Long Essays (10 Marks)

- 1. Define and classify antibiotics. Explain SAR and Mechanism of action of Beta lactum antibiotics
- 2. Describe the degradation of pencillins. Explain about development of acid resistant penicillins
- 3. What are antibiotics? Discuss the SAR & MOA of tetracyclines
- 4. What are beta lactum antibiotics? Give the degradation products of pencillins. Write a note on beta lactamase inhibitors.
- 5. What are Beta lactum antibiotics? Give the degradation products of penicillins. Outline the synthesis of chloramphenicol.
- 6. Define antibiotics? Classify them with examples. Discuss the chemistry and mechanism of action of aminoglycoside antibiotics
- 7. Define antibiotics? Classify them with examples. Write the chemistry & MOA of macrolide antibiotics.
- 8. Define antibiotics? Classify cephalosporins with examples. Write the structure and uses any two cephalosporins.
- 9. Define antibiotics? Write a note on Beta lactamase inhibitors. Explain the SAR & MOA of tetracyclines.
- 10. A) Define and classify antibiotics.
 - B) Discuss bacterial resistance? Write a note on beta lactamase inhibitors?
- 1) Classify antihypertensive agents? Explain the MOA of ACE inhibitors. Write the synthesis and uses of warfarin
- 2) What are antiarrhythmic drugs? Classify them with examples. Write structure and uses of verapamil, phenytoin and propranolol.
- 3) Classify antihypertensive agents? Write the MOA of Calcium channels blockers & Beta blockers with examples
- 4) Classify Anti-arrhythmic and antihypertensive agents? Write a note on Angiotensin Receptor Blockers.
- 5) What are calcium channel blockers? Describe their effect on cardiovascular system. Write the synthesis of Warfarin
- 6) Classify antihypertensive agents? Write a note on antianginal agents? Give the structure and uses of any two nitro vasodilators
- 7) Classify antiarrhythmic agents? Explain the MOA of antihyperlipidemic agents? Write the structure and uses of Atorvastatin and Lovastatin
- 8) What are cardiovascular drugs? Classify them with examples. Give the synthesis of Warfarin



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- 9) Write any two structure and uses of the following
 - Calcium channel blocker i)
- ii) ACE Inhibitor
- iii) Beta blocker

- iv) Antianginal agents
- v) Antihyperlipidemic agents
- 10) Write the structure and specific uses of
 - Isosorbide dinirate i) Clofibrate
- ii) Verapamil
- iii) Propronolol
- iv) Captopril

SHORT ESSAY

- 1) Write a note on urinary tract anti-infectives. Outline the synthesis of ciprofloxacin.
- 2) Add a note on synthetic antifungal agents. Give the synthesis of tolnaftate.
- 3) Name any four antiamoebic drugs. Give the synthesis of metronidazole.
- 4) What are anthelmintics. Write the synthesis of thiabendazole and albendazole
- 5) What are antifungal antibiotics? Explain their mechanism of action.
- 6) What are antitubercular agents? Write short notes on combination therapy for tuberculosis
- 7) Classify viral diseases and enumerate the drugs used in the therapy. Explain their mode of action. Give the structural and medicinal uses of zidovudine.
- 8) Name four antiviral agents .give the structure uses of Amantadine.
- 9) What are anti TB drugs? Enlist the problems associated with the treatment. Give the structure of Para amino salicylic acid and INH
- 10) What are antiviral drugs? Classify them with suitable examples.
- 11) Classify anti- TB agents? Write the structure of any two anti-tubercular drugs.
- 12) Write the structure and uses of p-amino salicylic acid, isoniazid, ethambutol and pyrazinamide
- 13) Discuss the chemistry of Quinolones? Write the synthesis of Nitrofurantoin.
- 14) Give the examples of substituted Imidazoles as antifugal agents? Give the synthesis of Miconazole
- 15) Name any four antiameobic agents? Give the synthesis of Metronidazole
- 1) Discuss the SAR of sulfonamides
- 2) Comment on combination therapy of trimethoprim and sulphamethoxazole.
- 3) Give the mechanism of action of sulphonamides. Write the structure and uses of phthalyl sulphathiazole and sulphadiazine.
- 4) Add a note on folate reductase inhibitors. Explain the synergestic action of sulphamethoxazole and trimethoprim.
- 5) Write the synthesis of sulfisoxazole and trimethoprim.
- 6) What is crystal uria? How to overcome from it.



- 7) Explain the MOA of sulfonamides? Write the structure and uses of sulfapyradine and sulfacetamide
- 8) Classify sulfonamides based on the duration of action? Give the synthesis of Dapsone
- 9) Classify sulfonamides based on site of action? Give the synthesis of Trimethoprim
- 10) Explain the SAR of sulfonamides? Give the synthesis of Dapsone
 - 1) Write the SAR of quinoline analogues of anti- malarials.
 - 2) Classify anti-malarial agents with suitable examples. Outline the synthesis of Chloroquine
 - 3) What are anti-malarial drugs? Explain the life cycle of malaria.
 - 4) Write the SAR of i) 8-amino quinolines ii) 4-amino quinolones.
 - 5) Classify anti-malarial agents. Outline the synthesis of chloroquine
 - 6) Give the mechanism and synthesis of chloroquine phosphate
 - 7) How malaria is caused? classify antimalarial agents?
 - 1) What are antineoplastic agents? Discus the mechanism of action of alkylating agents
 - 2) Classify the alkylating agents with example. Outline the synthesis of chlorambucil.
 - 3) Discus the mechanism of action of mercapto purine and busulfan.
 - 4) Give the structure, mechanism of action and therapeutic uses of chlorambucil and 5-fluorouracil.
 - 5) What are anticancer drug? Give the mechanism of action of antimetabolites
 - 6) Write a note on plant products and hormones as anticancer agents
 - 7) Write the synthesis of chlorambucil and methotrexate
- 1) Classify antiarrhythmic agents with examples

