EAST POINT COLLEGE OF PHARMACY
East Point Campus, Jnana Prabha, Virgo Nagar Post,
Bengaluru – 560049, Karnataka

QUESTION BANK

Pharm D

2nd Year

EAST POINT COLLEGE OF PHARMACY
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PATHOPHYSIOLOGY

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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 05 MARKS

1. What is Cell Injury? Discuss the various factors influencing Cell Injury?
2. What are the various biochemical intracellular accumulations found in Cell Injury?
3. What is Hyperplasia? What is Physiological Hyperplasia and Pathological Hyperplasia?
4. What is Necrosis? Write about the Pathogenesis of Necrosis?
5. Write principles involved in pathogenesis of cell injury by various agents.
6. With the help of a diagram differentiate ultra-structural changes between reversible and irreversible cell injury due to hypoxia/ischemia.
7. Write the mechanism of free radicals induced cell injury.
8. Briefly discuss types of necrosis.
9. Describe the morphology of reversible cell injury[Degeneration]
10. Briefly discuss the morphology of irreversible cell injury
11. Pathogenesis of reversible cell injury.
12. Describe biochemical changes during cell injury.
13. Explain the process of apoptosis.
14. Discuss the role of lipid metabolism in the pathogenesis of fatty liver.
15. Discuss the abnormalities in lipoproteinaemia resulting in fatty liver.

16. Explain in detail glycogen storage diseases with examples
17. What is lipoproteinemia? Classify abnormalities in lipoproteinemia and explain with examples
18. Define and classify Gangrene and write the difference between wet and dry gangrene.
19. Explain pathologic calcification and necrosis.
20. Define hyperlipidemia and discuss the types of hyperlipidemic diseases.

SHORT ANSWERS 02 MARKS

1. Define atrophy with example?
2. Define Amyloidosis?
3. What is Ischemia? What is glycogenoses.
4. What is MC Ardle's syndrome?
5. What is Gierke's disease?
6. What is Pompe's disease?
7. What is Hypoxia?
8. Differentiate between Necrosis and Apoptosis.
9. Differentiate between Degeneration and Necrosis.
10. What is hypertrophy? Give one example each for physiological and pathological hypertrophy.
11. What is metaplasia? Give example.
12. Differentiate between metaplasia and dysplasia.
13. Differentiate hypertrophy and hyperplasia.
14. What is Apoptosis?
15. Differentiate between hyperplasia and neoplasia.
16. What is anaplasia?
17. Anaplasia and dysplasia.
18. Difference between necrosis and degeneration.
19. What is Hypertrophy? Give an example each for Physiological and Pathological Hypertrophy?
20. What is Hydropic swelling?

21. Mention the types of necrosis.
22. What is autolysis?
23. Define Pyknosis, Karyorrhexis and Karyolysis.
24. Define hyperlipidemia and mention the types of hyperlipidemic diseases.

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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.
5. Explain the process of wound healing.

SHORT ESSAYS 05 MARKS

1. Explain the process of healing by Primary Intention?
2. What is healing by Secondary Intention?
3. What is healing by Granulation tissue formation?
4. Discuss the factors affecting wound healing.
5. Describe the physiological and pathological significance of prostaglandins.
6. Briefly discuss plasma derived mediators of acute inflammation.
7. Explain the pathogenesis of chronic inflammation.
8. Explain the role of autacoids in inflammation.
9. Differentiate between acute and chronic inflammation.
10. Differentiate between regeneration and fibrosis.
11. Explain Granulomatous inflammation.
12. Explain the process of phagocytosis

SHORT ANSWER 02 MARKS

1. List out complications of wound healing
2. Role of Histamine in acute inflammation
3. What are cardinal signs of inflammation?
4. Write the differences between transudate and exudate.
5. List of prostaglandins in inflammation.
6. List the factors affecting wound healing.
7. Healing of wounds.
8. What is regeneration and repair?

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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 05 MARKS

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

SHORT ANSWERS 02 MARKS

1. Define autoimmunity with examples.
2. Draw and label AIDS virus.
3. What is the biological significance of hypersensitivity?
4. Bring out the differences between B & T lymphocytes.
5. What is Autograft?
6. What is Isograft?

7. What is Allograft?
8. What is Xenograft?
9. What is Myasthenia gravis?
10. What is SLE?
11. What is Rheumatoid arthritis?
12. What is Sjogren’s syndrome

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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 05 MARKS

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

SHORT ANSWER 02 MARKS

1. What is Neoplasia
2. How does Radiation causes carcinogenesis
3. Write four contrasting features of benign and malignant tumour.
4. Define Carcinogenicity.
5. What is Tumor? Classify
6. Give two examples each for direct and indirect acting carcinogens.
7. Mention any two human cancers and its associated viral infection in etiology.
8. How do you grade cancer.
9. What are the different stages of cancer?
10. Give examples for radiation induced malignancies.
11. What is Ames test?
12. What is cancer cachexia?
13. Mention any two tumour markers and respective cancer.

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Unit-5 Shock

SHORT ESSAYS 05 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 02 MARKS

1. Define shock, Mention the types of shock.
2. Enlist the clinical features of decomopensated shock.
3. What is early or compensated shock?
4. What is progressive or decompensated shock?
5. What is Irreversible shock?
6. Write the mechanism of septic shock
7. Write the mechanism of cardiogenic shock.

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Unit-6 Biological effects of radiation

SHORT ESSAYS 05 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 02 MARKS

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

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Unit-7 Environment and Nutritional diseases

SHORT ESSAYS 05 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 02 MARKS

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

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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 05 MARKS

1. Explain depression and mania.
2. Write a note on pneumonia.
3. Write the pathogenesis of Angina pectoris.
4. Write the cause and pathogenesis of Parkinsonism.
5. Explain the pathogenesis and clinical symptoms of Asthma.
6. Write a note on risk factors of atherosclerosis.
7. Define infarction. Briefly write the morphology and clinical significance of infarction.
8. Write about the development of irritating bowel syndrome.
9. Explain the development of alcoholic liver disease and cirrhosis.
10. Explain Pathogenesis of peptic ulcer.
11. Explain Pathogenesis of tuberculosis.
12. Describe the Pathophysiology of hypertension.
13. Describe the pathogenesis of schizophrenia.

14. Explain the pathogenesis and clinical symptoms of CCF.
15. Describe the pathophysiology of chronic renal failure.
16. Explain the pathophysiology of congestive cardiac failure.
17. Explain the pathological role of renin angiotensin aldosterone system.
18. Describe the pathogenesis of type 2-diabetes mellitus.
19. With the clinical symptoms, explain the pathogenesis of Parkinsonism.
20. Explain the pathogenesis of Asthma
21. Explain peptic ulcer and inflammatory bowel disease.
22. What are the pathological changes in asthma?
23. Explain Pathogenesis of acute renal failure.

SHORT ANSWERS 02 MARKS

1. Symptoms of schizophrenia.
2. What is peptic ulcer?
3. Write the difference between depression and mania.
4. Define Angina. Mention the types.
5. Complications of Diabetes mellitus.
6. Define atherosclerosis give two major acquired risk factors.
7. Define IBD give two examples.
8. Symptoms of Parkinsonism.
9. What is CCF?
10. Name the cause for acute renal failure.
11. What are different stages of alcoholic liver disease?
12. What is COPD?
13. Write the signs and symptoms of Hyperthyroidism.
14. Write the signs and symptoms of Hypothysroidism,
15. What is Goiter? Mention the clinical symptoms,
16. What is Thyroiditis?
17. Write about lung functions tests for diagnosis of Asthma.

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

SHORT ESSAYS 05 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 02 MARKS

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

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Pharmaceutical Microbiology

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Chapter Introduction

SHORT ANSWERS 02 MARKS

1. Write four pharmaceutical uses of microorganisms.
2. State Koch's postulates.
3. List out harmful effects of micro-organisms
4. Write any four applications of Microbiology.
5. Name the major divisions of microbial world.
6. Write contributions of Antony Van Leeuwen hek.
7. Write contributions of Edward Jenner.
8. Write contributions of Robert Koch.
9. Write contributions of Louis Pasteur.
10. Write contributions of Alexander Fleming.
11. Write the concept of spontaneous generation.

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Chapter Classification of Microbes; Nutritional Requirements and Growth

LONG ESSAY 10 MARKS

1. Classify bacteria on the basis of nutritional requirements and add a note on raw materials used forpreparation of culture media. (4+6)
2. Define and classify culture media. Mention salient feature of each media along with an example.(1+2+7)
3. Draw an ultra structure of typical bacteria. Write composition and functions of its organelles.(3+7)
4. Classify bacteria on the basis of morphological features. Add a note on composition andfunctions of cell wall. (6+4)
5. Classify bacteria on the basis of oxygen, pH and temperature requirements. Add note on theeffect of hyper and hypotonicity on bacteria. (2+2+2+4)
6. Describe bacterial growth curve. Add a note on physical factors affecting growth of bacteria.(5+5).
7. Classify bacteria on the basis of oxygen requirement. Explain any fourefficient methods of cultivation of anaerobic bacteria. (2+8).

SHORT ANSWERS 05 MARKS

1. Describe methods of reproduction in fungi.
2. Write a note on cultivation of virus.
3. Discuss about merits and demerits of viral cultivation techniques.
4. Describe steps involved in replication of virus.
5. Write about classification of virus.
6. Classify bacteria on the basis of nutritional requirements
7. Write a note on raw materials used for preparation of culture media.

8. Define and classify culture media with examples.
9. Write salient feature of differential & selective media along with examples.
10. Classify bacteria on the basis of morphological features.
11. Explain composition and functions of cell wall.
12. Differentiate between gram positive and Gram negative cell wall.
13. Describe bacterial growth curve.
14. Write a note on physical factors affecting growth of bacteria.
15. Explain continuous and synchronous growth techniques.
16. Write a note on cultivation of anaerobic bacteria.

SHORT ANSWERS 02 MARKS

1. Mention media for cultivation of fungi.
2. Write merits of embryonic cultivation of virus.
3. Write merits of embryonic cultivation of virus.
4. What is capsid?
5. What is envelope in virus?
6. Classify fungi.
7. Mention pharmaceutical uses of fungi.
8. Write structure of typical virion.
9. What is mycelium?
10. Why are virus described as obligate parasites?
11. Differentiate between flagella and fimbrae.
12. Differentiate between enrichment and selective media.

