01 12 25
(Evening)

Roll Number ----------(Total Number of Questions 13) (Total number of Printed Pages 01)

Programme	B. Pharmacy
Semester	5th
Subject	Medicinal Chemistry-II
Subject Code	BP501T
Paper ID	76786
Time	3Hours
Maximum Marks	75

Instructions to Candidates: *No supplementary/continuation sheet will be issued to the candidates. Answer the questions precisely.*
**Section -A consists of Ten parts of 2 marks each (Very Short Answer); Attempt ALL.*
***Section- B consists of Three questions carrying 10 marks each (Long Answer); attempt any TWO.*
****Section -C consists of Nine questions carrying 5 marks each (Short Answer); attempt any SEVEN.*

Section- A **(10X2=20)**

1.	Give very short answers to the followings:
i.	What is the role of histamine in allergic reactions?
ii.	Write the IUPAC name and one therapeutic use of cimetidine.
iii.	Classify calcium channel blockers with one example each.
iv.	Define diuretics and mention any two thiazide drugs.
v.	Classify antiantiarrhythmic drug.
vi.	Mention any two oral anticoagulants and their mechanism.
vii.	Define oral contraceptives and give two examples.
viii.	Differentiate between insulin and sulfonylureas.
ix.	What are uses of omeprazole?
x.	Give the structure of progestrones.

Section- B **(2X10=20)**

2.	Explain the synthesis, SAR, and therapeutic uses of alkylating agents as anticancer. Add suitable reasoning for selective toxicity.
3.	Discuss the mechanism of action of calcium channel blockers and ACE inhibitors. Correlate with their clinical application in angina and hypertension.
4.	Explain in detail nomenclature and stereochemistry of steroids.

Section- C **(7X5=35)**

5.	Explain the synthesis and SAR of Promethazine.
6.	Differentiate H1 and H2 antagonists with examples and clinical use.
7.	Explain the classification and mechanism of antihypertensive agents.
8.	Describe the chemical synthesis and use of Furosemide.
9.	Write a short note on drugs used in CHF with mechanisms.
10.	Give the mechanism of action and SAR of warfarin.
11.	Describe the metabolism and stereochemistry of corticosteroids.
12.	Discuss the classification and mechanism of oral antidiabetics.
13.	Write short note on oral contraceptives.

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25/11/2021

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Section A **(10 X2 = 20)**

1. Give very short answers to the followings (2 marks each):

Give structure and mode of action of-

i.	Lisinopril
ii.	Lovastatin
iii.	Clopidogrel
iv.	Sildenafil
v.	Mifepristone

Give structure and uses of –

vi.	Azatidine maleate
vii.	Bleomycin
viii.	Pentaerythritol tetranitrate
ix.	Triamterene
x.	Reserpine

Section B **(2 X 10 = 20)**

2.	Define and classify H_1 and H_2 receptor antagonist with suitable examples. Give the mode of action, synthesis and therapeutic uses of Triprolidine Hydrochloride.
3.	Discuss the classification, mechanism of action and SAR of Local Anaesthetics.
4.	Define and classify diuretic drugs. Give the mode of action and synthesis of Acetazolamide and Chlorthiazide.

Section C **(7 X 5 = 35)**

5.	Write a note on thyroid drugs used in hypothyroidism.
6.	What are oral hypoglycaemic agents? Classify giving structure of one drug from each category.
7.	Write a note on non-steroidal estrogens giving suitable examples.
8.	Give the classification of antineoplastic drugs by giving the structure of at least one drug from each category.
9.	Write a note on chemistry of drugs used in Congestive Heart Failure.
10.	Discuss the chemistry of corticosteroids.
11.	Give the mechanism of action and synthesis of disopyramide phosphate.
12.	Explain the stereochemistry and metabolism of steroids.
13.	Give the structures of various proton pump inhibitors along with mechanism of action.

