[KZ 817] **OCTOBER 2011** **Sub. Code: 3817**

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

THIRD YEAR

PAPER V – MEDICINAL CHEMISTRY

Q.P. Code: 383817

Time: Three Hours **Maximum: 100 marks**

Answer ALL questions in the same order.

I. Elaborate on :	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. a) Describe various electronic parameters involved in QSAR study?	17	40 min.	20
b) Explain the chemistry and mechanism of action of Cardiac glycosides.			
2. a) Explain the mechanism of action of various classes of Antiarrythmic agents.	17	40 min.	20
b) Write the mechanism of action, SAR of sulphonyl ureas and the synthesis of any one.			
II. Write notes on :			
1. Write the SAR of Angiotensin –II antagonist.	4	10 min.	6
2. Write the structure, uses, mechanism of action and side effects of oxytetracycline.	4	10 min.	6
3. Classify Antitubercular agents and write the synthesis of any one of them.	4	10 min.	6
4. Write a note on Antiscabies and Antipedicular agents.	4	10 min.	6
5. Classify Antiviral agents and write the structure of any three of them.	4	10 min.	6
6. Enumerate the synthesis and mechanism of action of any one Anthelmentic agent.	4	10 min.	6
7. Explain the chemistry of estrogens.	4	10 min.	6
8. Write a note on Antithyroid agents.	4	10 min.	6
9. Write the synthesis, mechanism of action and side effects of mercaptopurine.	4	10 min.	6
10. Classify antimalarials and write the synthesis of chloroquine.	4	10 min.	6

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[LA 817] **APRIL 2012** **Sub. Code: 3817**

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

THIRD YEAR

PAPER V – MEDICINAL CHEMISTRY

Q.P. Code: 383817

Time: Three Hours **Maximum: 100 marks**

Answer ALL questions in the same order.

I. Elaborate on :	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Write the classification of Antibiotics and explain in detail the chemistry of Pencillins with mechanism of action and examples. Explain on Macrolides and Aminoglycosides.	17	40 min.	20
2. Discuss on Quantitative structure activity relationship with a note on various parameters. Write on the concept of antisense molecules.	17	40 min.	20
II. Write notes on :			
1. Write the chemistry, structures and synthesis of any one drug under the category of antifungal agents.	4	10 min.	6
2. Discuss on oral hypoglycemic agents.	4	10 min.	6
3. Brief out on thiazides and loop diuretics.	4	10 min.	6
4. Write on Mechanism of action, toxicity and uses of Sulphonamides.	4	10 min.	6
5. Brief out on combinatorial chemistry.	4	10 min.	6
6. Classify 1^{st} line and 2^{nd} line anti tubercular agents along with structures from various classes.	4	10 min.	6
7. Give a short account on steroidal sex hormones.	4	10 min.	6
8. Write on calcium channel blockers.	4	10 min.	6
9. Discuss on angiotensin converting enzyme inhibitors and aldosterone inhibitors as antihypertensives.	4	10 min.	6
10. Write on the prodrug concept and its applications.	4	10 min.	6

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[LB 817] **OCTOBER 2012** **Sub. Code: 3817**

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

THIRD YEAR

PAPER V – MEDICINAL CHEMISTRY

Q.P. Code: 383817

Time: Three Hours **Maximum: 100 marks**

Answer ALL questions in the same order.

I. Elaborate on :	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Write the classification of Antineoplastic agents and explain in detail their chemistry with suitable examples along with mechanism of action. Synthesize any two drugs under various classes.	17	40 min.	20
2. Classify cardiovascular agents. Discuss on antihyperensives and antiarrythmics in detail.	17	40 min.	20
II. Write notes on:			
1. Write the chemistry, structures and synthesis of any one drug under the category of anthelmintics.	4	10 min.	6
2. Discuss on oral hypoglycemic agents.	4	10 min.	6
3. Brief out on computer aided drug design.	4	10 min.	6
4. Classify broad spectrum pencillins and write the mechanism of action.	4	10 min.	6
5. Brief out on prodrugs and their applications.	4	10 min.	6
6. Write on thiazides and osmotic diuretics.	4	10 min.	6
7. Give a short account on anti thyroid hormones.	4	10 min.	6
8. Write on the electronic, lipophilic and steric parameters.	4	10 min.	6
9. What is the concept of antisense molecules?	4	10 min.	6
10. Discuss on macrolides.	4	10 min.	6

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[LC 817] **APRIL 2013** **Sub. Code: 3817**

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

THIRD YEAR

PAPER V – MEDICINAL CHEMISTRY

Q.P. Code: 383817

Time: Three Hours **Maximum: 100 marks**

Answer All questions

I. Elaborate on: **(2 x 20 = 40)**

1. Write the classification of Antivirals and explain in detail their chemistry, synthesis of any 2 drugs with mechanism of action and examples. Explain on Prodrug concept.

