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Rajiv Gandhi University of Health Sciences, Karnataka
III Year Pharm-D Degree Examination – 19-Nov-2021

Time: Three Hours

Max. Marks: 70 Marks

MEDICINAL CHEMISTRY (RS & RS2)

Q.P. CODE: 2865

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (answer any two)

2 x 10 = 20 Marks

1. Define antibiotics? Classify Cephalosporins with examples. Write the structure and uses any two Cephalosporins. Discuss the MOA and therapeutic uses of Macrolide antibiotics.
2. Classify anti-arrhythmic and antihypertensive agents? Explain the MOA of angiotension receptor blockers. Write the structure and uses of Losartan.
3. a. Give the mechanism of action of sulphonamides. Write the structure and uses of Phthalyl sulphathiazole and Sulphadiazone.
b. What are anticancer drugs? Give the mechanism of action of Antimetabolites.

SHORT ESSAYS (answer any six)

6 x 5 = 30 Marks

1. Give examples, MOA and clinical uses of Reverse transcriptase inhibitors.
2. Classify anthelmintics with examples. Give the synthesis of Albendazole.
3. Write the structure and uses of *p*-amino salicylic acid, Isoniazid, Ethambutol and Pyrazinamide.
4. What is crystalluria? How it could be prevented.
5. Write a note on the use of Artemisinin and its derivatives as antimalarial drugs.
6. Outline the synthesis, MOA and uses of 1) Methotrexate 2) 5-Fluorouracil
7. Write a note on antihyperlipidemic agents.
8. How malaria is caused? Classify antimalarial agents.

SHORT ANSWERS

10 x 2 = 20 Marks

1. Mention the steric parameters used in QSAR.
2. What is prodrug? Give examples.
3. Name any two calcium channel blockers with their uses.
4. Write the structure and uses of Glibenclamide.
5. Give the synthesis of Chlorpropamide.
6. Define hormones and classify them on the basis of source.
7. What are potassium sparing diuretics? Give examples.
8. What are high ceiling diuretics? Give examples.
9. Name any two drugs used for examination of Liver function.
10. What are steroids? Name any one drug containing Pregnane nucleus.

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Rajiv Gandhi University of Health Sciences, Karnataka
III Year Pharm-D Degree Examination - 25-Mar-2021

Time: Three Hours

MEDICINAL CHEMISTRY (RS & RS2)

Max. Marks: 70 Marks

Q.P. CODE: 2865

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (answer any two)

2 x 10 = 20 Marks

1. Describe the degradation of penicillins. Explain about development of acid resistant penicillins.
2. Define and classify antihypertensive agents? Explain the MOA of Angiotension Receptor Blockers. Write the synthesis of Methyl Dopa.
3. a. Write a note on Antimetabolites used in the treatment of cancer.
b. Write a note on folate reductase inhibitors. Explain the synergistic action of sulphamethoxazole and Trimethoprim.

SHORT ESSAYS (answer any six)

6 x 5 = 30 Marks

4. Write a note on urinary tract anti-infectives. Outline the synthesis of Ciprofloxacin.
5. Add a note on synthetic antifungal agents. Give the synthesis of Tolnaftate.
6. Explain the SAR of sulfonamides. Give the synthesis of Dapsone.
7. Classify anti-malarial agents with suitable examples. Outline the synthesis of Chloroquine.
8. What are antineoplastic agents? Discuss the mechanism of action of alkylating agents.
9. Give the chemical name, structure and specific uses of Isosorbide dinitrite, Amylnitrite and Nitroglycerin.
10. Name any four antiamebic drugs. Give the synthesis of Metronidazole.
1. Discuss the MOA, structure and uses of Mercaptopurine and Busulfan.

SHORT ANSWERS

10 x 2 = 20 Marks

2. Give the structures of two carrier linked prodrugs.
3. What is CADD? Enlist the applications.
4. Write the structure and uses of Amiodarone and Diltiazem.
5. Name any four drugs used in the treatment of Type-II diabetes.
6. Give the MOA of sulphonylureas.
7. What are hormones? How are they classified chemically? Name any two hormones secreted by thyroid gland.
8. What are high ceiling diuretics? Give examples.
9. What are carbonic anhydrase inhibitors? Give examples.
10. What are diagnostic agents? Classify them with examples.
1. What are steroidal drugs? Name any two steroidal drugs with their uses.