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4/7/22 M

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**** Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.*

Section A (10 X2 = 20)

1. Give very short answers to the followings (2 marks each):

i.	Give name and structure of any one ACE Inhibitors.
ii.	Why nitro vasodialators are used in angina pectoris.
iii.	Give the structure of any two antiepileptic agents.
iv.	Write uses, MOA and uses of Clonidine.
v.	Give the structure of any two Site –II diuretic agents.
vi.	Give examples of 2nd generation oral hypoglycemic agents.
vii.	Write MOA and synthesis of Methyldopa hydrochloride.
viii.	Write note on Vinca alkaloids.
ix.	Give synthetic procedure for methotrexate.
x.	Give name and structure of phytoconstituents obtained from *Digitalis pupurea.*

Section B (2 X 10 = 20)

2.	Classify Antineoplastic agents with example. Give synthesis and MOA of Mercaptopurine.
3.	Describe the detailed SAR of Local anaesthetics and give synthesis & MOA of Procaine.
4.	(a) Comment upon the nomenclature and stereochemistry of steroidal drugs. (b) Discuss in detail the chemistry of corticosteroids.

Section C (7 X 5 = 35)

5.	Classify Antiarrythmic agents with example of each class.
6.	Write a note on HMG coenzyme reductase inhibitors.
7.	Give structural classification of H_1-antagonist and synthesis of Promethazine.
8.	Give brief account of anticoagulants with examples.
9.	Write a note on calcium channel blockers used in the treatment of angina.
10.	Briefly describe the chemistry of thyroid hormones and its synthetic derivatives.
11.	What are proton pump inhibitors? Give uses and examples of proton pump inhibitors.
12.	Write short note on Glucosidase inhibitors as antidiabetic agents and synthesis of Tolbutamide.
13.	Discuss in detail the chemistry of carbonic anhydrase inhibitors.

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Section-A **(10X2=20)**

1.	Give very short answers to the followings:
i.	Write in brief about antibiotics used as antineoplastic agents.
ii.	Write the synthesis of procaine.
iii.	Write in brief the role of insulin and its preparation in diabetes mellitus.
iv.	Write the structure and use of Sildenafil.
v.	Name the sex hormones.
vi.	Define the anti-anginal agents. Give example.
vii.	Give example of Potassium sparing diuretics with structure.
viii	Give example of plant products used as anti-cancer agents.
ix.	Write the structure and uses of Benzocaine.
x.	Write the structure and uses of Tolbutamide.

Section-B **(2 X10=20)**

2.	Describe the classification of anti-neoplastic agents. Explain the mechanism of action and chemical structure of drugs with special reference to antimetabolites.
3.	Illustrate the SAR and classification of local anaesthetics with structural example from each class.
4.	Elaborate the mechanism of action and classification of diuretics. Write the synthesis of Furosemide.

Section-C **(7X5=35)**

5.	Discuss the stereochemistry and metabolism of steroids.
6.	Explain the mechanism of action of drugs prescribed for congestive heart failure.
7.	Write a short note on Thiazolidinediones.
8.	Describe the HMG-CoA reductase inhibitors.
9.	Write down the chemistry of Thyroid and anti-thyroid drugs.
10.	Write in brief about the structure &use of synthetic Estrogen.
11.	Give classification of H_1-antagonists with structural example of each drug.
12.	Write in detail the proton pump inhibitors.
13.	Write down the mechanism of action of alkylating agents and synthesis of Meclorethamine.

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12 JUN 2023

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Section- A **(10 X2 = 20)**

1	Give very short answers to the followings:
i.	What are proton pump inhibitors? Give examples.
ii.	Write the structure and uses of any two anticoagulants.
iii.	Write the structure of any two calcium channel blocking agents.
iv.	Discuss the importance of histamine receptor.
v.	Write a note on Insulin and its derivatives.
vi.	Write the structure and uses Sildenafil.
vii.	Name any two natural products used as anticancer agents.
viii.	Write the structure and uses of synthetic estrogens?
ix.	Write briefly about nitro vasodilators.
x.	Outline the synthesis of furosemide.

