoms for Gonorrhea.
12. Write the causative agent, mode of transmission, signs and symptoms of Leprosy.
13. Write the causative agent, mode of transmission, signs and symptoms of Pneumonia.
14. Write the causative agent, mode of transmission, signs and symptoms of Malaria.
15. List any two STD and its causative organisms.
16. Write the causative agent, mode of transmission, signs and symptoms of Urinary tract infection.
17. Write the diagnostic tests for Typhoid, Malaria.
18. Write the laboratory diagnosis of Leprosy and Syphilis.
19. How do you distinguish between bacterial and amoebic dysentry.
20. Write the diagnostic tests for HIV infection.