2. Discuss on Computer aided drug design and modeling with an emphasis on its various applications.

II. Write notes on: **(10 x 6 = 60)**

1. Write the chemistry, structures and synthesis of any one drug under the category of anticancer agents.
2. Discuss on anti protozoal agents.
3. Brief out on high ceiling diuretics
4. Write on Mechanism of action, toxicity and uses of Sulphonamides.
5. Brief out on antisence molecules.
6. Classify various anti-tubercular agents used for multiple drug resistant tuberculosis and write their mechanism of action.
7. Give a short account on adrenocorticoids.
8. Write on oral hypoglycemic agents.
9. Discuss on antianginals.
10. Classify antimalarials and discuss on 4- amino quinolines.

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[LD 817] **OCTOBER 2013** **Sub. Code: 3817**

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

THIRD YEAR

PAPER V – MEDICINAL CHEMISTRY

Q.P. Code: 383817

Time: Three Hours **Maximum: 70 marks**

Answer All questions

I. Elaborate on: **(2 x 20 = 40)**

1. What are Tetracyclines and Classify with structural examples for each? Discuss briefly SAR, Chemistry and mechanism action of Tetracyclines.

2. a) Classify antitubercular agents.
   b) Give synthesis of any two drugs with mechanism of action.
   c) Explain briefly antiprotozoal agents.

II. Write notes on: **(10 x 3 = 30)**

1. What is prodrug? Explain the types of pro drugs with suitable examples
2. Give a method of synthesis of:
   (i) Hexachlorphene (ii) Halazone
3. Classify anti fungal agents and give their mechanism of action
4. What are urinary tract anti-infectives? Classify them with suitable examples
5. Give the structure and uses of
   (i) INH (ii) Ehionamide (iii) Pyrazinamide
6. Explain the mechanism of action of Mitronidazole
7. Write a short note on HIV protease inhibitors
8. What is Crystalluria? How can it be prevented?
9. Explain the life cycle of malarial parasite
10. Write short notes on polypeptide antibiotics.

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[LF 817] **OCTOBER 2014** **Sub. Code: 3817**

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

(2009-2010 Regulation)

THIRD YEAR

PAPER V – MEDICINAL CHEMISTRY

Q.P. Code: 383817

Time: Three Hours **Maximum: 70 marks**

Answer All questions

I. Elaborate on: **(4 x 10 = 40)**

1. Explain the medicinal chemistry aspects of antihypertensive agents with emphasis to classification and mechanism of action of each class.
2. Enumerate various approaches utilized in computer aided drug design.
3. Discuss the chemistry, mechanism of action, SAR and synthesis of chloramphenicol.
4. Write a note on urinary tract anti-infectives and enumerate the synthesis of any one.

II. Write notes on: **(6 x 5 = 30)**

1. Write a note on antimetabolites used in anticancer therapy.
2. Classify oral hypoglycaemic agents and enumerate the synthesis of any one.
3. Discuss the structural types of quinolone urinary tract anti-infectives and write the structure any one flouro quinolone.
4. Write a note on estrogens and non steroidal estrogens.
5. Explain briefly on lipophilic parameters in quantitative structure activity relationship.
6. Give the structure and uses of

   (a) Acetazolamide (b) Pyrimethamine

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[LG 817] **APRIL 2015** **Sub. Code: 3817**

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

(2009-2010 Regulation)

THIRD YEAR

PAPER V – MEDICINAL CHEMISTRY

Q.P. Code: 383817

Time: Three Hours **Maximum: 70 marks**

Answer All questions

I. Elaborate on: **(4 x 10 = 40)**

1. Classify diuretics.
   Explain the mechanism of action and structure of any one drug from each class.

2. Write a brief account on the electronic & steric parameters involved in a QSAR study.

3. Classify semisynthetic pencillins.
   Enumerate the mechanism of action and SAR of pencillins.

4. a) Classify sulphonamides.
      Briefly discuss the mechanism of action and SAR of sulphonamides.

   b) Enumerate the general synthesis of sulfonamides.