Section- B **(2 X 10 = 20)**

2.	What are antineoplastic agents? Classify them with example. Discus the mechanism of action of alkylating agents. Outline the synthesis of Meclorethamine.
3.	Define and Classify antihypertensive agents. Explain the MOA of Angiotensin Receptor Blockers. Write the synthesis of Methyl Dopa.
4.	Define and classify antidiabetic agents with examples. Write the synthesis and mechanism of action of tolbutamide.

Section- C **(7 X 5 = 35)**

5.	Define and classify local anaesthetic agents with examples. Explain the SAR of local anaesthetic agents.
6.	Write a note on antianginal agents. Explain the synthesis of Isosorbidedinitrite.
7.	Define & classify antiarrythmic drugs.
8.	Write a note on thyroid and antithyroid drugs.
9.	Write a note on antihyperlipidemic agents.
10.	Explain the stereochemistry & metabolism of steroids.
11.	Write a note on antihistaminic drugs.
12.	Write a detail note on Loop diuretics.
13.	Write a note on oral contraceptives.

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291123

(Evening)

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**** Section C consists of nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.*

Section- A (10 X2 = 20)

1.	Give very short answers to the following:
i.	Classify Antihyperlipidemic agents.
ii.	What are Oral contraceptives?
iii.	Give the mechanism of action of carbonic anhydrase as diuretics.
iv.	What are the uses of Lovastatin?
v.	Give the structure of any two sex hormones.
vi.	Give the structure of Reserpine.
vii.	Give the structure of Omeprazole.
viii.	Write the therapeutic uses of corticosteroids.
ix.	What are the uses of Disopyramide phosphate?
x.	Give the mechanism of action of Antibiotics as antineoplastic agents.

Section- B (2 X 10 = 20)

2.	Discuss in detail : a) Sulfonyl ureas b) Loop Diuretics
3.	Classify antineoplastic agents with one structural example of each. Give synthesis & MOA of mercaptopurine.
4.	Explain the stereochemistry of Steroids.

Section C (7 X 5 = 35)

5.	Write a note on insulin & its preparations
6.	Classify Local anaesthetic agents. Give SAR of any one class.
7.	What are the uses of proton pump inhibitors? Give their examples.
8.	Write down the structure and uses of the following: a) Ranitidine b) Cetirizine c) Omeprazole
9.	Write a note on Proton Pump inhibitors.
10.	Explain the mechanism of action of Methyldopate Hydrochloride with structure.
11.	Give structure & uses of Oral contraceptives with examples.
12.	Write a note on HMG-CoA reductase inhibitors.
13.	Explain the synthesis of Nitroglycerin.

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(Morning)
230524

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Section- A **(10X2=20)**

1.	Give very short answers to the followings:
i.	Write down the structure and use of digoxin.
ii.	List out the examples of drugs used as oral contraceptives.
iii.	Define anticoagulants and give an example.
iv.	Give an example and structure of antihypertensive agents from herbal origin.
v.	Write the structure and use of furosemide.
vi.	List out the vasodilators used as anti-anginal agents.
vii.	Write a note on corticosteroids.
viii	Explain the role of prednisolone.
ix.	Write the synthesis of promethazine hydrochloride.
x.	Give the structure and significance of estradiol.

Section-B **(2 X10=20)**

2.	Define antineoplastic agents and write the classification of antineoplastic agents. Explain the drugs from herbal origin and antibiotics with their mechanisms of action.
3.	Describe the classification of antihypertensive agents with the chemical structure from each category. Write the synthesis of methyldopate hydrochloride.
4.	Illustrate the classification of antidiabetic agents with chemical structures. Explain the synthesis of tolbutamide.