13. What is mesosome ?

14. Differentiate between prokaryotes and Eukaryotes.

15. Differentiate between bacteria and virus.

16. Differentiate between fungi and bacteria.

17. Differentiate between phototroph and chemotrophs.

18. Write functions of cytoplasmic membrane.

19. What are plasmids?

20. Write significance of plasmids

21. What are micronutrients?

22. Write composition of Peptidoglycan.

23. What is pleomorphism? Give examples.

24. What are involution forms?

25. What are Intra cytoplasmic inclusions? Give examples.

26. Mention functions of bacterial capsule.

27. What are mesophilic bacteria? Give examples.

28. What are Psychrophilic bacteria? Give examples.

29. What are Thermophilic bacteria? Give examples.

30. What are fastidious bacteria?

31. What is selective media? Give example.

32. What is pour plate method, write its uses.

33. Differentiate between log phase and decline phase.

34. Differentiate between chemostat and turbidostat.

35. Differentiate between facultative anaerobes and obligatory anaerobes.

36. Differentiate between organotrophs and lithotrophs.

37. Differentiate between autotrophs and heterotrophs.

38. What is anaerobic media? Give examples.

39. What is basal media? Give example.

40. What is synchronous growth?

41. What is transport media? Give one example.

42. What is enriched media? Give example.

43. What is differential media? Give example.

44. What is the role of agar in culture media.

45. Mention arrangement based classification of cocci.

46. What is mean generation time?

47. What is lag phase of growth.

48. What is log phase of growth.

49. What is stationary phase of growth.

50. What is decline phase of growth.

51. List out the different phases of growth of bacteria

52. Mention chemicals used in gaspak system.

53. Write about Spirochets.

54. What are rickettsiae?

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Chapter Isolation and Identification of Bacteria

LONG ESSAY 10 MARKS

1. Differentiate between gram positive and Gram negative cell wall. Add a note on principle andprocedure of Gram's staining technique. (5+5).
2. Enlist methods used for total and viability counting bacteria. Describe any two methods of total counting. (4+6)
3. Mention methods used for identification of bacteria. Explain any four biochemical testsUsed for identification of bacteria. (2+8)
4. Write briefly on various techniques used for identification of bacteria with emphasis onBiochemical tests.
5. Write in detail about agar plate methods of viability counting.
6. What is pure culture? Enlist methods for isolation of pure culture? Describe any two industriallyimportant techniques of preserving bacteria. (2+3+5)
7. Write about importance of microbial preservation technique. Write procedure, merit and demeritof any four preservation techniques. (2+8).
8. What is pure culture? Write in detail about isolation of pure culture. (2+8)

SHORT ANSWERS 05 MARKS

1. Write principle and procedure of Gram's staining technique.
2. Write principle and procedure of Acid-fast staining.
3. Describe any two methods of viability counting.
4. Describe any two methods of total counting.
5. Write a note on filter membrane method of counting bacteria.
6. Explain IMViC tests used for identification of bacteria.
7. Explain MR-VP tests used for identification of bacteria.
8. Write different methods of motility testing

9. Enlist methods for isolation of pure culture?
10. Describe any two industrially important techniques of preserving bacteria.
11. Write about methods for maintenance of pure culture.
12. Write about importance of microbial preservation technique.
13. Write merit and demerit of any four preservation techniques.
14. Write a note on gelatin liquefaction and starch hydrolysis tests.

SHORT ANSWERS 02 MARKS

1. Differentiate between mordant and decolourising agent.
2. Differentiate between acid fast and non acid fast bacteria.
3. Mention uses of preservation techniques.
4. What is micromanipulator? Mention its use.
5. Write principle and use of coulter counter instrument.
6. Mention reagents used for acid fast staining.
7. Mention role of each chemical used in gram's staining.
8. What are cryoprotective agents? Give examples.
9. Write principle of starch hydrolysis test.
10. Mention Carbohydrate utilization tests.

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Chapter Sterilization

LONG ESSAY 10 MARKS

1. Explain the principle, procedure, applications and demerits of sterilization using autoclave (3+3+2+2)
2. Explain the principle and operating procedure of autoclave along with a neat labeled diagram (4 +6)
3. Explain the principle, procedure, applications and demerits of sterilization using hot air oven.(3+3+2+2).
4. Explain the mechanism of action, procedure, applications and factors affecting sterilization usingethylene oxide. (2+2+2+4).
5. Explain the source, mechanism of sterilisation, merit, demerits and applications of sterilizationusing Gamma radiations. (1+3+2+2+2).
6. Describe the steps involved in sterility testing; add a note on its interpretation. (6+4).
7. Explain principles involved in sterilisation by filtration. Add a note on its merits and demerits(5+1+4).
8. Classify different sterilization methods. Add a note on sterility test methods.
9. What are sterilisation indicators? Mention indicators used for various sterilization methods.
10. Explain different factors affecting disinfection
11. Explain different methods for evaluation of bacteriostatic activity.
12. Describe Redial Walker's test. List out the merits and demerits of the test.
13. Explain the principle and operating procedure, merits and demerits of ethylene oxide sterilization.

SHORT ESSAY 05 MARKS

1. Write the procedure, merits and demerits of membrane filtration
2. Write the merits and demerits of different sterilizing filters.
3. Write the procedure, merits and demerits of ethylene oxide sterilisation.
4. Explain the principle involved in autoclaving.
5. Explain the mechanism of sterilisation and heat transfer by hot air oven.

6. Write the production, mechanism of action, demerits and applications of UV radiations.
7. Explain the factors affecting gaseous sterilisation.
8. Write a note on heating with bactericide
9. Write a note on sterilisation indicators.
10. Write about sampling technique of sterility testing.
11. Justify the importance of controls in sterility testing.
12. Explain any two methods for evaluation of bacteriostatic activity of a disinfectant.
13. Write the procedure of Redial Walker's co-efficient test.
14. Mention the merits and demerits of Redial Walker's co-efficient tests.
15. Explain a test for evaluation of bactericidal activity of a disinfectant.
16. What is MIC? Explain the method for its determination
17. Explain the antimicrobial sensitivity test.
18. List out the properties of an ideal disinfectant.
19. Classify disinfectants giving examples
20. Outline mechanism of action for each class of disinfectant.
21. Explain different factors affecting disinfection.
22. Write classification, mechanism of action and uses of phenolic disinfectants.
23. Explain the mechanism of action and uses of aldehyde disinfectants.
24. Write classification, mechanism of action and uses of halogens as disinfectants.
25. Write a note on evaluation of preservatives.
26. Explain evaluation of bacteriostatic activity of a disinfectant.

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SHORT ANSWERS 02 MARKS

1. Define sterilisation
2. What is Pasteurization? List out its applications
3. What is incineration?
4. Explain 'Heating to red hot' as a method of sterilisation.
5. Mention applications of UV radiations as a sterilant.
6. Explain the advantage of saturated steam over super heated steam.
7. Explain the advantages of autoclaving over hot air sterilization.
8. List out any four applications of gamma irradiation.
9. Mention any four applications of autoclave.
10. Mention any four applications of dry heat sterilization.
11. Mention any four applications of gaseous sterilization.
12. Mention any four applications of ethylene oxide sterilization
13. Mention any four applications of filtration sterilization
14. Mention any four gaseous sterilants.
15. Mention the ionizing and non-ionising radiations used for sterilization.
16. Write the mechanism of sterilisation by hot air oven.
17. Write the mechanism of sterilisation by autoclave.
18. Write mechanism sterilization by ethylene oxide.
19. Write the mechanism involved in membrane filtration sterilization.
20. Mention the demerits of moist heat sterilization
21. Mention the demerits of dry heat sterilization
22. Mention the demerits of ethylene oxide sterilization

23. Mention the demerits of gaseous sterilization

24. Mention the demerits of membrane filtration method of sterilization

25. Mention the demerits of UV radiation sterilization

26. Mention the demerits of gamma radiation as sterilant

27. Write bio-indicators for thermal sterilization.

28. Mention media used for sterility testing.

29. Why are positive controls used in sterility test

30. Why are negative controls used for sterility test

31. Write applications of membrane filtration

32. Write applications and limitations of formaldehyde as a sterilant.

33. What are HEPA filters?

34. Write time and temperature of incubation for sterility testing.

35. Define disinfection.

36. Define antisepsis.

37. Differentiate between disinfection and antisepsis.

38. What is a preservative? Give examples

39. Give examples for disinfectants with virucidal activity

40. Give examples for disinfectants with antifungal activity

41. Give examples for disinfectants with sporicidal activity

42. Write the ideal properties of an antiseptic

43. Give examples for aerial disinfectants

44. Give two examples for alcoholic disinfectants. Mention its mechanism of action.

45. Give two examples for halide disinfectants. Mention its mechanism of action.
46. Give two examples for heavy metal compounds used as disinfectants. Mention its mechanism ofaction.
47. Name any two compounds used for disinfection of water, mention their mechanism of action
48. What is ‘Zone of inhibition’?
49. What is MIC?
50. What is Disc diffusion method?
51. Write the equation for determination of Redial Walkers co-efficient
52. Difference between bacteriostatic and bactericidal agents.

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Chapter Immunology

LONG ESSAY 10 MARKS

01. Discuss in general the various types of antigen and antibody reactions. Add a note on theirapplications. (8+2)
02. Mention various antigen-antibody reactions. Discuss in detail the precipitation test. (2+8)
03. Explain types of antibodies. Explain antigen antibody reactions. (5+5)
04. Discuss in detail the Agglutination and complement fixation tests. (6+4)
05. What are different types of antigen? Write the chemical nature of the antigen and antibody. Adda note on antigenic determinants. (2+4+4)
06. Classify antibodies and write note on salient features of each antibody. (2+2+2+2+2)
07. Write about types of immunity and types of vaccines. (5+5)

SHORT ESSAY 05 MARKS

01. Write principle, procedure and applications of Western Blotting Technique.
02. Write principle, procedure and applications of Southern Blotting Technique.
03. Write principle, procedure and application of Shick's test.
04. Write principle, procedure and application of QBC test
05. Write principle, procedure and applications of Monteuxs test
06. Write principle, procedure and applications of ELISA test.
07. Write principle, procedure and applications of Widal test.
08. Enlist different antibody antigen reactions and mention its diagnostic applications.
09. Define immunity. Classify the types of immunity.
10. Write in detail the structure of different types of antibodies with neat labeled diagram.
11. Highlight on steps involved in production of antibodies.
12. What are vaccines? Classify them.

13. What are toxins & toxoids?

14. Add a note on immunization programme.

15. Write about the role of lymphocytes in immunity.

16. Enumerate the differences between endotoxin and exotoxin

17. Write about microbial virulence factors

SHORT ANSWERS 02 MARKS

01. What are haptens?

02. What are epitopes and paratopes?

03. Mention characters of antigen-antibody reactions.

04. What are mixed vaccines? Give examples.

05. Differentiate between killed and live vaccines.

06. Differentiate between active and passive immunity.

07. Differentiate between vaccine and antisera.

08. What are Toxoids?

09. Write the Principle involved in Widal test.

10. Write the Principle involved in Monteux test.

11. Write the Principle involved in Western blot

12. Write the applications of ELISA test

13. Classify immunity

14. Write significance of H and O antigens

15. Mention diagnostic tests for Tuberculosis

16. Mention diagnostic tests for AIDS

17. Mention diagnostic tests for typhoid

18. Write two differences between agglutination and precipitation reactions.

19. Mention different types of immunoglobulins.

20. What is antitoxin?

21. Write general storage conditions for vaccines and sera.

22. Define vaccine with examples.

23. Define immunity.

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Chapter Microbiologial Assays and Antimicrobial Sensitivity Testing

SHORT ESSAY 05 MARKS

1. Write principle and method of microbiological assay of Vitamin B12.
2. Write principle and method of microbiological assay of Vitamin B2.
3. Write principle and method of microbiological assay of Streptomycin by cup plate method.
4. Write principle and method of microbiological assay of Streptomycin by tube assay method.
5. Write principle and method of microbiological assay of vitamin B12 by titrimetric method.
6. Write about standardization of vaccines and sera
7. Describe a method for antimicrobial sensitivity testing.

SHORT ANSWERS 02 MARKS

1. Write the organisms used for microbiological assay of sreptomycin.
2. Write the organisms used for microbiological assay of vitamin B12 and vitamin B2.
3. Enlist the tests for standardization of vaccines.
4. What is anti-microbial sensitivity? Mention one method for its determination.
5. Write about cup-plate method.
6. Write about agar diffusion method.