II. Write notes on: **(6 x 5 = 30)**

1. Discuss the life cycle of malarial parasite.

2. Describe the mechanism of action of
   (a) Polyene antifungals (b) Allylamine antifungals.

3. Write a note on solid phase synthesis in combinatorial chemical library synthesis.

4. Discuss briefly on agents used for hyperthyroidism and write the structure of any two drugs.

5. Write a note on adrenocorticoids.

6. Give the structure and uses of
   (a) Chloroquine (b) Clonidine.

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[LH 817] **OCTOBER 2015** **Sub. Code: 3817**

PHARM. D DEGREE EXAMINATION

(2009-2010 Regulation)

THIRD YEAR

PAPER V – MEDICINAL CHEMISTRY

Q.P. Code : 383817

Time: Three Hours **Maximum: 70 marks**

Answer ALL questions

I. Elaborate on : **(4 x 10 = 40)**

1. Classify alkylating agents. Discuss in detail the mechanism of action and SAR of alkylating agents.
2. Enumerate various electronic and solubility parameters in QSAR.
3. Describe briefly on various approaches of prodrug design.
4. Briefly discuss the mechanism of action and SAR of azole antifungals.

II. Write notes on : **(6 x 5 = 30)**

1. Write a short note on antihyperlipidemic agents.
2. Write the structure, mechanism of action and synthesis of pyrazinamide.
3. Write the structure and uses of any two diagnostic agents.
4. Write the structure, mechanism of action and synthesis of amantadine.
5. Write a short note on amino glycoside antibiotics.
6. Write a note on molecular mechanics.

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[LI 817] APRIL 2016 **Sub. Code: 3817**

PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
THIRD YEAR
PAPER V – MEDICINAL CHEMISTRY

Q.P. Code: 383817

Time : Three hours **Maximum : 70 Marks**

I. Elaborate on : **(4 x 10 = 40)**

1. Briefly discuss about the techniques involved in Combinatorial Chemistry.
2. Give short note on Antisense Molecule.
3. Write the structure of various Tetracyclines, mechanism and SAR of Tetracyclines.
4. Enumerate about any two Endocrines**.**

II. Write notes on : **(6 x 5 = 30)**

1. Give note on Steroidal hormone.
2. Short note on Hypoglycemic agent.
3. Write the synthesis and mechanism of any two Purine analogues used as an anti-neoplastic agent.
4. Write the synthesis and mechanism of any two anti-fungal agents.
5. Write down the Synthesis, Mechanism and SAR of Chloroquine, anti-malarial agent.
6. Write note on Calcium channel blockers.

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[LJ 817] OCTOBER 2016 **Sub. Code: 3817**

PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
HIRD YEAR
PAPER V – MEDICINAL CHEMISTRY

Q.P. Code : 383817

Time : Three hours **Maximum : 70 Marks**

I. Elaborate on: **(4 x 10 = 40)**

1. Explain the Chemistry and Mechanism of action of Cardiac glycosides.

2. Write the classification of Antibiotics. Explain in detail the chemistry, mechanism of action and SAR of Tetracyclines.

3. What are Urinary-tract Anti-infective agents? Classify them with examples. Explain the chemistry, SAR, mechanism of action of Quinolone anti-bacterial agents.

4. Classify anti-malarial drugs with examples. Write the structure, synthesis, mechanism of action and medicinal uses of any one 4-Aminoquinoline derivative.

II. Write notes on: **(6 x 5 = 30)**

1. Explain the synthesis of any two Sulphonamides.
2. Write a note on computer aided Drug design.
3. Write the synthesis of INH.
4. Brief out Thiazide and Loop diuretics.
5. Write a note on Combinatorial Chemistry.
6. Write a note on Insulin and its preparations.

