

THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY

(LQ 2051)

MARCH 2020

Sub. Code: 2051

**B.PHARM. DEGREE EXAMINATION
PCI Regulation – SEMESTER V
PAPER I – MEDICINAL CHEMISTRY – II**

Q.P. Code: 562051

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. a) What are antihistamines? What do you mean by H1 & H2-receptor antagonists?
b) Discuss its mechanism of action and classify them with examples.
c) Give the structures of any two antihistamines with pyrimidine nucleus. Add a note on synthesis of Promethazine HCl.
2. a) Classify anti-neoplastic agents.
b) Discuss the mechanism of action of its alkylating agents & anti-metabolites.
c) Give the synthesis and uses of Disopyramide and MTX.
3. a) Detail on Insulin and its preparations.
b) Write the classification of Anti-anginal. Explain the MOA of β -blocker and CCB classes of anti-anginal.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Write the syntheses of High ceiling and Carbonic anhydrase inhibitor type diuretics.
2. Give an account on SAR of Local anaesthetics.
3. Write the structures and uses of :
i) Diazoxide ii) Nitroglycerin iii) Metformin and iv) Lidocaine
4. Justify for the administration of:
i) Lidocaine with Adrenaline and ii) Anticoagulants with Sulfa drugs
5. Discuss HMG-CoA reductase inhibitors as Anti-hyperlipidemic agents. Give any one structure.
6. Write the syntheses and uses of Isosorbide dinitrate and Triprolidine HCl.
7. Explain the mechanism of action of Diuretics.
8. Discuss the nomenclature and stereochemistry of steroids.
9. Classification of anti-arrhythmic drugs.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. What are Potassium sparing Diuretics? Give examples.
2. Define Cardiotonics, give examples.
3. Give the structures and uses of Hydralazine HCl and Fluorouracil.
4. Write the general pharmacophore for Anti-histamines with one drug's structure.
5. Mechanism of action of anticoagulants.
6. Give the synthesis and use of Benzocaine.
7. Enumerate the lists of CHF. Give the structure of any one.
8. Define erectile dysfunction agents with examples.
9. Classify Local anaesthetics.
10. Give the structures and uses of Clofibrate and Nifedipine.

[BPHARM 0921]

SEPTEMBER 2021
(SEPTEMBER 2020 EXAM SESSION)

Sub. Code: 2051

B.PHARM. DEGREE EXAMINATION
PCI Regulation 2017 – SEMESTER V
PAPER I – MEDICINAL CHEMISTRY – II

Q.P. Code: 562051

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. a) Classify Anti-neoplastic agents with suitable examples. Explain the mechanism of action and therapeutic uses of antimetabolites.
b) Write the synthesis and uses of Mechlorethamine and Methotrexate.
2. a) Explain the chemistry of steroids. Write briefly on corticosteroids.
b) Write a note on Insulin and its preparations.
3. Classify antihistaminic drugs with suitable examples. Explain the chemistry, SAR and mechanism of action of H₁-receptor antagonists. Write the synthesis of Diphenhydramine hydrochloride.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Classify antianginal drugs. Write the synthesis and uses of Isosorbide dinitrate.
2. Write the structure and uses of **a) Thiotepa b) Nifedipine c) Hydrochlorthiazide d) Digoxin e) Lidocaine hydrochloride.**
3. Explain the SAR of local anaesthetics.
4. Write a note on H₂-blockers. Give the structure of Ranitidine and Famotidine.
5. Explain the mechanism of action of biguanides as antidiabetic drugs. Give the structure and uses of Metformin.
6. Write a note on thyroid hormones. Give the structure of L-Thyroxine and L-Thyronine.
7. Write the structure, mechanism of action and medicinal uses of Sildenafil citrate.
8. Explain the physiological function of androgens. Give the structure and uses of Testosterone and Nandrolone.
9. Write the synthesis and mechanism of action of Benzocaine.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Write a note on glucosidase inhibitors as antidiabetic agents.
2. What are oral contraceptives? Give the structure and uses of Mifepristone.
3. Give the structure and medicinal uses of Betamethasone.
4. Write the clinical importance of potassium sparing diuretics. Give example.
5. Write the name and mechanism of action of plant products as anticancer agents.
6. Write the structure and uses of Reserpine.
7. Give the structure and uses of Bosentan and Amlodipine.
8. What are the clinical uses of Cholestyramine. Explain its mechanism of action.
9. Write a note on calcium channel blockers.
10. Write the structure and uses of Butamben and Procaine.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[BPHARM 0122]