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Chapter **Infectious Diseases**

SHORT ESSAY 05 MARKS

1. Mention the causative organism, mode of transmission, signs and symptoms, diagnosis andtreatment of malaria
2. Mention the causative organism, mode of transmission, signs and symptoms, diagnosis andtreatment of Typhoid
3. Mention the causative organism, mode of transmission, signs and symptoms, diagnosis andtreatment of tuberculosis
4. Mention the causative organism, mode of transmission, signs and symptoms, diagnosis andtreatment of syphilis
5. Mention the causative organism, mode of transmission, signs and symptoms, diagnosis andprevention of AIDS
6. Mention the causative organism, mode of transmission, signs and symptoms, diagnosis andtreatment of cholera
7. Mention the causative organism, mode of transmission, signs and symptoms, diagnosis andtreatment of gonorrhea.
8. What is typhoid? Write the causative organism, mode of transmission, sign and symptoms.

SHORT ANSWERS 02 MARKS

1. Name the causative organism and diagnostic test for typhoid.
2. Name the causative organism and diagnostic test for tuberculosis.
3. Name the causative organism and diagnostic test for AIDS.
4. Name the causative organism and diagnostic test for malaria.
5. Enlist preventive measures for AIDS
6. Enlist preventive measures for syphilis
7. Enlist preventive measures for malaria.
8. Enlist preventive measures for typhoid.

9. Enlist preventive measures for cholera.
10. Write the mode of transmission of AIDS.
11. Write the mode of transmission of hepatitis.
12. Write the mode of transmission of malaria.
13. Write the mode of transmission of typhoid.
14. Write the mode of transmission of cholera.
15. Write the mode of transmission of syphilis
16. Write the mode of transmission of gonorrhea.
17. Mention drugs used for treatment of Tuberculosis.
18. Mention drugs used for treatment of malaria.
19. Mention drugs used for treatment of typhoid.
20. Mention drugs used for treatment of AIDS.
21. Write signs and symptoms of dengue.
22. Write about prevention of dengue.
23. What are attenuated vaccines? Give examples.

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PHARMACOGNOSY

AND

PHYTOPHARMACEUTICALS

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Chapter 1: Detailed study of various cell constituents

SHORT ANSWERS 02 MARKS

1. List out the various types of plant constituents.
2. Name the different types of phytoconstituents present in plants.
3. Define carbohydrates and glycosides.
4. What are primary cell constituents? Give examples.
5. Give the general tests for the identification of carbohydrates.
6. Give the chemical tests for the identification of proteins
7. Give the chemical tests for the identification of tannins.
8. Define primary metabolites with examples.
9. Define secondary metabolites with examples.
10. List out the secondary metabolites of plants.
11. What is latex? Give examples.
12. What is lignin? Give the test for identification of lignin.
13. Give the importance's of primary and secondary metabolites.

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Chapter 2: Study of cell wall constituents and cell inclusions

SHORT ANSWERS 02 MARKS

1. Enumerate the cell wall constituents.
2. List outdifferent ergastic substances with examples.
3. Explain with examples non-living cell inclusions.
4. Write a note on composition of plant cell wall.
5. Explain the cell wall components and their significance.
6. Discuss the cell wall components and ergastic cell inclusions.
7. Write the chemical test for lignin and mucilage
8. Write the chemical test for starch and mucilage.
9. Name the various types of excretory products of plant
10. Name the different types of calcium oxalate crystals.
11. Name the various types of secretory products of plan.

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Chapter 4: Definition, History and Scope of Pharmacognosy

SHORT ANSWERS 02 MARKS

1. Define Pharmacognosy. Who coined the term Pharmacognosy?
2. Explain the scope of Pharmacognosy.
3. Define Phamacognosy and Phytopharmaceuticals.
4. Outline the status of Pharmacognosy in the area of research and industry.
5. What is Pharmacognosy. Mention the present status of Pharmacognosy.
6. Discuss the Scope of Pharmacognosy.
7. Define Pharmacognosy and Crude drug.
8. Name the natural sources of crude drugs with examples.
9. Name the traditional system of medicines.
10. Importance of Pharmacognosy.
11. Differentiate between organized and un-organized drugs with suitable examples.

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Chapter 5 Classification of crude drugs

LONG ESSAYS 10 MARKS

1. Define crude drug. Discuss various methods of classification of crude drugs with suitable examples.
2. Discuss the various methods of classification of crude drugs with particular emphasison the merits and demerits of each method.
3. Explain in detail chemical and pharmacological methods of classification of crudedrugs with examples.
4. Describe different methods of classification of crude drugs with examples. Give its advantages and disadvantages.
5. Define crude drug. Enlist different method of classifying crude drugs. Explain indetail pharmacological method of classification.
6. Describe the classification of crude drugs based on chemicalconstituents and pharmacological activity with examples.
7. Differentiate between taxonomy and chemotaxonomy. Describe their significanceswith reference to classification of crude drugs.
8. Write a note on advantages and disadvantages of various methods of classification ofcrude drugs.
9. Explain in detail botanical/ taxonomical and morphological classification of crudedrugs with examples.
10. Explain in detail alphabetical and pharmacological classification of crude drugs with examples.
11. Explain the taxonomical and chemo-taxonomical classification of crude drugs with examples.
12. Explain in detail morphological and pharmacological classification of crude drugswith examples.
13. Explain in detail morphological and chemical classification of crude drugs with examples.

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SHORT ESSAYS 05 MARKS

1. Write a note on morphological classification of crude drugs with examples.
2. Write a note on differences between organized and unorganized drugs with examples.
3. Enumerate with examples chemical classification of crude drugs.
4. Explain with examples therapeutic classification of crude drugs.
5. Give the chemical classification of crude drugs with examples.
6. Explain the taxonomical and chemo- taxonomical classification of crude drugs with examples.
7. Give the pharmacological classification of crude drugs with examples.

SHORT ANSWERS 02 MARKS

1. Define chemotaxonomy. Give examples.
2. Give the significances of chemotaxonomy.
3. Classify the crude drugs based on alphabetical method of classification.
4. What are organized and unorganized drugs give examples.
5. Give the advantages and dis advantages of chemical classification.
6. Give the advantages and dis advantages of pharmacological classification.
7. Give the advantages and dis advantages of morphological classification.
8. Give the advantages and dis advantages of alphabetical classification.
9. Give the advantages and dis advantages of taxonomical classification.
10. Give the advantages and dis advantages of chemotaxonomical classification.

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Chapter 6: Cultivation, collection, processing and storage of crude drugs

LONG ESSAYS 10 MARKS

1. Mention the advantages and disadvantages of cultivation of medicinal plants with examples.
2. Define cultivation**.** Explain various factors affecting cultivation of medicinal plants.
3. Write a note on storage of crude drugs and their significances.
4. Explain in brief conservation of medicinal plants and its importance's.
5. Discuss in detail the various factors affecting cultivation of medicinal plants.
6. Enumerate the factors affecting cultivation of medicinal plants.
7. Write note on various methods of cultivation of medicinal plants.
8. Write a note on storage and processing of crude drugs.
9. Write an account on the method of drying, preservation and storage of crude drugs.
10. Write in detail about the general methods of cultivation and collection of medicinal Plants.

SHORT ESSAYS 05 MARKS

1. Explain in brief storage of crude drugs with examples.
2. Write a note on Plant growth regulators.
3. Explain various methods of processing of crude drugs.
4. Explain in brief on method of drying, preservation and storage of crude drugs.
5. Explain in brief on various factors affecting cultivation of crude drugs.
6. Write in brief about conservation of medicinal plants and its importance's.
7. Give the merits and demerits of cultivation of medicinal plants.
8. Write a note on collection of barks and latex.
9. Explain in detail various methods of cultivation of medicinal plants.

10. Describe the vegetative method of propagation of medicinal plants.

11. Define soil fertility. Explain the importance of soil in cultivation of medicinal plants.

SHORT ANSWERS 02 MARKS

1. List out the factors affecting cultivation of medicinal plants.
2. Give the significances of storage and processing of crude drugs.
3. Write a note onedaphic factor.
4. What are auxins? Give its significance.
5. What are gibberlins? Give its significance.
6. Significance of moisture content and its control in crude drugs.
7. What is garbling?
8. What is coppicing and felling?
9. Conservation of medicinal plants.
10. What is grafting?
11. What are bio-fertilizers.
12. What is mulching.
13. List out the various methods of drying of crude drugs.

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Chapter 7: Different methods of adulteration of crude drugs

LONG ESSAYS 10 MARKS

1. Explain in detail the various methods of adulteration of crude drugs with examples.
2. Explain thefive different methods usedfor adulteration of crude drugs and discuss.
3. Define adulteration. Explain the various methods of adulteration with examples.
4. What do you mean by deliberate and indeliberate adulteration give examples?

SHORT ESSAYS 05 MARKS

1. Define adulteration and explain the various methods of adulteration.
2. Define adulteration and give the reasons for adulteration with examples.
3. What do you mean by deliberate and indeliberate adulteration with examples?
4. Discuss with examples on adulteration of powder and liquid drugs.
5. Explain in detail the methods of adulteration of crude drugs with examples.
6. Name five different methods used for adulteration of crude drugs and explain with examples.
7. What is adulteration? Explain in-deliberate adulteration of crude drugs with examples.
8. What is adulteration? Explain the deliberate adulteration of crude drugs with examples.

SHORT ANSWERS 02 MARKS

1. Define Adulteration and Substitution.
2. What do you mean by deliberate and indeliberate adulteration?
3. Give the various reasons of adulteration
4. Artificial adulteration with examples.
5. Name the different methods of adulteration of crude drugs.
6. Define adulteration and sophistication.
7. What are exhausted drugs? Give examples.

8. What is harmful adulteration? Give examples.
9. Give the difference between substitute and official drug with example.
10. What is substitution? Give examples.
11. What is deterioration? Give example.
12. Adulteration of crude drugs with artificial adulterants

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Chapter 8: Study of natural pesticides- Pyrethrum, Neem, Tobacco

SHORT ESSAYS 05 MARKS

1. Give the advantages and disadvantages of natural pesticides.
2. Write the advantages and disadvantages of natural pesticides. Explain the role ofNeem as a natural pesticide.
3. Write the advantages and disadvantages of natural pesticides. Discuss Pyrethrum andNeem as natural pesticides.
4. Write the advantages and disadvantages of natural pesticides. Discuss Pyrethrum andNeem as natural pesticides.
5. Discuss various natural pesticides along with their mode of action.
6. What are natural pesticides? Give their advantages and disadvantages.
7. Write the advantages and disadvantages of natural pesticides. Discuss Pyrethrum andNeem as natural pesticides.
8. What are natural pesticides? Give their advantages and disadvantages.
9. Discuss Pyrethrum and Neem as natural pesticides.
10. Discuss Pyrethrum and Tobacco as natural pesticides.
11. Explain the mode of action of natural drugs used as pesticides.

SHORT ANSWERS 02 MARKS

1. Name the natural drugs used as pesticides.
2. Write the mode of action of Neem as a pesticide.
3. Write the mode of action of Pyrethrum as a pesticide.
4. Write the mode of action of Tobacco as a pesticide.
5. Give the source and chemical constituents of Neem.
6. Give the source and chemical constituents of Pyrethrum.
7. Give the source and chemical constituents of Tobacco.
8. What is pest and pesticide? Give examples.
9. What are insecticides and rodenticides? Give examples.
10. Name the various mechanisms of action of natural pesticides with examples.
11. Write the mode of action of Neem as a pesticide.