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[LK 817] MAY 2017 **Sub. Code: 3817**

PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
THIRD YEAR
PAPER V – MEDICINAL CHEMISTRY

Q.P. Code : 383817

Time : Three hours **Maximum : 70 Marks**

I. Elaborate on: **(4 x 10 = 40)**

1. Write a brief account on hydrophobic parameters and spatial descriptors involved in a QSAR.

2. Classify Antifungal agents with suitable examples. Discuss the chemistry, structure and mechanism of any two antifungal antibiotics.

3. Define and classify anti-tubercular agents. Give the synthesis of any two drugs with mechanism of action from antitubercular agents.

4. Discuss the SAR of thiazide diuretics.

II. Write notes on: **(6 x 5 = 30)**

1. Discuss briefly about Anticoagulants drugs with suitable examples.
2. Write a note on HIV Protease inhibitors.
3. Write a short note on anti anginal agents.
4. Write a short note on steroidal sex hormones.
5. Enumerate about Macrolide antibiotics.
6. Write a note on sulpha drugs used burn therapy.

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[LL 817] OCTOBER 2017 **Sub. Code: 3817**

PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
THIRD YEAR
PAPER V – MEDICINAL CHEMISTRY

Q.P. Code : 383817

Time : Three hours **Maximum : 70 Marks**

I. Elaborate on: **(4 x 10 = 40)**

1. Explain the mechanism of action and SAR of sulphonyl urea derivatives. Write the synthesis of any one drug.

2. Classify Anti-hypertensive drugs with examples. Write the chemistry, mechanism and SAR of 1, 4-dihydropyridine derivatives.

3. Write the classification of Anti-viral drugs with suitable examples. Explain the synthesis and mechanism of action for any two Anti-viral drugs.

4. Write a note on: a) Steroid hormone. b) Brief out on antisense molecules.

II. Write notes on: **(6 x 5 = 30)**

1. Explain the synthesis of metronidazole.
2. Write a note on Anti-scabies and Anti-pedicular agents.
3. Explain the mechanism of action of any two Anti-malarials.
4. Discuss on Anti-anginal drugs. Write the synthesis and mechanism of any one drug belongs to organics nitrates and nitrites.
5. Brief out Anti-thyroid drugs.
6. Write a note on semi-synthetic penicillins.

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

[LM 817] MAY 2018 **Sub. Code: 3817**

PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
THIRD YEAR
PAPER V – MEDICINAL CHEMISTRY

Q.P. Code: 383817

Time : Three hours **Maximum : 70 Marks**

I. Elaborate on: **(4 x 10 = 40)**

1. Write the classification of Anti-neoplastic agents. Give the mechanism and synthesis of any two Anti-neoplastic agents.

2. Enumerate various approaches utilized in computer aided drug design.

3. Classify diuretics. Explain the mechanism of action and structure of any one drug from each class.

4. Classify sulfonamides. Briefly discuss the mechanism of action and SAR of sulfonamides. Enumerate the general synthesis of sulfonamides.

II. Write notes on: **(6 x 5 = 30)**

1. Classify oral hypoglycaemic agents and enumerate the synthesis of any one.
2. Explain briefly on Lipophilic parameters in quantitative structure activity relationship.
3. Give the structure and uses of : a) Acetazolamide b) Pyrimethamine.
4. Brief out on antisense molecules.
5. Enumerate the synthesis and mechanism of action of any one Anthelmintic agents.
6. Give the structure and uses of :
   i) Isoniazid ii) Ethambutol iii) Pyrazinamide

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

[LO 817] MAY 2019 **Sub. Code: 3817**

PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
THIRD YEAR
PAPER V – MEDICINAL CHEMISTRY

Q.P. Code: 383817

Time : Three hours **Maximum : 70 Marks**

I. Elaborate on: **(4 x 10 = 40)**

1. What are ACE inhibitors? Write the types, mechanism of action and SAR of the same.
2. Briefly discuss the techniques involved in combinatorial chemistry.
3. Classify urinary tract anti infectives. Explain the chemistry, SAR and mechanism of action of quinolone derivatives.
4. Classify antibiotics. Explain in detail about the chemistry of cephalosporins.

II. Write notes on: **(6 x 5 = 30)**

1. Write the synthesis of chloroquine.
2. Explain the chemistry of estrogens.
3. Write the structure and uses of clotrimazole and hexachlorophene.
4. Thiazide diuretics.
5. Write short notes on Anti-protozoal agents.
6. Write the structure and uses of any 2 anthelmintics.

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