**JANUARY 2022
(MARCH 2021 EXAM SESSION)**

Sub. Code: 2051

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

PCI Regulation 2017 – SEMESTER V

PAPER I – MEDICINAL CHEMISTRY – II

Q.P. Code: 562051

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. a) Classify Anti-hypertensive drugs with suitable examples. Explain the mechanism of action and therapeutic uses of ACE inhibitors.
b) Write the synthesis and uses of Methyl Dopa.
2. Write the classification of diuretics. Explain the chemistry of thiazide diuretics. Write synthesis of Chlorthiazide.
3. Explain the mechanism of action of organic nitrates and nitrites as antianginal drugs. Give the synthesis and uses of Isosorbide dinitrate and Nitroglycerin.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Write a note on anticancer antibiotics. Explain chemistry and MOA of any one drug.
2. Classify antiarrhythmic drugs. Write the structure and MOA of Lidocaine hydrochloride.
3. Write a note on physiological role of histamine, types of histamine receptors in human body.
4. Explain the clinical uses of H1-receptor antagonists. Give the structure of Chlorpheniramine and Cetirizine.
5. Explain the synthesis and uses of Promethazine hydrochloride.
6. Write a note on the drugs used in congestive heart failure.
7. Write the structure, mechanism of action and medicinal uses of Tadalafil.
8. Write the synthesis of Procaine. Mention its therapeutic applications.
9. Write a note on Insulin and its preparations.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Classification of steroids.
2. What are oral contraceptives? Give the structure and uses of Levonorgestrel.
3. Give the structure and medicinal uses of Prednisolone.
4. Write the clinical importance of thyroid hormones.
5. Write the structure and uses of Cisplatin.
6. Write the structure and uses of Verapamil.
7. Give the structure and uses of Bosentan and Digitoxin.
8. What are the clinical uses of Clofibrate. Explain its mechanism of action.
9. Give two examples of proton pump inhibitors.
10. Write the structure and uses of Thioguanine and Busulfan.

[BPHARM 0522]

MAY 2022
(SEPTEMBER 2021 EXAM SESSION)

Sub. Code: 2051

B.PHARM. DEGREE EXAMINATION
PCI Regulation 2017 – SEMESTER V
PAPER I – MEDICINAL CHEMISTRY – II

Q.P. Code: 562051

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. a) Define and Classify Anti-neoplastics.
b) Explain the mechanism of action of any four major classes of anti-cancer drugs.
c) Give the syntheses and uses of Tolbutamide and Mechlorethamine.
2. a) Classify Local-anaesthetics.
b) Enumerate the structures (any three), mechanism of action and SAR of Local anesthetics.
c) Give the synthesis of Procaine.
3. a) Give an account on Thyroid and anti-thyroid drugs.
b) Classify Anti-hypertensive agents.
c) Discuss on MOA of Anti-hypertensive & synthesis of Methyldopate HCl.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Give the syntheses and uses of Dibucaine and Triprolidine HCl.
2. Give any two structures of Thiazide class of Diuretics and discuss its mechanism of action.
3. Account on ACE inhibitor, with example structures of drugs.
4. Write the syntheses and uses of Dibucaine and Disopyramide Phosphate.
5. Classification of Diuretics.
6. Give the structures & uses of any two 1,4-dihydropyridine and Piperazine based drugs.
7. Discuss on Biosynthesis & Preparations of Insulin.
8. Illustrate the classification of Anti-histamines and Anti-coagulants.
9. Mechanism of action of Anti-arrhythmic drugs.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Give the structure and uses of Diethyl stilbesterol.
2. What do you mean by Repolarisation elongators? Give examples
3. Write the structure and use of Lovastatin
4. Define and give example for Vasodilators.
5. Mention the examples for Cardiac smooth muscle relaxants. Give any one structure.
6. Enumerate the lists of AT₁-antagonists, Give the structure of any one drug.
7. Give the synthesis and use of Mercaptopurine.
8. Exemplify ganglionic blockers with one structure.
9. Write the general pharmacophore for Beta blockers, add examples.
10. Structure and use of Isosorbide dinitrite.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[BPHARM 1022]