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Chapter 9: Detailed method of cultivation of crude drugs - Datura, Cassia cinnamom, Cinchona, Ephedra, Quassia, Clove, Fennel, Nux vomica, Rauwolfia, Liquorice

LONG ESSAYS 10 MARKS

1. Describe the method of cultivation and collection of Datura and Rauwolfia.
2. Describe the method of cultivation and collection of Cinchona and Fennel.
3. Describe the method of cultivation and collection of Cassia Cinnamon and Clove.
4. Describe the method of cultivation and collection of Nux vomica and Liquorice.
5. Describe the method of cultivation and collection of Cinchona and Clove.
6. Describe the method of cultivation and collection Raulwolfia and Cassia Cinnamon.
7. Describe the method of cultivation and collection of Datura and Fennel.
8. Describe the method of cultivation and collection of Cassia cinnamon & Nuxvomica.
9. Describe the cultivation and collection of Datura and Clove.
10. Describe the cultivation and collection of Cinchona and Fennel.

SHORT ESSAYS 05 MARKS

1. Explain the method of cultivation and collection of Datura.
2. Explain the method of cultivation and collection of Rauwolfia.
3. Explain the method of cultivation and collection of Cinchona.
4. Explain the method of cultivation and collection of Fennel.
5. Explain the method of cultivation and collection of Cassia cinnamon.
6. Explain the method of cultivation and collection of Clove.
7. Explain the method of cultivation and collection of Nuxvomica.
8. Explain the method of cultivation and collection of Liquorice.
9. Explain the method of cultivation and collection of Ephedra
10. Explain the method of cultivation and collection of Quassia.

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SHORT ANSWERS 02 MARKS

1. Give the source, chemical constituents and uses of Datura.
2. Give the source, chemical constituents and uses of Rauwolfia.
3. Give the source, chemical constituents, and uses of Cinchona.
4. Give the source, chemical constituents and uses of Fennel.
5. Give the source, chemical constituents and uses of Cassia cinnamon.
6. Give the source, chemical constituents and uses of Clove.
7. Give the source, chemical constituents and uses of Nuxvomica.
8. Give the source, chemical constituents and uses of Liquorice.
9. Give the source, chemical constituents and uses of Ephedra.
10. Give the source, chemical constituents and uses of Quassia.

Chapter 10: Microscopical and powder Microscopical study of crude drugs - Datura, Cassiacinnamom, Cinchona, Ephedra, Quassia, Clove, Fennel, Nux vomica, Rauwolfia, Liquorice.

LONG ESSAYS 10 MARKS

1. Explain with a neat labelled diagram microscopy and powder microscopical characters of and Cassia cinnamon.
2. Explain with a neat labelled diagram microscopy and powder microscopical characters of Datura
3. Explain with a neat labelled diagram microscopy and powder microscopical characters of Cinchona.
4. Explain with a neat labelled diagram microscopy and powder microscopical characters of Ephedra
5. Explain with a neat labelled diagram microscopy and powder microscopical characters of Quassia.
6. Explain with a neat labelled diagram microscopy and powder microscopical characters of Fennel.
7. Explain with a neat labelled diagram microscopy and powder microscopical characters of Nuxvomica
8. Explain with a neat labelled diagram microscopy and powder microscopical characters of Rauwolfia.
9. Explain with a neat labelled diagram microscopy and powder microscopical characters of Liquorice.
10. Explain with a neat labelled diagram microscopy and powder microscopical characters of Clove.
11. Describe the anatomical features of Datura and Cassia Cinnamon with a neat labelled diagram.
12. Describe the anatomical features of Cinchona and Ephedra with a neat labelled diagram.
13. Describe the anatomical features of Quassia and Clove with a neat labelled diagram.
14. Describe the anatomical features of Fennel and Nuxvomica with a neat labelled diagram.
15. Describe the anatomical features of Rauwolfia and Liquorice with a neat labelled diagram.

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SHORT ESSAYS 05 MARKS

1. Explain with a neat diagram the anatomy of Datura.
2. Explain with a neat diagram the anatomy of Cassia Cinnamon.
3. Explain with a neat diagram the anatomy of Cinchona.
4. Explain with a neat diagram the anatomy of Ephedra.
5. Explain with a neat diagram the anatomy of Quassia.
6. Explain with a neat diagram the anatomy of Clove.
7. Explain with a neat diagram the anatomy of Fennel.
8. Explain with a neat diagram the anatomy of Nuxvomica.
9. Explain with a neat diagram the anatomy of Rauwolfia.
10. Explain with a neat diagram the anatomy of Liquorice.
11. Give the powder microscopical character for Datura and Cassia Cinnamon.
12. Give the powder microscopical character for Cinchona and Ephedra
13. Give the powder microscopical character for Quassia and Clove.
14. Give the powder microscopical character for Fennel and Nuxvomica.
15. Give the powder microscopical character for Rauwolfia and Liquorice.

SHORT ANSWERS 02 MARKS

1. Give the source, constituents and uses of Datura.
2. Give the source, constituents and uses of Cassia Cinnamon.
3. Give the source, constituents and uses of Chinchona.
4. Give the source, constituents and uses of Ephedra.
5. Give the source, constituents and uses of Quassia.
6. Give the source, constituents and uses of Clove.
7. Give the source, constituents and uses of Fennel.
8. Give the source, constituents and uses of Nuxvomica.

9. Give the source, constituents and uses of Rauwolfia.
10. Give the source, constituents and uses of Liquorice.
11. Classify trichomes with examples.
12. Classify stomata with examples.
13. Give the functions of stomata and trichomes.
14. Name the shapes of bark with examples.
15. Name the drug containing plasmodesmata and give its source.
16. What is Parquetry arrangement? Give examples.
17. Give the source and uses of drug containing vittae.
18. What are cystoliths?
19. Give the powder microscopic characters of Datura
20. Give the powder microscopic characters of Cinnamon
21. Give the powder microscopic characters of Cinchona
22. Give the powder microscopic characters of Quassia
23. Give the powder microscopic characters of Fennel
24. Give the powder microscopic characters of Ephedra
25. Give the powder microscopic characters of Clove
26. Give the powder microscopic characters of Nux-vomica
27. Give the powder microscopic characters of Rauwolfia
28. Give the powder microscopic characters of Liquorice.

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Chapter 11: Study of plant and animal fibers used in surgical dressings and related products -Cotton, Wool, Jute, Silk, Hemp

SHORT ESSAYS 05 MARKS

1. Classify fibers with examples and explain in detail about Jute.
2. Describe the plant fibers used in surgical dressing.
3. Describe the source, method of preparation and usesof absorbentCotton.
4. Describe the method of preparation of Silk and Wool.
5. Write a note on plant fibers and name two surgical dressings and their uses.
6. What are surgical dressings? Name plant fibers used in surgical dressings and add anote on cotton.
7. Define surgical dressings. Write the general properties and sources of plant fibersused as surgical dressings.
8. Define and classify fibers. Write the preparation of absorbent cotton.
9. Give the source, chemical constituents and uses of cotton. Write the preparation of absorbent cotton.
10. What are surgical dressings? Explain animal fibers used in surgical dressings.
11. Give the source, method of preparation and pharmaceutical uses of Silk and Jute.
12. Give the source, method of preparation and pharmaceutical uses of Silk and Wool

SHORT ANSWERS 02 MARKS

1. Define plant and animal fibers with examples.
2. Give the chemical tests for plant fibers.
3. Give the chemical tests for animal fibers.
4. Give the chemical tests for Cotton.
5. Give the source, constituents and uses of Cotton.
6. Give the source, constituents and uses of Jute.
7. Give the source, constituents and uses of Silk
8. Give the source, constituents and uses of Hemp.
9. Give the method of preparation of Hemp.
10. Give the source, constituents and uses of Wool.

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Chapter 12: Introduction and classification of carbohydrates and related products

SHORT ESSAYS 05 MARKS

1. Define and classify carbohydrates with examples.
2. Explain the differences between gums and mucilage with examples.
3. Define carbohydrates. Give the differences between gums and mucilage.
4. What are carbohydrates? Give the general identification tests and classification of carbohydrates with examples.
5. Define and classify carbohydrates. Write the general tests for identification of carbohydrates.
6. Define simple and complex polysaccharides with examples. Give the general tests forthe identification of reducing sugars.

SHORT ANSWERS 02 MARKS

7. Give the identification tests for mucilage.
8. Give the source of any two drugs containing mucilage.
9. Give the source of any two drugs containing gums.
10. Define Swelling Index. Give its significances.
11. Write the general tests for identification of carbohydrates.
12. Classify carbohydrates with suitable examples.
13. What are polysaccharides? Give examples.
14. Give the pharmaceutical significance of polysaccharides.
15. Define carbohydrates. Give some examples for disaccharides.
16. What is swelling index?

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Chapter 13: Biological source, method of production, chemical constituents, identification tests and uses of the following carbohydrates and related products

i) Isapgol ii) Guar gum iii)Honey iv) Acacia v) Agar vi) Tragacanth vii) Pectin viii) Sterculia gum ix) Starch.

SHORT ESSAYS 05 MARKS

1. Give the source, chemical constituents and tests for Acacia.
2. Write the source, chemical constituents, method of preparation and tests for Honey.
3. Explain the source, chemical constituentsand tests for Isapgol.
4. Write the source, chemical constituents, method of preparation and tests for Guargum.
5. Write the source, chemical constituents and tests for Tragacanth.
6. Write the source, chemical constituents, method of preparation and tests for Pectin.
7. Write the source, chemical constituents and tests for Sterculia gum.
8. Write the source, method of preparation and tests for Agar.
9. Write the source, chemical constituents, method of preparation and tests for Starch.
10. Write the chemical tests used to differentiate Agar and Acacia.
11. Give the chemical tests used to differentiate Tragacanth and Acacia

SHORT ANSWERS 02 MARKS

1. What is pectin? Name the source of Pectin.
2. Differentiate pure honey from adulterated honey by chemical tests.
3. Give the specific chemical tests for the identification of Tragacanth.
4. Write the chemical nature of Pectin.
5. Give the specific chemical tests for the identification chemical tests for Acacia.
6. Name the different drugs containing mucilage. How is mucilage tested?
7. Give the source of Pectin and Guar gum.
8. Chemical constituents and uses of Honey.

9. Chemical constituentsand uses of Acacia.
10. Chemical constituents and uses of Tragacanth.
11. Chemical constituents and uses of Agar.
12. Chemical constituents and uses of Sterculia.
13. Chemical constituents and uses of Pectin.
14. Chemical constituents and uses of Guar gum.
15. Write the chemical tests for identification of Pectin.
16. Write the chemical tests for identification of Sterculia.
17. Give the source and pharmaceutical uses of Acacia
18. Give the source and pharmaceutical uses of Agar.
19. Give the source and pharmaceutical uses of Sterculia.
20. Give the source and pharmaceutical uses of Tragacanth.
21. Give the source and pharmaceutical uses of Honey.
22. Give the source and pharmaceutical uses of Pectin.
23. Give the source and pharmaceutical uses of Guar gum.

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Chapter 14: Definition sources, method extraction, chemistry and method of analysis of lipids.

SHORT ESSAYS 05 MARKS

1. Discuss in detail about chemical methods of analysis of fixed oils.
2. Define lipids. Explain the chemistry and different methods of extraction of lipids.
3. Define and outline the principle and significance of acid value and iodine value.
4. Define and outline the principle of saponification value and ester value and give its significances.
5. Define and classify lipids with the suitable examples. Give the differences betweenfixed oils, fats and waxes.
6. Explain the general method of extraction and refining of lipids.
7. Describe the chemical methods of analysis of lipids.
8. Define lipids. Explain the various parameters for analysis of lipids
9. Define Iodine value. Explain principle and procedure for the determination of Iodinevalue
10. Define acid value. Explain principle and procedure for the determination of acidvalue.
11. Define saponification value. Explain principle and procedure for the determination of saponification value.