Section-C **(7X5=35)**

5.	Write a short note on calcium channel blockers.
6.	Elaborate on the drugs mentioned as carbonic anhydrase inhibitors and the synthesis of acetazolamide..
7.	Discuss the mechanism of action and synthesis of warfarin.
8.	Write briefly about corticosteroids.
9.	Explain the structure-activity relationship (SAR) of aminobenzoic acid derivatives and the synthesis of benzocaine.
10.	Classify the anti-arrhythmic drugs with structural example from each class.
11.	Describe the mechanism of action and synthesis of cimetidine.
12.	Write a detailed note on antimetabolites and synthesis of methotrexate.
13.	Explain briefly antihyperlipidemic agents.

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****Section C consists of Nine questions carrying 5 marks each (Short Answer); attempt any **SEVEN**.*

Section- A (10X2=20)

1.	Give very short answers to the followings:
i.	What are antianginal agents? Give examples.
ii.	Write the therapeutic uses of captopril.
iii.	Outline the synthesis of furosemide.
iv.	Give the structure & MOA of reserpine.
v.	Write the structure and uses of dexamethasone.
vi.	Give the structure of any two sex hormones.
vii.	Which is an alkaloid isolated from cinchona bark & used as anti-arrhythmic drug.
viii.	Classify antihyperlipidemic agents.
ix.	What are therapeutic uses of cimetidine?
x.	Define antidiabetic agents.

Section- B (2X10=20)

2.	Discuss in detail- A) Sulfonyl ureas B) Loop diurectics.
3.	Classify antineoplastic agents with one structural examples of each.
4.	Classify antiarrhythmic agents, describe their mechanisms of action, and outline the synthetic procedure for disopyramide phosphate.

Section- C (7X5=35)

5.	Write a note on insulin & its preparations.
6.	Classify Local anaesthetic agents. Give SAR of any one class.
7.	Write a note on H2 antagonists.
8.	Discuss the structures of cardiac glycosides used in the treatment of CHF.
9.	Comment upon the nomenclature of steroids.
10.	What are the uses of proton pump inhibitors? Give their examples.
11.	Discuss the role of calcium channel blockers in Angina pectoris.
12.	Write a note on oral contraceptives.
13.	Write a short note on glucosidase inhibitors as antidiabetic agents & synthesis of Tolbutamide.

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Section- A (10X2=20)

1.	Give very short answers to the followings:
i.	What is the mechanism of action of metformin?
ii.	Define oral contraceptives with one example.
iii.	What is the therapeutic use of cyclophosphamide?
iv.	Define anti-anginal drugs with two examples.
v.	Give the structure and uses of ranitidine.
vi.	Mention any two thyroid hormone drugs.
vii.	What is the role of digoxin in congestive heart failure (CHF)?
viii.	Write two examples of H_2 antagonists.
ix.	Define anti-arrhythmic drugs with one example.
x.	Name two sulfonylureas used in diabetes.

Section- B (2X10=20)

2.	Discuss the various classes of oral hypoglycemic agents along with their mechanisms of action and examples.
3.	Classify diuretics and describe their therapeutic applications with suitable examples.
4.	Write in detail about antihistaminic agents. Classify them and explain their mechanisms of action and side effects.

Section- C (7X5=35)

5.	Write a short note on statins.
6.	Explain the mechanism of action of methimazole.
7.	Write a short note on methotrexate.
8.	Write a note on drugs used in erectile dysfunction.
9.	Discuss the mechanism of action of cimetidine and its therapeutic uses.
10.	What is the role of insulin in the management of diabetes?
11.	List any three proton pump inhibitors with their uses.
12.	Give the structure–activity relationship (SAR) of local anaesthetics.
13.	What is the pharmacological role of pantoprazole?

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1.	Give very short answers to the followings:
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ii.	Write the IUPAC name and one therapeutic use of cimetidine.
iii.	Classify calcium channel blockers with one example each.
iv.	Define diuretics and mention any two thiazide drugs.
v.	Classify antiantiarrhythmic drug.
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vii.	Define oral contraceptives and give two examples.
viii.	Differentiate between insulin and sulfonylureas.
ix.	What are uses of omeprazole?
x.	Give the structure of progestrones.

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