**OCTOBER 2022
(MARCH 2022 EXAM SESSION)**

Sub. Code: 2051

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

PCI Regulation 2017 – SEMESTER V

PAPER I – MEDICINAL CHEMISTRY II

Q.P. Code: 562051

**Time: Three hours
Marks**

Maximum: 75

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. a) Discuss the Structural Activity Relationship of H-1 receptor antagonist drugs.
b) Discuss the structure, synthesis and uses of Cimetidine.
2. a) Give the classification of Local Anesthetics with example. Explain the SAR of Local Anesthetics.
b) Outline the synthesis and uses of Benzocaine.
3. a) Classify Anticancer drugs with atleast one structure in each class.
b) Illustrate the synthesis, mechanism and uses of Methotrexate.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Outline the mechanism and synthesis of any one loop diuretic.
2. Classify oral anti diabetic agents with its structure.
3. Describe the Mechanism and uses of Organic nitrates as Anti-anginal agents.
4. Illustrate the synthesis, mechanism and uses of Disopyramide phosphate.
5. Demonstrate mechanism and uses of Sulfonyl ureas.
6. Describe the medicinal chemistry of aspect of Corticosteroids.
7. Demonstrate the structure, Mechanism and uses of Methimazole.
8. Classify anti-hyperlipidemic agents with its structures.
9. Discuss biosynthesis of sex hormones and its roles.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Note on Proton pump inhibitors.
2. Draw the structure and mention the uses of Cyclophosphamide.
3. Recall the structure and uses of Verapamil.
4. Mechanism of action of Biguanides.
5. Sketch the structure and mention the uses of Hydralazine.
6. Mention Mechanism of Menadione.
7. Define Congestive Heart Failure.
8. Recall the structure and uses of Dexamethasone.
9. Sketch the structure and mention the uses of Propylthiouracil.
10. Draw the structure and mention the uses of Cocaine.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[B.PHARM 0323]

MARCH 2023
(SEPTEMBER 2022 EXAM SESSION)

Sub. Code: 2051

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 – SEMESTER V
PAPER I – MEDICINAL CHEMISTRY II

Q.P. Code: 562051

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. a. Classify H₁ and H₂ receptor antagonists with at least one structure of each class.
b. Discuss the structure, synthesis and uses of Promethazine hydrochloride.
2. a. Categorize Diuretics drugs with at least one structure of each class.
b. Discuss the synthesis and uses of Methyldopa.
3. a. Discuss the synthesis and uses of Tolbutamide.
b. Categorize Anti-arrhythmic drugs with at least one structure of each class.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Illustrate the synthesis, mechanism of Meclizine.
2. Write note on mechanism of ACE Inhibitors.
3. Describe the mechanism and uses of calcium channel blockers as anti-anginal agent.
4. Illustrate the synthesis, mechanism and uses of warfarin.
5. Demonstrate the biological role of sex hormones.
6. Describe the local anesthetics activity of para Amino benzoic acid derivatives.
7. Write note on Insulin and its preparations
8. Give an account on SAR of Local anaesthetics.
9. What are corticosteroids and give its significance.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Note on proton pump inhibitor.
2. Mechanism of alkylating agents.
3. Give the structure and uses of Isosorbide dinitrate.
4. Mechanism of action of Furosemide.
5. Sketch the structure and mention the uses of Clonidine.
6. Mention Mechanism of Quinidine sulphate.
7. Define diabetics and its types.
8. Recall the structure and uses of Testosterone.
9. Sketch the structure and mention the uses of Levonorgestrel.
10. Draw the structure and mention the uses of Clofibrate.