SHORT ANSWERS 02 MARKS

1. Define saponification value. Give its significance.
2. Define acid value. Give its significance.
3. Define iodine value. Give its significance.
4. Define ester value. Give its significance.
5. Define saponification value and ester value.
6. Define ester value and hydroxyl value.
7. Define iodine value and saponification value.
8. Give the chemistry of lipids.
9. Name the various methods of analysis of lipids.

10. List out physical methods of analysis of lipids.

11. Define Polenski value and Reichert-meisle value.

12. Define rancidity and unsaponifiable matter.

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Chapter 15: Detailed study of oils

i) Castor oil ii) Cod liver oil iii) Chaulmoogra oil Olive oil v) Linseed oil vi) Sesame oil

SHORT ESSAYS 05 MARKS

1. Explain the source, method of production and uses of Castor oil and Linseed oil.
2. Give the source, method of preparation and uses of Cod liver oil and Chaulmoograoil.
3. Give the source, method of preparation and uses of Olive oil and Sesame oil.
4. Discuss the source, chemistry, method of preparation and uses of Castor oil.
5. Discuss the source, chemistry, method of preparation and uses of Chaulmoogra oil.
6. Source, chemical constituents, tests and uses of Chaulmoogra oil and Linseed oil.
7. Write the source, chemical constituents, uses and identification tests for Castor oil andCod liver oil.
8. Write the source, chemical constituents, uses of Olive oil and Linseed oil.
9. Discuss the source, chemical constituents, uses and tests for the identification of Oliveoil and Sesame oil.
10. Write the source, chemical constituents, uses of Olive oil and Castor oil.

SHORT ANSWERS 02 MARKS

11. Give the chemical constituents and uses of Chaulmoogra oil.
12. Give the chemical constituents and uses of Castor oil.
13. Give the chemical constituents and uses of Cod liver oil.
14. Give the chemical constituents and uses of Olive oil.
15. Give the chemical constituents and uses of Linseed oil.
16. Give the chemical constituents and uses of Sesame oil.
17. Explain the method of preparation of Castor oil.
18. Explain the method of preparation of Linseed oil.

19. Explain the method of preparation of Cod liver oil.

20. Explain the method of preparation of Chaulmoogra oil.

21. Explain the method of preparation of Olive oil.

22. Explain the method of preparation of Sesame oil.

23. Give the source and uses of the drug containing vitamin A.

24. Give source and chemical constituents of antileprotic drug

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Chapter 16: Definition, classification, chemistry and method of analysis of proteins

SHORT ESSAYS 05 MARKS

1. Define and classify proteins with examples.
2. Define proteins. Add a note on chemistry and method of analysis of proteins.
3. Write the chemistry and chemical tests for proteins.
4. Write an essay on the classification and chemistry of proteins.
5. Define and classify proteins. Discuss about method of analysis of proteins.
6. Define proteins. Write in detail about properties and method of analysis of proteins.

SHORT ANSWERS 02 MARKS

7. Define proteins and give examples.
8. Give the chemical tests for protein.
9. List out different methods of analysis proteins.
10. Give the identification tests for proteins.
11. Classify proteins with examples.
12. Give the general properties of proteins.
13. Give the chemistry of proteins.
14. What are derived proteins and give examples.
15. What are conjugated proteins and give suitable examples.
16. What is gelatin and write its uses.
17. Write the pharmaceutical importance of proteins.

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Pharmacology-1

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CHAPTER: General Pharmacology

SHORT ESSAY 05 MARKS

1. Write a note on pharmacodynamic drug interaction.
2. Write a note on pharmacokinetic drug interaction.
3. Write a note on preclinical evaluation
4. Explain Drug tolerance in detail
5. Write a note on drug dependence and explain its mechanism
6. Factors affecting drug actions
7. Write a note on drug interactions.
8. Explain different mechanisms of drug absorption
9. Explain the factors affecting absorption.
10. Explain Phase-I metabolism in detail
11. Explain Phase-II metabolism in detail
12. Explain the factors affecting metabolism of drugs
13. Write different routes of administration along with their merits & demerits
14. Explain the different phases of clinical trials
15. Define bioavailability? Explain the factors affecting bioavailability.
16. Write a note on mechanism of drug action.
17. Write a note on G-protein coupled receptors \
18. Write a note on different types of receptors
19. Explain the factors affecting drug action
20. Importance of plasma protein binding
21. Define subacute toxicity with example
22. Give any two examples for acute toxicity

SHORT ANSWERS 02 MARKS

1. Define Prodrug
2. Define First pass effect
3. Define Therapeutic index
4. Define Bioequivalence
5. Explain Child dose calculation
6. Define cross tolerance with example

7. Define iontophoresis and its uses
8. What are the different Source of drugs
9. Define Drug dependence & Drug abuse
10. Explain Tachyphylaxis
11. What are Adverse drug reactions? Give Example.
12. Define Apparent volume of distribution
13. Define Additive effects with examples
14. Define synergistic effects with examples
15. Enlist Cholinergic receptors
16. Define Dose response relationship
17. Merits & Demerits of Intrathecal route of administration 18. Define Competitive antagonism with example
18. Define non-Competitive antagonism with example
19. Define Placebo
20. Merits & Demerits of nasal route of administration
21. Merits & Demerits of sublinguial route of administration

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CHAPTER: Drugs acting on ANS

LONG ESSAY 10 MARKS

1. Classify adrenergic agonists with suitable examples. Explain the pharmacology of Nor-adrenaline
2. Write the classification of cholinomimietics. Explain the pharmacology of acetylcholine.
3. Explain the pharmacology of adrenergic blockers
4. Classify anticholinergics with examples. Describe the pharmacological actions of atropine.
5. Write a note on adrenergic and cholinergic receptors
6. Explain the Pharmacology Neuromuscular blockers

SHORT ESSAY 05 MARKS

1. Define ganglionic blockers with examples. Explain their mechanism of action and therapeutic uses.
2. Write a note on antiparkinsonism drugs.
3. Drugs used in Myasthenia gravis
4. Explain the phases of general anaesthesia
5. Explain the pharmacology of nicotine
6. Classify Peripherally acting skeletal muscle relaxants. Explain the pharmacology of D-tubocurarine
7. Write a note on atropine
8. Explain pharmacology of levodopa & carbidopa
9. Write a note on succinylcholine

SHORT ANSWERS 02 MARKS

1. Dales vasomotor reversal phenomenon
2. Define Mydriatics and give two examples
3. Define miotics and give two examples
4. Mechanism of Pancuronium
5. Mechanism of Organophosphates
6. List of cholinoceptors antaagonists
7. Mechanism of Nicotine
8. Clinical uses of Hyoscine

9. Give four examples for Catecholamines
10. Examples and uses of Anticholienesterases
11. Mechanism of action and uses of Pseudostyigmine
12. Clinical uses of scopolamine
13. Adverse effects and clinical uses of prazocin

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CHAPTER: Cardiovascular Acting drugs

LONG ESSAY 10 MARKS

1. What are antihypertensive drugs? Classify them with examples. Explain the mechanism of action & therapeutic uses of ACE inhibitors
2. Define CHF. Classify the drugs used for the treatment of CHF. Add a note on digitalis.
3. Classify anti-arrhythmic drugs. Explain membrane stabilizing agents.
4. Classify antianginal drugs. Write the pharmacology of nitrovasodilators
5. Classify hypolipidemic agents. Explain the pharmacology of statins
6. Explain in detail the pharmacology of adrenergic blockers and centrally acting antihypertensives.

SHORT ESSAY 05 MARKS

1. Explain the mechanism, therapeutic uses & adverse effects of Cholistyramine.
2. Explain the pharmacology of fibrates
3. Discuss the pharmacological actions of digitalis
4. Write a note on calcium channel blockers
5. Explain the pharmacology of atorvastatin
6. Explain the pharmacology of diuretics in the treatment of hypertension

SHORT ANSWERS 02 MARKS

1. Adverse effects of reserpine
2. Two Adverse effects of Quinidine
3. Clinical uses of Simvastatin
4. Mechanism of hydralazine
5. Mechanism of losartan
6. Give 2 examples for beta blockers with intrinsic symapthomimetic activity
7. Clinical uses of Atenolol
8. Give any two examples for cardiotonics
9. Uses and adverse effects of carvedilol
10. Uses and adverse effects of Nifedipine
11. Mechanism of action of Procainamide
12. Two Adverse effects of Quinidine
13. Give examples for Non- selective beta blockers
14. Give 2 examples for proarrythmic drugs

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CHAPTER: Drugs acting on CNS

LONG ESSAY 10 MARKS

1. Classify narcotic analgesics. Write the pharmacology of morphine
2. Classify anticonvulsants. Write the mechanism of action and pharmacology of phenytoin.
3. Classify NSAIDS. Explain the pharmacology of Aspirin
4. Classify anti-depressants. Write a note on tricyclic antidepressants
5. Classify Hypnotics & Sedatives with examples. Explain the pharmacology of diazepam.
6. Explain different phases of general anaesthesia and Classify general anesthetics with examples
7. Explain the pharmacology of alcohol
8. Classify antipsychotics. Explain the pharmacology of atypical antipsychotics.
9. Explain the mechanism of action and adverse effects of general anaesthetics

SHORT ESSAY 05 MARKS

1. Explain the pharmacology of barbiturates
2. Explain the pharmacology of buspirone
3. Explain the pharmacology of tramadol
4. Write pharmacology of carbamazapiene
5. Explain the pharmacology of fluxotine
6. Write a note on monoaminooxidase (MAO) inhibitors
7. Classify local anesthetics. Explain the pharmacology lignocaine.
8. Classify anxiolytics. Explain about phenobarbitone

SHORT ANSWERS 02 MARKS

1. Mechanism of Disulfiram
2. Two Examples for Cognition enhancers
3. Clinial uses of naltrexone
4. Clinical uses & adverse effects of Fluoxtine
5. Two Clinical uses of Pentibarbitone
6. Two clinical uses of Ethosuccinamide

7. Mechanism of Valproic acid
8. Mechanism of Etoricoxib
9. Calssify Opiod anagonists with example
10. Mechanism of local anaesthetics
11. Two adverse effects of Buspirone
12. Give examples for hallucinogens
13. Give examples for psychoactive drugs
14. Ant two adverse effects of diethyl ether
15. Give examples of typical antipsychotics
16. Any two sideeffcets of haloperidol

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CHAPTER: Drugs acting on Respiratory system

SHORT ESSAY 05 MARKS

1. Write a note on drugs used in the treatment of COPD.
2. Classify the drugs used in the treatment of asthma with examples.
3. Explain the pharmacology of bronchodilators.