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year Pharm-D Degree Examination – 11-Dec-2020

Time: Three Hours

Max. Marks: 70 Marks

MEDICINAL CHEMISTRY (RS & RS2)

Q.P. CODE: 2865

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (answer any two)

2 x 10 = 20 Marks

1. Define antibiotics. Classify them with examples. Discuss the chemistry and mechanism of action of aminoglycoside antibiotics
2. What are cardiovascular drugs? Classify them with examples. Give the synthesis of Warfarin
3. a) Explain the SAR of Sulfonamides. Give the synthesis of Dapsone.
b) Write the synthesis of Chlorambucil and Methotrexate.

SHORT ESSAYS (answer any six)

6 x 5 = 30 Marks



1. Add a note on synthetic antifungal agents. Give the synthesis of Tolnaftate
2. What is multi drug resistant TB? How it is treated?
3. What is crystalluria? How it could be prevented
4. How malaria is caused? Classify antimalarial agents.
5. What are anticancer drugs? Give the mechanism of action of antimetabolites
6. Give the structure and uses of the following a) Captopril b) Methyldopa c) Phenytoin
7. What are anthelmintics? Write the synthesis of Thiabendazole and Albendazole.
8. What are antiviral drugs? Classify them with suitable examples.

10 x 2 = 20 Marks

SHORT ANSWERS

2. Mention the electronic parameters used in QSAR studies
3. Give the structures of two carrier linked prodrugs
4. What are antianginal agents give examples
5. Give the MOA of sulphonylureas
6. Write the structure and uses of Metformin
7. Classify antithyroid drugs with examples
8. Write the structure and uses of Hydrochlorothiazide
9. What are potassium sparing diuretics give examples
10. Name any two drugs used for examination of ophthalmic diagnostic aid.
11. Classify steroidal drugs with examples

Rajiv Gandhi University of Health Sciences, Karnataka

III Year Pharm-D Degree Examination - 10-Jan-2020

Time: Three Hours

MEDICINAL CHEMISTRY (RS & RS2)

Max. Marks: 70 Marks

Q.P. CODE: 2865

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (answer any two)

2 x 10 = 20 Marks

1. What are Beta lactum antibiotics? Give the degradation products of penicillins. Outline the synthesis of Chloramphenicol
2. Classify antihypertensive agents? Write a note on antianginal agents? Give the structure and uses of any two nitro vasodilators
3. a) What is crystal urea? How to overcome from it.
b) How malaria is caused? Classify antimalarial agents.

SHORT ESSAYS (answer any six)

6 x 5 = 30 Marks

4. Give examples of drugs that act as DNA polymerase inhibitors. Describe their chemistry and therapeutic uses
5. What are anti TB drugs? Enlist the problems associated with the treatment. Give the structure of Para amino salicylic acid and INH
5. Add a note on folate reductase inhibitors. Explain the synergistic action of Sulphamethoxazole and Trimethoprim
7. Write the SAR of i) 8-amino quinolines ii) 4-amino quinolines
3. Give the structure, MOA and therapeutic uses of Chlorambucil
9. Write the briefly about the chemistry and MOA of anticoagulants
10. Give the examples of substituted Imidazoles as antifungal agents? Give the synthesis of Miconazole.
1. Name any four antiamoebic drugs. Give the synthesis of Metronidazole.

SHORT ANSWERS

10 x 2 = 20 Marks

2. What is CADD? Enlist the applications
3. Write the structure of one prodrug and its active metabolites
4. Name any two calcium channel blockers with their uses
5. Define hyperglycemia? Name any two biguanides used in the treatment of diabetes
6. Give the MOA of biguanides
7. What are antithyroid drugs? Why are they called goitrogens?
8. Structure and uses of Furosemide
9. What are potassium sparing diuretics? Give examples
10. Name any two drugs used for examination of liver function
1. What are steroidal drugs? Name any two steroidal drugs with their uses