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 – SEMESTER V
PAPER I – MEDICINAL CHEMISTRY II

Q.P. Code: 562051

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. a) Classify antineoplastic agents with example.
b) Explain the synthesis and mechanism of action of Methotrexate, Mercaptopurine.
2. a) Write the classification of antianginal agents with example.
b) Explain the synthesis and mechanism of action of any one vasodilator class of antianginal.
c) Write a note on H₂ receptor antagonist.
3. a) Define anti-hypertensive agents.
b) Discuss the synthesis and mechanism of action of Methyldopate.
c) Give an account of Thyroid and Antithyroid agents.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Give any two structures of Piperazine and Phenothiazine classes of H₁ anti-histamines.
2. Outline the mechanism of action, synthesis and use of Tolbutamide.
3. Explain the physiological functions of Oestrogenic hormones. Give the structure and use of Oestrone and Diethyl stilbesterol.
4. Write the synthesis, mechanism of action and uses of procaine.
5. List out any three anticoagulants and write the synthesis of Warfarin.
6. Discuss the stereochemistry and metabolism of Steroids.
7. Explain the SAR of Local-anaesthetics.
8. Describe the synthesis and mechanism of action of any one Loop diuretic.
9. Write note on antiarrhythmic agents.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Write note on Alpha glucosidase inhibitors.
2. Draw the structure of Lignocaine and Butamben.
3. Illustrate the structure and use of Quinidine.
4. Discuss about Osmotic diuretics.
5. Give the structure and use of Procainamide Hydrochloride.
6. Write the mechanism of action of cardiotonics.
7. Give the clinical importance of Clofibrate. Explain its mechanism of action.
8. Write the structure and use of Prednisolone.
9. Write a note on bile acid sequestrant.
10. Write the structure and use of Levonorgestrol.

[B.PHARM 1223]

DECEMBER 2023
(SEPTEMBER 2023 EXAM SESSION)

Sub. Code: 2051

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

**PCI Regulation 2017 – SEMESTER V
PAPER I – MEDICINAL CHEMISTRY II**

Q.P. Code: 562051

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. a) Classify H_1 - receptor antagonist with example.
b) Discuss the mechanism of action and SAR of amino alkyl ethers class of H_1 -receptor antagonist.
c) Write the synthesis of Promethazine Hydrochloride.
2. a) Classify diuretics with suitable examples.
b) Explain the synthesis and mechanism of action of Acetazolamide and Chlorthiazide.
3. a) Classify anti-arrhythmic agents and write the synthesis of Disopyramide – Phosphate.
b) Describe structure of Insulin and detail on its preparations.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Write the synthesis and mechanism of action of any one organic nitrite as antianginal agents.
2. Write a note on alkylating agents.
3. Classify antineoplastic agents and write the synthesis and mechanism of action of methotrexate.
4. Write a note on anticoagulant agents.
5. Discuss about the nomenclature of steroids.
6. Write the structure, use and mechanism of action of Sildenafil.
7. Discuss the SAR of Local anesthetics.
8. Explain the synthesis and use of Tolbutamide and Procaine.
9. Explain the synthesis and mechanism of action of Dibucaine.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Give the structure and use of Acrabose.
2. Outline the mechanism of action of any one Biguanide as antidiabetic agents.
3. Define and give one structure for Oral contraceptives.
4. Write the structure of Dexamethasone and Betamethasone.
5. List out any two HMG CoA reductase inhibitors with structure.
6. Write the structure and use of Isosorbide dinitrite.
7. Classify drugs used in Congestive heart failure.
8. Illustrate the structure and use of Reserpine.
9. Write a note on Calcium channel blockers.
10. Write the structure and use of L-Thyroxine and Propyl thiouracil.