SHORT ANSWERS 02 MARKS

1. Clinical uses of pseudoephedrine
2. Adverse effects of Guaifenesin
3. Define antitussives with examples
4. Mechanism of action of cromolyn sodium
5. Clinical uses of monteleukast
6. Define Mucolytics. Give any two examples
7. Define Expectorants. Give any two examples
8. Define Nasal Decongestants. Give any two examples
9. Any two adverse effects of Theophylline
10. Any two clinical uses of salbutamol
11. Any two adverse effects of terbutaline

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CHAPTER: Hormones & their related drugs

SHORT ESSAY 05 MARKS

1. Classify oral hypoglycemic agents & explain the pharmacology of metformin.
2. Classify Sulfonyl ureas. Explain their mechanism of action and adverse effects.
3. Classify different types of insulin. Explain its pharmacology.
4. Write a note on antithyroid drugs.
5. Explain the pharmacology of levothyroxine
6. Write a note on Oral Contraceptives.
7. Classify uterine stimulants. Write a note on oxytocin.
8. Explain mechanism, pharmacokinetics and adverse effects of thiazolidenediones
9. Explain the Pharmacological actions of various sex hormones

SHORT ANSWERS 02 MARKS

1. Mechanism of action of radioiodine
2. Define and give two examples for tocolytics
3. Name any two sex hormones and their uses
4. Clinical uses of progesterone
5. Adverse effects of estradiol
6. Mechanism of acarbose
7. Any two adverse effects of insulin therapy
8. Give examples for insulin analogues
9. Adverse effects of meglitinides

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CHAPTER: Autocoids

SHORT ESSAY 05 MARKS

1. .Explain the Pharmacology of histamine
2. classify antihistamines with examples and mention their adverse effects.
3. Write a note pharmacology on 5–HT.
4. Write a note on Lipid derived autocoids
5. Write the pharmacological actions of 5HT antagonist

SHORT ANSWERS 02 MARKS

1. Define autocoids. Give any two examples
2. Give examples for Lipid derived autacoids
3. Give physiological significance of autocoids
4. Clinical uses of plate activating factors
5. any two examples for leukotriene blockers
6. Any two Adverse effects of antihistaminic drugs
7. Write any two clinical uses of prostaglandins
8. any two side effects of chlorphenaramine
9. Give any two examples of H1 antihistaminics
10. Clinical uses of H2 antihistaminics

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Community Pharmacy

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CHAPTER 1 Community Pharmacy: -Definition &roles &responsibilities of community pharmacy -Scope of community pharmacy

SHORT ANSWERS 02 MARKS

1. Define community Pharmacy.
2. Define community Pharmacist.
3. Write about Role of community Pharmacist.
4. What are the Responsibility communities Pharmacist?
5. What is the scope of community Pharmacy?
6. What do you know about responsibilities of Community pharmacist?
7. Remunerate about the role of Community pharmacist
8. Explain the scope of Community pharmacy in India.
9. What is the responsibilities of community pharmacist.
10. Enumurate about f community pharmacist

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CHAPTER 2 Community pharmacy management: Selection of site, space, layout design, Staff materials, coding, and stocking, Legal requirements,Maintenance of various registers, use of computers.

SHORT ESSAYS 05 MARKS

1. Explain in brief about Selection of site, space for Community Pharmacy.
2. Explain in brief about the use of computers in community pharmacy?
3. Discuss the legal requirements in community pharmacy?
4. Explain the need of registers in community pharmacy?
5. What are different Steps involved in the selection of site for community pharmacy?
6. Explain the layout of community pharmacy?
7. What do you know about legal requirements about Community pharmacist.
8. How computers and softwares are useful in Community pharmacy.
9. Write about maintainance of various registers in Community pharmacy.
10. How coding and decoding are done in Community pharmacy

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CHAPTER 3 Prescriptions: Parts of prescription, legality & identificationof medication related problems like drug interactions.

SHORT ANSWERS 02 MARKS

1. Define prescription.
2. Comment on Drug interaction.
3. Enumerate about medication related problems.
4. Name the sources of drug interaction checkers.
5. Give examples of drug-drug interactions.
6. Give examples of drug-food interactions.
7. Give examples of drug-other body components interactions.
8. Define drug interactions.
9. How do you identify medication related problems.
10. What do you know about different parts of prescription.

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CHAPTER 4 Inventory control in community pharmacy

Definition, various methods of Inventory Control, ABC, VED, EOQ, Lead time, safety stock.

SHORT ESSAYS 05 MARKS

1. What are the various methods of inventory control techniques. Explain any one method.
2. Explain about ABC analysis with example.
3. Explain about VED analysis with example.
4. Explain about EOQ analysis with example.
5. What is Lead time and reorder level?
6. Explain about safety stock buffer stock?
7. What are the different methods of Inventory control followed in community pharmacy?
8. Define ABC,VED, EOQ, buffer stock and lead time.
9. Define inventory control, safety stock, reorder level, minimum safety level and maximum safety level.
10. What do you know about ABC and VED analysis.

Chapter 5. **Pharmaceutical care: Definition and Principles of Pharmaceutical care**.

SHORT ESSAYS 05 MARKS

1. Define pharmaceutical care. Write in detail about the principles of pharmaceutical care
2. Explain in detail about principles of pharmaceutical care .
3. Discuss in detail about principles of pharmaceutical care
4. What do you mean by pharmaceutical care.
5. Describe about principles of pharmaceutical care.
6. Describe the principle involved for pharmaceutical care
7. What is the principles of pharmaceutical care.
8. Explain about pharmaceutical care
9. Write about importance of pharmaceutical care
10. Enumurate in detail about pharmaceutical care,

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SHORT ANSWERS 02 MARKS

1. Define pharmaceutical care
2. What is the principle involved in pharmaceutical care.
3. Write in brief about pharmaceutical care.
4. Comment on pharmaceutical care.
5. Enumerate about pharmaceutical care.
6. Discuss pharmaceutical care.
7. Enumerate about role of Pharmacist in pharmaceutical care.
8. Comment on principles in pharmaceutical care.
9. Define Pharmacist role towards pharmaceutical care.
10. Write about pharmaceutical care.

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CHAPTER 6 Patient counseling: Definition, outcomes, various stages, barriers, Strategies to overcome barriers Patient information leaflets- content, design, & layouts, advisory labels

SHORT ESSAYS 05 MARKS

1. Explain various barriers of patient counseling
2. What are the different Methods to overcome patient counseling barriers?
3. Write briefly about the advantages and disadvantages of patient counseling?
4. What are the various stages of patient counseling?
5. Explain Patient information leaflet?
6. Write a note on design & layout of leaflets?
7. Discuss about the contents of PIL?
8. Explain Advisory labels in patient counseling?
9. Explain Advisory label for paracetamol.
10. Explain Advisory label for cough syrup.
11. Explain Advisory label for proton pump inhibiter.

SHORT ANSWERS 02 MARKS

1. Counseling tips for haematonics.
2. Define patient counseling.
3. Counseling tips for multi-vitamins.
4. Objectives of patient counseling.
5. Advisory label for antacids.
6. Define the terms Patient information leaflet, Advisory label.
7. Counseling tips for Antacids.
8. Counseling tips for Aspirin in pregnancy.
9. Counseling tips for sedatives.
10. Explain about communication skills.

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CHAPTER 7 Patient medication adherence: Definition, Factors affecting medication adherence, role of pharmacist in improving the Adherence

SHORT ANSWERS 02 MARKS

1. Define the term medication adherence.
2. Name any two medication adherence scales
3. Role of pharmacist in improving medication adherence
4. What are the different methods for measuring the medication adherence
5. Mention any four factors affecting medication adherence.
6. Explain the term medication adherence.
7. Name the factors affecting medication adherence.
8. What do you mean by medication non adherence.
9. Functions of Pharmacist in preventing medication non adherence.
10. Steps involved in medication adherence.

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CHAPTER 8 Health screening services Definition, importance, methods for screening Blood Pressure / blood sugar/ lung function and Cholesterol testing.

LONG ESSAYS 10 MARKS

1. Define Health screening explain about for cholesterol testing
2. What is the importance of health screening services explain about testing of blood pressure
3. Discuss about the lung function tests.
4. Define Health screening explain about for Blood sugar testing.
5. Explain the screening methods for estimating blood pressure.
6. Define screening methods for blood sugar.
7. Discuss about different test involved in cholesterol estimation
8. List out different pulmonary test explain about any one method
9. Discuss about different test involved in Blood sugar testing
10. Explore about health screening.

SHORT ESSAYS 05 MARKS

1. What are the screening techniques for blood sugar ?
2. Discuss about the cholesterol testing.
3. Explain about lung function test
4. Define health screening services for estimating blood pressure
5. Define health screening explain any one method
6. Explain about spirometry
7. What do you know about cholesterol testing.
8. What do you know about lung function test
9. What do you know about blood sugar
10. What do you know about blood pressure

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CHAPTER 9 OTC Medication- Definition, OTC medication list & Counselling

SHORT ANSWERS 02 MARKS

1. Define OTC medication
2. Give the examples of OTC medications
3. When OTC medications are dispensed.
4. Write about concealing for OTC.
5. What is the role of Pharmacist in OTC medications.
6. Give some examples of OTC medications
7. Write about counsealining tips for OTC medications.
8. Enumurate about counselling for OTC medication.
9. What do you about OTC medication.
10. Comment on OTC medication.

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CHAPTER 10 Health Education: WHO Definition of health, and health promotion, care for children, pregnant & breast feeding women and geriatric patients. Commonly occurring Communicable Diseases, causative agents, Clinical presentations and prevention of communicabledise Tuberculosis,Hepatitis ,Typhoid, Amoebiasis, Malaria, Leprosy, Syphilis, Gonorrhea and AIDS,Balance diet, and treatment & prevention of deficiency disorders. Family planning – role of pharmacist

LONG ESSAYS 10 MARKS

1. Define Balanced diet. Write note on vitamins deficiency disorders and its prevention
2. Define health. Describe the pharmaceutical care for geriatrics
3. Define health.Describe the pharmaceutical care for pediatrics
4. Define health. Describe the pharmaceutical care for Breast feeding mothers
5. Define health. Describe the pharmaceutical care for pregnant women
6. Explain the causative organism, clinical presentation & prevention of Hepatitis & Typhoid?
7. Write briefly about Syphilis & Gonorrhea?
8. What is balanced diet? Discuss the treatment & prevention of deficiency disorder?
9. Discuss about the causative organism, clinical presentation & prevention of TB & Malaria.
10. Discuss about the causative organism, clinical presentation ,life cycle of plasmodium species.
11. Explain role of community pharmacist in family planning. Write about different methods of family planning.
12. Discuss in detail about AIDS & Leprosy.
13. Define communicable disease. Discuss the role of community pharmacist in preventing communicable diseases.
14. Discuss about the causative organism, clinical presentation & prevention of Hepatitis.
15. Discuss about the causative organism, clinical presentation & prevention of Amoebiasis.

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SHORT ANSWERS 02 MARKS

1. Diaphragm & Condom.
2. Pellagra & Scurvy.
3. Abstinence.
4. Beriberi.
5. Hormonal methods.
6. Amoebiasis.
7. vasectomy
8. Marasmus& Kwashiorkar.
9. Tubectomy
10. Balanced Diet
11. Causative organisms for malaria
12. Causative organisms for Typhoid

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Chapter 11 Responding to symptoms of minor ailments

SHORT ESSAYS 05 MARKS

1. What are the GI disturbances, explain in detail.
2. Write a note on diarrhea.
3. Write briefly about Dyspepsia.
4. Common drug therapy to pain.
5. Vomiting.
6. Constipation.
7. Discuss worms infestations.
8. Write a note on Pyrexia.
9. Write a note on Nasuea.
10. Write a note on ophthalmic symptoms.
11. Drugs used in the treatment of Nausea and vomiting.

SHORT ANSWERS 02 MARKS

1. Pyrexia.
2. Ophthalmic symptoms.

Relevant pathophysiology, common drug therapy to, Pain, GI disturbances (Nausea, Vomiting, Dyspepsia, diarrhea, constipation), Pyrexia, Opthalmic symptoms, worms infestations (5marks / 2 marks)

3. Worms infestations.
4. Drugs used in ophthalmic disorders.
5. Write about worm infestations.
6. Write about Ophthalmic symptoms.
7. Write about Pyrexia.
8. Write about ophthalmic disorders.
9. Drugs used in worm infestations.
10. What do you know about ophthalmic sysmptoms.