2)



SHORT ANSWERES

- 1) Give the structures of two carrier linked prodrugs.
- 2) What is prodrug? Give examples.
- 3) Define prodrug with one example.
- 4) Write the structure of one prodrug and its active metabolites.
- 5) Mention the electronic paramaters used in QSAR studies
- 6) Mention the steric paramaters used in QSAR
- 7) What are lead molecules? How are they useful in drug discovery
- 8) Applications of QSAR
- 9) Give the structure and uses of anyone Antiviral agent.
- 10) Give the structure of an antifungal agent having imidazole nucleus.
- 11) Outline the synthesis and uses of tolnaftate.
- 12) Give the examples of antifungal antibiotics.
- 13) Outline the synthesis of Nitrofurantoin.
- 14) Write the structure and uses of pefloxacin.
- 15) Give the structure and uses of ciprofloxacin
- 16) Give the structure and uses of Nitrofurantoin.
- 17) Write the structure and uses of Nalidixic acid.
- 18) Structure and uses of Isoniazid and pyrazinamide
- 19) Write the structure and uses of Para amino salicylic acid
- 20) Outline the synthesis of dapsone.
- 21) Name any two antibiotics used as antitubercular agents.
- 22) Write the structure and uses of Zidovudine.
- 23) Give the synthesis of Metronidazole.
- 24) Define Anthelmintics, give examples.
- 25) What are antiprotozoal agents? Give the structure of Carbasone.
- 26) Synthesis and uses of thiabendazole

- 27) Synthesis and uses of albendazole
- 28) Write the structure and uses of sparfloxacin
- 29) Source, structure and use of emetine
- 30) Write the structure uses of propronolol
- 31) Write the structure and uses of amiodaran and diltiazem.
- 32) What are ACE inhibitors? Give two examples.
- 33) Name any two calcium channel blockers and give their uses.
- 34) Write the structure and uses of minoxidil.
- 35) Write the structure and uses of felodepin
- 36) Write the structure and uses of cyclandelate.
- 37) Give the structure and uses of Amantedine and Isosorbide nitrate.
- 38) What are vasodilators, give examples.
- 39) Write the structure and uses of captopril.
- 40) Give the structure and uses of procainamide and phenytoin.
- 41) Chemical structure and specific uses of Amyl nitrate.
- 42) Write the synthesis of Warfarin.
- 43) Name any two anticoagulants with their mechanism of action.
- 44) Write the structure and uses of Isosorbide Dinitrate
- 45) Write the structure and specific uses of quinidine
- 46) Write the structure and uses of alpha1 antagonist
- 47) What is the use of Angiotensin receptor blockers, Give one structure and use
- 48) Mechanism of Antianginal agents
- 49) What are beta blockers? Write name and uses of any two drugs.
- 50) Write the structure of any two anti hyperlipidemic agents.
- 51) What are antihyperlipidimic agents? Write the structure of Atorvastatin
- 52) What are antihyperlipidimic agents? Write the structure of Lovastatin

- 53) Give the synthesis of chlorpropamide
- 54) Give the structure and uses of Meglitinide
- 55) Write the structure and uses of Pioglitazone
- 56) Write the structure and uses of Rosiglitazone
- 57) Define diabetes? Name any two drugs used in the treatment of diabetes
- 58) Define Hyperglycemia? Name any two biguanides used in the treatment of diabetes
- 59) Define hypoglycemia? Name any two sulfonyl urea derivatives
- 60) Insulin and its derivatives
- 61) Write the structure and uses of glipizide
- 62) Give two drug names of thiazolidinediones used as hypoglycemic agents
- 63) Give the structure of any two antithyroid drugs
- 64) Give one structure and uses of thyroid hormones.
- 65) Structure and uses of estrogen
- 66) Write the structure and uses of Progesterone
- 67) Give examples for synthetic estrogens
- 68) Write the structure and uses of Amiloride
- 69) Structure and uses of triampterene
- 70) What are high ceiling diuretics? Give examples
- 71) Synthesis of furosemide
- 72) Structure and uses of furosemide
- 73) Synthesis of ethacrynic acid
- 74) Structure and uses of ethacrynic acid
- 75) Mechanism of acetazolamide
- 76) Structure and uses of acetazolamide
- 77) What are carbonic anhydrase inhibitors give examples
- 78) Write the structure and uses of spironolactone
- 79) Write the structure and uses of hydrochlorthaizide
- 80) Write the structure and uses of Benzthiazide
- 81) What are potassium sparing diuretics give examples

- 82) Give the structure and use of any one aldosterone antagonists
- 83) MOA of thiazide diuretics

84) Cotrimoxazole and mechanism

- 85) Synergestic effect of cotrimoxazole
- 86) Give the synthesis of sulphamethoxazole
- 87) Synthesis of dapsone
- 88) Structural features required for sulfonamides
- 89) Name any two sulfonamides used in the treatment of Burn therapy
- 90) Write the structure and uses of sulphamethoxazole
- 91) Write the structure and uses of Phthalyl sulfathiazole
- 92) Write the structure and uses of trimethoprim
- 93) Write the structure and uses of sulfisoxazole
- 94) Write the structure and uses of sulfasalazine
- 95) What the structure and uses of chlorguanide
- 96) Write the structure and uses of chloroquine
- 97) What are artemesins give one structure
- 98) Give source, structure and uses of quinine
- 99) Give the structure and use of artimether
- 100) Write the structure of any two 4-amino quinolines
- 101) Write the structure and uses of any two 8-amino quinolines