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

PCI Regulation 2017 – SEMESTER V

PAPER I – MEDICINAL CHEMISTRY II

Q.P. Code: 562051

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. a) Define and classify Anti-neoplastics with examples.
b) Explain the mechanism of action of alkylating agents.
c) Write the synthesis of Mercaptopurine.
2. a) Classification of diuretics.
b) Write the synthesis of Furosemide and Acetazolamide.
3. a) Define and Classify Anti-arrhythmic drugs.
b) Write the Synthesis of Disopyramide phosphate.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Write a note on Insulin and its preparation.
2. SAR of Local anaesthetics.
3. Give an account of Thyroid and anti-thyroid drugs.
4. Give the structure and synthesis of
a) Diphenhydramine Hydrochloride b) Triprolidine hydrochloride.
5. Write a note Oral contraceptive. Give the structures of Mifepristone and Norgestrel.
6. Explain the synthesis and uses of
a) Promethazine Hydrochloride b) Cimetidine.
7. Structure, mechanism of action and Synthesis of Methyldopate hydrochloride.
8. What are Anticoagulants? Give the synthesis of Warfarin.
9. Write a note on physiological role of histamine, types of histamine receptors in human body.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Define Cardiotonics.
2. Give structure and uses of Tolbutamide.
3. Give any two structures of local anaesthetics.
4. Give structure and uses of Nitroglycerin.
5. Define antidiabetic agents.
6. Cisplatin.
7. Write note on Vasodilators.
8. Give the mechanism of Verpamil as Anti-anginal agents.
9. What are Anti-hyperlipidemic agents? Give any one structure.
10. Give structure and medicinal uses of Chlorthiazide.

B. PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 – SEMESTER V
PAPER I – MEDICINAL CHEMISTRY II

Q.P. Code: 562051

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. a) Write note on Nomenclature and Stereochemistry of Steroids.
b) Write briefly on corticosteroids.
2. a) Give notes on Histamine receptors and their distribution in body.
b) Classify Antihistaminic drugs with suitable examples.
c) Synthesis of Promethazine hydrochloride.
3. a) What are Anti-anginal drugs?
b) Give the mechanism of action of vasodilators.
c) Write the synthesis of Nitroglycerin.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Give the synthesis of Benzocaine and Procaine.
2. Write a note on Insulin and its preparations.
3. Give the mechanism of action of ACE inhibitors. Give any one structure of Ace Inhibitors.
4. Classify Diuretics. Give the synthesis of Chlorthiazide.
5. Give the structure and medicinal uses of:
a) Mechlorethamine b) Clonidine hydrochloride c) Warfarin
d) L-Thyroxine e) Tolbutamide
6. Explain the mechanism of action of Antimetabolites. Give any two structures of Antimetabolites.
7. What are proton pump inhibitors? Write down the synthesis of Cimetidine.
8. Write a note on HMG-CoA reductase as Anti-hyperlipidemic agents.
9. Anti-arrhythmic drugs. Enumerate the synthesis of Disopyramide Phosphate.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. What are Potassium sparing Diuretics? Give examples.
2. Give the structure and uses of Thioguanine and Chlorambucil.
3. Mechanisms of action of anticoagulants.
4. Calcium channel blockers.
5. What are the drugs used in CHF? Give any one structure.
6. Write the mechanism of action of Glucosidase inhibitors as antidiabetic agents.
7. Give structure and medicinal uses of Dexamethasone.
8. List out the plant based drugs used in cancer treatment.
9. Structure and uses of Isosorbide dinitrate.
10. What are the clinical uses of Cholestyramine? Explain its mechanism of action.

B. PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

PCI Regulation 2017 – SEMESTER V

PAPER I – MEDICINAL CHEMISTRY II

Q.P. Code: 562051

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. a) Define diuretic agents and classify with example.
b) Enumerate the synthesis and mechanism of action of Loop diuretics and Carbonic anhydrase inhibitors.
2. a) Classify Local-anesthetics with suitable examples.
b) Explain the mechanism of action and SAR of Local anesthetics.
c) Give the synthesis of Dibucaine.
3. a) Classify drugs used in congestive heart failure.
b) Explain the synthesis any one of alkylating agent and antimetabolite.
c) Write a note on anti-cancer antibiotics.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Note on Proton pump inhibitors.
2. Demonstrate the synthesis, mechanism and uses of any one Sulfonyl ureas.
3. Give the structure and mechanism of action of Tadalafil and Sildenafil.
4. Write a note on Oral contraceptives.
5. Define arrhythmia. Add note on Sodium channel blockers.
6. Write the synthesis and medicinal importance of Promethazine Hydrochloride and Disopyramide Phosphate.
7. Illustrate the synthesis, mechanism and uses of Isosorbide dinitrite.
8. Discuss the nomenclature of Steroids and stereochemistry of Betamethasone.
9. Describe alpha glucosidase inhibitors and Biguanide classes of antidiabetic agents.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Sketch the structure of any two anti-thyroid drugs.
2. Discuss about metabolism of Steroids.
3. What are anti-hyper lipidemic agents?
4. Note on Vasodilators.
5. List out any two H₂ receptor antagonist with structure.
6. Define and give example for coagulants.
7. Write the structures and use of Digoxin.
8. Draw the structures of Captopril and Rosiglitazone.
9. Draw the structure and use of Cyproheptadine Hydrochloride.
10. Note on Mechanism of Calcium channel blockers.

B. PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)

PCI Regulation 2017 – SEMESTER V

PAPER I – MEDICINAL CHEMISTRY II

Q.P. Code: 562051

Time: Three hours

Maximum: 75 Marks

I. Elaborate on: Answer any TWO questions.

(2 x 10 = 20)

1. a) Classify Local anesthetics. Give the SAR of Local anesthetics.
b) Enumerate the Synthesis of Procaine and Dibucaine.
2. a) Classify Anti-hypertensive drugs. Write the mechanism of action of ACE inhibitors.
b) Synthesis of Methyldopate hydrochloride.
3. a) Define anti diabetic agents and classify them.
b) Synthesis of Tolbutamide.

II. Write notes on: Answer any SEVEN questions.

(7 x 5 = 35)

1. Mechanism of action of Thiazide diuretics. Write down the synthesis of Chlorthiazide.
2. Classify Anti-arrhythmic drugs with examples.
3. Nomenclature of steroids.
4. Histamine receptors and their distribution in the body.
5. Explain briefly about Mechanism of action of Antimetabolites. Give the synthesis of Methotrexate.
6. Classify Anti-anginal drugs. Give the synthesis of Isosorbide dinitrate.
7. Write note on biguanides as antidiabetic drugs. Give the structure of Metformin.
8. What are H1 and H2 antagonists? Give the synthesis of Promethazine hydrochloride.
9. Give a brief account on Thyroid and anti-thyroid drugs.

III. Short answers on: Answer ALL questions.

(10 x 2 = 20)

1. Calcium channel blockers.
2. Anticancer antibiotics.
3. Give any two examples of HMG-CoA reductase.
4. Drugs used for erectile dysfunction.
5. Physiological functions of androgens.
6. Write the structures and uses of Nimodipine.
7. Write the Mechanism of action of anti-hyperlipidemic drugs.
8. Mention the clinical uses of Minoxidil and Reserpine.
9. Give the structure and uses of Oestrinol.
10. What are Cardiotonics? Give examples.