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CHAPTER 12 Essential Drugs concept and Rational Drug Therapy

SHORT ANSWERS 02 MARKS

1. Write a note on rational use of drugs.
2. Write a note on Essential drug concept.
3. Health indicators of essential drug concept.
4. Name Steps involved in the selection of essential drug.
5. Write about the rational drug therapy for injections.
6. Comment on rational use of drugs.
7. Write about rational use of drugs.
8. What do you know about rational use of drugs.
9. Write the principle of essential drug concept.
10. Enumerate about rational use of drugs.

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CHAPTER 13 Code of ethics for community pharmacists

SHORT ANSWERS 02 MARKS

1. Define code of ethics.
2. Code of ethics of pharmacist in relation to his profession.
3. Write role of pharmacist in code of ethics.
4. Write on code of ethics in health care profession.
5. Write on code of ethics towards patients.
6. Write on code of ethics towards Society.
7. Write on code of ethics pharmacy profession.
8. Write on code of ethics towords professional relation.
9. Write note on autonomy and dignity.
10. Write note on trade of Pharmacy.

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Pharmacotherapeutics-1

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Chapter 1A: Hypertension

LONG ESSAYS 10 MARKS:

1) Explain the pathophysiology and management of hypertension.
2) Explain the treatment protocol for Hypertension.
3) Explain in detail the compelling indications of Hypertension.
4) Explain the pathogenesis and pharmacotherapy of hypertension.
5) Define and classify hypertension according to INC guidelines. Explain the etiology, pathogenesis, and pharmacotherapy of essential hypertension.
6) Discuss the management of hypertension with a treatment algorithm. Enumerate the risk factors and complications of Hypertension.

SHORT ANSWERS 05 MARKS:

1) Define hypertension and write its types and etiology
2) Explain the Therapeutic management of hypertension with special reference to drugs of choice.
3) Write the management of the Hypertensive crisis.

SHORT ANSWERS 02 MARKS:

1) Explain the clinical manifestations and complications of hypertension.
2) Write JNC 7 Classification of Hypertension.
3) Define Malignant Hypertension
4) Define Hypertensive Urgency and Hypertensive Emergency
5) Mention ADRs of diuretics.
6) Explain DASH therapy.
7) Why diuretics are least preferred in the Indian population for the management of Hypertension.
8) Define Pseudo hypertension and emergency hypertension.
9) Enlist ADRs of ACE Inhibitors.
10) Mention the role of diuretic s in hypertension therapy.
11) Define accelerated hypertension.
12) Define Hypertensive crisis and classify it.
13) Define preeclampsia.
14) Define essential hypertension.
15) Define Cor-pulmonale.

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Chapter 1B: Congestive cardiac failure

LONG ESSAYS 10 MARKS:

1) What is atherosclerosis? Explain the management of atherosclerosis.

2) Define Congestive heart failure and explain its management.

3) Explain the pharmacotherapy of congestive cardiac failure.

SHORT ANSWERS 05 MARKS:

1) Define CCF. Write its aetiology. signs & symptoms of CH'F.

2) Explain the role of ionotropic agents in the treatment of congestive heart failure.

3) Explain the rule of diuretics and sympathomimetics in congestive cardiac failure.

4) Mention the investigations performed to confirm the diagnosis of heart failure.

SHORT ANSWERS 02 MARKS:

1) Explain the role of digoxin in congestive cardiac failure.

2) List the risk factors for congestive cardiac failure.

3) Define CCF.

4) Comment on diuretic and digoxin combination in the management of congestive cardiac failure.

5) ABCDE standard treatment for coronary heart disease.

6) Mention the NYHA classification of functional status of the patient with heart failure.

7) List the clinical manifestations of heart failure.

8) Enlist vasodilators used in heart failure.

9) Enumerate ADRs of Digoxin.

10) Differentiate between right heart failure and left heart failure.

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Chapter 1C: Angina Pectoris

SHORT ANSWERS 05 MARKS:

1) Define angina pectoris. Describe its etiology and pathogenesis.

2) Explain the signs and symptoms and pharmacotherapy of angina.

3) Explain the therapeutic management of Angina Pectoris.

4} Explain the role of nitrates in coronary heart disease.

5) Explain different types of angina pectoris and its management.

6) Define angina pectoris. outline different types of angina

SHORT ANSWERS 02 MARKS:

1) Mention the role of Nitro-glycerine in angina

2) Mention the role of calcium channel blockers in angina

3) Mention diagnostic tests for angina pectoris.

4) Write the differential diagnosis between angina and myocardial infraction.

5) Define nitrate tolerance. How it can be prevented.

6) Write the mechanism of act ion of nitrates and list out its adverse effects.

7) Define variant angina.

8) Mention adverse effects of nitrates.

9) Differentiate between ISMN & ISDN.

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Chapter 1D: Myocardial infarction

LONG ESSAYS 10 MARKS:

1) Explain the treatment algorithm for the treatment of acute MI.

2) Describe the etiology, clinical features and investigations of ischemic heart disease.

3) Explain the therapeutic management of MI.

4) Define myocardial infarction. Explain the etiopathogenesis, risk factors, and treatment

SHORT ANSWERS 02 MARKS:

1) Write the treatment algorithm for NSTEMI.

2) Mention any four Fibrinolytic agents.

3) Mention the indication and treatment regimen for Strepto kinase.

4) Mention the significance of ECG in myocardial infarction.

5) Differentiate between STEMI and NSTEMI.

6) Write the treatment goals of lHD.

7) Mention the role of morphine in the management of myocardial infarction.

8) Enlist Diagnosis tests used for myocardial infarction.

9) Define myocardial infarction. Mention its risk factors.

10) Write the importance of lactate dehydrogenase and troponins.

11) Mention any four Fibrinolytic agents.

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Chapter 1E: Hyperlipidemia

SHORT ANSWERS 05 MARKS:

1) Explain the Pharmacotherapy of hyperlipidaemias.

2) Explain etiopathogenesis of Hyperlipidaemias.

3) Write the pharmacological and non-pharmacological management of dyslipidemia.

4) Discuss the role of HMG CO-A reductase inhibitors and fibrates in the management of hyperlipidemia.

SHORT ANSWERS 02 MARKS:

1) Suggest in brief the lifestyle modification of hyperlipidemia

2) Explain the role of statins in hyperlipidemia

3) Define diabetic dyslipidemia

4) Mention any four ADRs of statins.

5) List the types of primary hyperlipidemia

6) Write the dosage regimen of any two statins with their adverse effects

7) Write the complications of Hyperlipidaemias

8) Enlist different etiological conditions of Hyperlipidaemias

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Chapter 1F: Electrophysiology of heart

SHORT ANSWERS 05 MARKS:

1) Explain the different phases of ECG.

2) Explain the electrophysiology of the heart.

3) Mention the drugs which cause Q-T prolongation

4) Draw a neat labeled diagram of a normal ECG. Enlist various intervals and what they represent.

5) Illustrate the electrophysiology of the heart.

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Chapter 1G: Arrhythmias

LONG ESSAYS 10 MARKS:

1) Explain pharmacotherapy of cardiac arrhythmia

2) Explain the etiopathogenesis, and pharmacotherapy for cardiac arrhythmia with a treatment algorithm

3) Explain the pharmacology of arrhythmia.

SHORT ANSWERS 05 MARKS:

1) Write in detail about the etiology, signs & symptoms of Arrhythmia.

2) Explain the pathogenesis of cardiac arrhythmias

3) Explain different types of arrhythmia.

4) Explain the role of class-I anti-arrhythmic agents.

5) Enlist different types of Arrhythmias

6) Mention the clinical features of arrhythmia

7) Write the mechanism of action and adverse effects of Amiodarone.

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Chapter 2A: Introduction to Pulmonary Function Test

SHORT ANSWERS 05 MARKS:

1) Discuss in detail the significance of pulmonary function tests in respiratory disorders
2) Differentiate lung volume tests and lung capacities with a neat illustration
3) Explain different Pulmonary function tests.
4) Discuss in detail the importance of pulmonary function tests in COPD and asthma.

SHORT ANSWERS 02 MARKS:

1) What is the significance of the Pulmonary Function test
2) Enlist different types of Pulmonary Function Test
3) Define lung volume and lung capacity
4) Mention the significance of Spirometry
5) Define tidal volume and vital capacity.
6) Define PEFR and FEVI.

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Chapter 2B: Asthma

LONG ESSAYS 10 MARKS:

1) Discuss in detail the treatment of asthma.

2) Discuss the etiology, pathogenesis, signs and symptoms, diagnosis and pharmacotherapy of asthma.

3) Discuss the management of asthma with a treatment algorithm.

SHORT ANSWERS 05 MARKS:

1) Discuss in detail the management of Acute Severe Asthma and write its algorithm.

2) Discuss in detail the Etiopathogenesis of Asthma

3) Explain the role of inhaled beta-agonists in the management of asthma.

4) Discuss in detail the management of exercise-induced Asthma

5) Discuss in detail steps of therapy for Asthma

6) Write the Steps involved in using Metered Dose Inhalers.

7) Write the Pharmacological and non-pharmacological therapy for asthma.

SHORT ANSWERS 02 MARKS:

1) Discuss the role of sympathomimetics and methyl xanthine in the management of asthma.

2) Differentiate Extrinsic and Intrinsic asthma

3) Enlist triggering factors for Asthma

4) Enlist etiologic factors for Asthma

5) What are the signs and symptoms of Asthma

6) Write the difference between Asthma & COPD

7) Writ e the dosing of intravenous aminophylline in acute severe asthma.

8) Mention the Diet for asthma.

9) Define pulmonary embolism.

10) Differentiate between bronchitis and emphysema.

11) Define Cor-pulmonale

12) Mention the clinical presentations of Asthma.

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Chapter 2C: COPD

LONG ESSAYS 10 MARKS:

1) Discuss in detail the treatment of COPD.

2) Explain the pharmacotherapy of COPD.

3) Discuss in detail the Pharmacology of COPD.

SHORT ANSWERS 05 MARKS:

1) Discuss in detail about etiopathogenesis of COPD

2) Discuss the GOLD guidelines for the management of COPD

3) Explain in detail the non-pharmacological treatment of COPD.

4) Explain the treatment algorithm of COPD in detail

5) Describe the role of antibiotics and corticosteroids in COPD

6) Explain the common therapeutic problems associated with the stages of COPD.

SHORT ANSWERS 02 MARKS:

1) Define COPD. List down its symptoms

2) Discuss the difference betvveen Chronic Bronchitis and Emphysema based on clinical manifestations.

3) What is pack years? Give equation to calculate the same.

4) List out the Clinical manifestations for Chronic Bronchitis

5) What is Blue bloaters and Pink puffers.

6) Write a short note on smoking cessation in COPD.

7) Mention the role of corticosteroids in COPD.

17) List the Treatment goals of COPD.

18) Define Long Term Oxygen Therapy (LTOT).

19) Mention Guidelines for prescribing LTOT.

20) Describe the mMRC scale.

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Chapter 2D: Drug-Induced Pulmonary disorders

SHORT ANSWERS 05 MARKS:

1) Write a short note on Drugs induced Pulmonary disorders

2) Enumerate drug-induced pulmonary diseases. Explain the pharmacotherapy of any one of them.

3) List out the various drug-induced pulmonary disorders. Explain any two mechanisms.

SHORT ANSWERS 02 MARKS:

1) Give examples of drugs that cause Bronchospasm

2) Enlist the drugs that causes Fibrosis

2) Name any four drugs that cause pulmonary disorders.

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Chapter 3A: Diabetes

LONG ESSAY 10 MARKS:

I) Discuss in detail the general management of Type II Diabetes mellitus

2) Discuss in detail Diabetes mellitus complications and their management.

3) Explain the pathogenesis, diagnostic tests, and Pharmacotherapy of Diabetes mellitus.

4) Explain the pharmacotherapy of IDDM/type I diabetes mellitus.

5) Explain the pathophysiology, symptoms, treatment goals, and treatment of diabetes mellitus with oral drugs.

SHORT ANSWERS 05 MARKS:

1) Define and classify diabetes mellitus. Discuss in detail about insulins in diabetic management.

2) Enumerate the various types of insulins and explain the insulin regimens in the management of type I diabetes mellitus.

3) Discuss the role of thiazolidinediones in the management of type II diabetes mellitus.

4) Explain the counseling points to diabetic patients with respect to diet and lifestyle.

5) Explain the pharmacotherapy of type II DM emphasizing the ADR of each group of agents.

6) Discuss in detail the management of Diabetic ketoacidosis

7) Discuss in detail the Pharmacology of type II diabetes mellitus.

8) Write a short note on Insulins

9) Differentiate Insulin Preparation based on Onset of action, duration of action and peak .

10) Differentiate Type I and Type II Diabetes mellitus

SHORT ANSWERS 02 MARKS:

1) Discuss the complications involved in diabetes mellitus.

2) Define Diabetic Ketoacidosis.

3) Define Hyperosmolar hyperglycemic state.

4) Define diabetic foot.

5) Mention appropriate diet for hyperglycemic patients.

6) Why would nocturnal hypoglycacmia cause elevated blood glucose level in morning.

7) What are the types and their clinical features of diabetes mellitus?

8) Explain Patient counseling for patients taking insulin.

9) Explain the Glucose tolerance test.

10) What is lipo hypertrophy?

11) What is gestational diabetes?

12) Enlist the various microvascular and macrovascular complications associated with diabetes mellitus.

13) What is Diabetic Neuropathy?

14) What is Diabetic Nephropathy?

15) Define Diabetes Mellitus

16) Discuss the difference between Type I and Type II Diabetes Mellitus.

17) What are the signs and symptoms of Diabetes Mellitus?

18) What is Diabetic Nephropathy?

19) Define HbA1C.

20) What is Nocturnal Hypoglycaernia?

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Chapter 3B: Thyroid disease

SHORT ANSWERS 05 MARKS:

1) Discuss in detail about Grave's disease.
2) Explain in detail about Anti-hyperthyroid drugs.
3) Discuss in detail the management of Myxedema coma
4) Explain in detail about etiology, clinical manifestations and treatment of hyperthyroidism
5) Explain in detail about etiology. clinical manifestations and treatment of hypothyroidism.
6) Write a note on Goitre.
7) Explain treatment modalities of hypothyroidism.
8) Discuss the difference between Hyperthyroidism and Hypothyroidism.

SHORT ANSWERS 02 MARKS:

1) Enumerate 4 drug effects on thyroid function.
2) Define Grave's disease.
3) Mention Counselling points for patients on anti-thyroid drugs.
4) Enlist some adverse effects and contraindications of radioactive iodine
5) How does amiodarone causes Thyrotoxicosis.
6) Explain in brief about Thyroid ablative therapy.
7) What is hyperparathyroidism its causes and symptoms?
8) Mention the management of Iodine deficiency in pregnancy.
9) What is Thyroid storm.
10) What are the clinical features and diagnosis for Hyperthyroidism.
12) Discuss in detail about Hoshimoto disease.
13) What are the clinical features and diagnosis for Hypothyroid
14) Write a short note on Thyroxin.
15) Define thyrotoxicosis.
16) Explain thyroxin administration in pregnancy

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Chapter 3C: Oral Contraceptives

SHORT ANSWERS 05 MARKS:

1) Write a note on Oral contraceptives.
2) Enlist the merits and demerits of various contraceptives.
3) Explain the Principles of oral contraception.
4) What are the advantages and disadvantages of Oral contraceptives

SHORT ANSWERS 02 MARKS:

1) Enlist the major adverse effects of Oral contraceptives
2) Enlist the various complications associated with the use of oral contraceptives.
3) Administration of estrogens.
4) Define mini pills.
5) Enlist patient instructions for using oral contraceptives.
6) Mention commonly prescribed oral contraceptives
7) Enlist the various types of oral contraceptives.

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Chapter 3D: Hormone Replacement Therapy

SHORT ANSWERS 05 MARKS:

1) What are the risks and benefits of Hormone therapy
2) Write a short note on Hormonal regimens
3) Explain hormone replacement therapy in detail.
4) Discuss the treatment objectives with the use of HRT in post-menopausal women.
5) Explain the need and importance of HRT.
6) Explain the general principles of hormone replacement therapy.

SHORT ANSWERS 02 MARKS:

1) Mention the signs and symptoms of stopping HRT.
2) Define SERMS.
3) Mention the non-pharmacological treatment for menopausal symptoms.
4) What are the clinical features of Menopause?
5) What are the diagnosis parameters of Menopause?
6) Write a short note on the administration of estrogen.
7) Give example of five common combination Post-menopausal Hormone therapy regimens.
8) Mention the Risks of HRT.
9) Mention the need for HRT.
10) List the symptoms of menopause.
11) Define HRT and its significance.
12) Mention the importance of administration of estrogen.
13) Explain estrogen and progesterone regimens for use in HRT.

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Chapter 3E: Osteoporosis

SHORT ANSWERS 05 MARKS:

1) Discuss in detail the management of Osteoporosis.
2) Describe the clinical features, diagnosis, pathophysiology and treatment of osteoporosis.
3) Discuss in detail etiopathogenesis of Osteoporosis
4) Write clinical manifestations. and treatment options of osteoporosis.
5) Explain in detail the treatment of osteoporosis in postmenopausal women along with its treatment algorithm.
6) Explain in detail about antiresorptive therapy for osteoporosis.

SHORT ANSWERS 02 MARKS:

1) Define Osteoporosis
2) Define Osteoclast and Osteoblast
3) What are the clinical features of Osteoporosis
4) What are the treatment goals for Osteoporosis
5) Explain the role of Calcium in Osteoporosis
6) Enlist the drugs used for treating osteoporosis with their dose and adverse effects
7) Write the risk factors for osteoporosis
8) Enlist any four drugs that will cause osteoporosis.
9) Write the diagnostic tests for conforming osteoporosis.
10) Enlist the non-pharmacological therapy for osteoporosis.
11) Write the Importance of bisphosphonates in osteoporosis.
12) Enlist the ADRs of bisphosphonate therapy.
13) Define Glucocorticoid-induced Osteoporosis.
14) Define the RANK ligand.
21) Define T-score.

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Chapter 4A: Osteoporosis

SHORT ANSWERS 05 MARKS:

1) Write the guidelines for prescribing drugs to pediatrics.

2) Discuss the various formulas used in pediatric dosage calculation.

3) Discuss the various factors in selecting drug dosage regimens in pediatric population.

4) Write a short note on prescribing guidelines for Paediatric patients

5) Classify pediatric age groups.

6) Write Young's formula.

7) Write Dilling's formula.

8) Write Fried's formula.

9) Mention contraindicated drugs for paediatrics.

10) Give a reason why chloramphenicol is contraindicated in paediatrics.

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Chapter 4B: Geriatric Guidelines

LONG ESSAY 10 MARKS:

1) Write the guidelines for prescribing of drugs to geriatrics
2) Discuss the various factors to be considered while prescribing the drugs in geriatrics.

SHORT ANSWERS 02 MARKS:

1) Explain the pharmacokinetic alterations in geriatric populations as by age.
2) Explain the principles and goals of drug therapy in geriatrics.
3) Why geriatric populations are more susceptible to ADR?
4) Enlist the drugs confusing geriatrics.
5) Enlist some adverse effects of NSAIDs commonly seen among geriatrics.
6) Why dosage adjustment is required in renal impairment geriatric patients.
7) Mention the reasons for caution for drug use in the elderly.
8) Name some common diseases associated with geriatrics.

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Chapter 4C: Pregnancy and Breastfeeding Guidelines

LONG ESSAY 10 MARKS:

1) Enumerate the prescribing guidelines for pregnancy and lactation.

2) Explain the categorization of drugs in pregnancy with suitable examples.

SHORT ANSWERS 02 MARKS:

1) Explain in detail about drug dosing in pregnancy.

2) Mention four drugs that are contraindicated in pregnancy and breastfeeding and mention the reasons.

3) Define the pregnancy category of drugs.

4) Enlist four teratogenic drugs.

5) Mention the categorization of drugs for pregnant and lactating mothers.

6) Name any three safer antibiotics used during lactation.

7) What is the effect of alcohol and cigarette smoking on pregnancy?

8) What are the risks associated with valproate treatment in pregnancy?

9) What are the safest antidepressants in the first trimester of pregnancy?

10) What effect is smoking likely to have on breastfeeding?

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Chapter 5A: Glaucoma

SHORT ANSWERS 05 MARKS:

1) Explain the pharmacotherapy of glaucoma

2) Explain in detail about etiology, pathophysiology, clinical manifestations, and management of chronic open-angle glaucoma.

3) Draw a neat algorithm for pharmacotherapy of open glaucoma.

4) List out distinguishing features of open-angle and closed-angle glaucoma.

5) Mention the drugs used in the treatment of chronic open-angle glaucoma.

SHORT ANSWERS 02 MARKS:

1) Enlist the ocular and systemic side effects of any 4 drug agents used in glaucoma.

2) Mention the counseling for patients taking eye drops.

3) Enlist the drugs contraindicated in narrow-angle glaucoma.

4) Explain a suitable alternative agent along with its strength for beta blockers in glaucoma.

5) Define I.O.P with its normal value.

6) Define trabecular meshwork and optic nerve fiber.

7) Differentiate between open-angle and angle-closure glaucoma.

8) Discuss the non-pharmacological treatment of glaucoma.

9) Mention the drugs used to treat glaucoma.

10) What is open-angle glaucoma?

11) Define and classify glaucoma.

12) Define glaucoma.

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Chapter 6: Introduction to Rational Drug Use

SHORT ANSWERS 05 MARKS:

1) Define rational drug use. Explain the role of the pharmacist in rational drug use.

2) Explain WHO's interventions or guidelines for promoting rational drug use.

3) Explain the role of the pharmacist in essential drug concept

4) Explain essential drug concepts.

5) Discuss the strategies to overcome the irrational use of drugs.

SHORT ANSWERS 02 MARKS:

1) Define rational drug use and essential drug concepts.

2) What are the general guidelines for rational use of antibiotics

3) Mention the importance of essential drug concepts.

4) Define rational drug use and list out its objectives.

5) Define the essential drug list.

6) List the obstacles contributing to the rational use of drugs.

Vision and Mission of the Institution

Vision

The East Point College of Pharmacy aspires to be a globally acclaimed institution, **recognized** for **excellence in** pharmaceutical education, research and nurturing students for **holistic development.**

Mission

M1 Create pharmacy graduates through **quality education**

M2 Promote innovation, **creativity**, and excellence **in teaching**, learning, and **research**

M3 **Inspire** integrity, teamwork, critical thinking**, personal** development, and ethics in **students** and lay **the** foundation for lifelong learning

M4 **Serve** the **healthcare, technological, scientific**, and **economic** needs of then **society**.