

Final Year - B.Pharm - Sem - VII

PURUS- VII : (2011 COURSE): SUMMER- 2016
SUBJECT: MEDICINAL CHEMISTRY-III

Day: Friday
Date: 22-04-2016

Time: 2:00 P.M. TO 5:00 P.M.
Max Marks: 80

N.B:

- 1) Q. No 1 and 5 are **COMPULSORY**. Out of remaining solve any **TWO** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION-I

Q.1 Attempt any **FIVE** from the following: (10)

- a) Give any two examples of drugs used as antiinfective agent along with structures.
- b) Sketch out line synthesis of Dapsone.
- c) Give any two examples of alkaloids used for the treatment of malaria.
- d) Give examples of any two heterocyclic drugs used for the treatment of amebiasis along with their structure.
- e) Give any two examples of animetabolites used in the treatment of cancer.
- f) Sketch out the synthesis of Ethambutol.

Q.2 What are antineoplastic agents? Give their classification. Give a detail account of natural products as anticancer agents. Sketch out the synthesis of mechlorethamine and chlorambucil. (15)

Q.3 What are antimalarial agents? Give chemical classification. Explain in detail SAR of cinchona alkaloids. Give synthesis of chloroquin. (15)

Q.4 Write short notes on (ANY THREE) (15)

- a) Anti tubercular agents.
- b) Tripanosomiasis.
- c) Anthelmintics.
- d) Halogen and halophors as antiseptics

SECTION-II

Q.5 Attempt any **FIVE** from the following: (10)

- a) Give two examples of orally acting penicillin's along with their structures.
- b) Give two examples of drugs belonging to tetracycline class of antibiotics.
- c) Give example and structure of sulfonamide used for treatment of eye infection.
- d) What are macrolide antibiotics? Give examples.
- e) Define emetics and give their examples.
- f) Sketch out the synthesis of sulfamerazine.

Q.6 Give various ways of classifying antibiotics. Give chemistry, SAR and MOA of amino glycoside antibiotics. (15)

Q.7 Give chemical classification of sulfonamides with examples. Give their chemistry, SAR, uses and side effects of sulfonamides (15)

Q.8 Write short notes on (ANY THREE) (15)

- a) Stability of penicillin's.
- b) Polyene class of antibiotics.
- c) SAR of Quinolones.
- d) Purgatives.

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PURUS – VIII (OLD COURSE) : SUMMER - 2016
SUBJECT : MEDICINAL CHEMISTRY – IV

Day : Saturday
Date : 23-04-2016

Time : 2:00 PM TO 5:00 PM
Max. Marks : 80

N.B.

- 1) Q.1 and Q.5 are **COMPULSORY**. Out of the remaining attempt **TWO** questions from Section – I and any **TWO** questions from Section – II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION – I

- Q.1** Answer any **FIVE** of the following: (10)
- a) Give two examples of aryl propionic acid derivatives with their structures.
 - b) Give structure of Morphine.
 - c) Enlist various QSAR parameters.
 - d) Enlist various Radio-Opaque diagnostic agents.
 - e) Sketch out the synthesis of any one drug belonging to sulfonylurea class of oral hypoglycemic agent.
 - f) Write applications of CADD.
- Q.2** Explain the chemistry of Insulin and discuss in detail Oral hypoglycemic agents. (15)
- Q.3** Classify NSAIDS and discuss in detail aryl alkanoic acid class of NSAIDS. (15)
- Q.4** Write short notes on: (Any Three) (15)
- a) Antithyroid agents
 - b) Radio opaque diagnostic agents
 - c) Methods of QSAR
 - d) Nuclear modifications of morphine

SECTION – II

- Q.5** Answer any **FIVE** of the following: (10)
- a) Write down the structure and IUPAC name of Prednisone and Progesterone.
 - b) Give applications of anti histaminics.
 - c) Write down the structure of Metiamide.
 - d) Sketch out the synthesis of Triptenamine.
 - e) Give any two examples of synthetic oestrogens.
 - f) Write down the structure of any one drug belonging to coumarin class of anticoagulant.
- Q.6** What are glucocorticoids? Give their chemistry, SAR, MOA and functions of glucocorticoids. (15)
- Q.7** Classify antihistaminics. Give an account of agents from Amino alkyl ether class. (15)
- Q.8** Write short notes on: (Any Three) (15)
- a) Nomenclature of prostaglandins
 - b) Androgens
 - c) Applications of combinatorial chemistry
 - d) Oral contraceptives
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PURUS- VII (2011 COURSE): SUMMER – 2016
SUBJECT: BIOPHARMACEUTICS & PHARMACOKINETICS

Day: Tuesday
Date: 03-05-2016

Time: 2:00 PM TO 5:00 PM
Max. Marks: 80

N.B.:

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of the remaining attempt any **TWO** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION-I

- Q.1** Answer any **FIVE** of the following: (10)
- a) Explain the active of transport mechanism for drug absorption.
 - b) Define clearance and give its equation.
 - c) What is bioactivation?
 - d) Explain the influence of vehicle in formulation of liquid orals.
 - e) Give significance of protein binding with respect to therapy and diagnosis.
 - f) Explain interfacial barrier theory for drug dissolution.
- Q.2** a) Explain in detail different physiological barriers to the drug distribution. (08)
- b) Discuss influence of drug pKa and pH of GIT on drug absorption from GI. (07)
- Q.3** a) Give a detailed account of factors affecting renal clearance. (08)
- b) Explain the concept and clinical significance of tissue binding of drugs. (07)
- Q.4** Write short notes on any **TWO** of the following: (15)
- a) Manufacturing variables affecting drug absorption
 - b) Kinetics of protein drug binding
 - c) Passive diffusion mechanism for drug absorption

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SECTION-II

- Q.5** Answer any **FIVE** of the following: **(10)**
- a) Explain the terms: Central compartment and peripheral compartment.
 - b) What is zero order process? Give examples.
 - c) Explain in short C_{max} and t_{max} .
 - d) What are causes of non-linear kinetics?
 - e) What are the advantages of urinary data over plasma data?
 - f) Define absolute and relative bioavailability.
- Q.6** a) Derive the pharmacokinetic parameters following drug administered as IV bolus assuming one compartment open model. **(08)**
- b) Discuss Wagnor-Nelson method to obtain absorption rate constant K_a . **(07)**
- Q.7** a) Discuss methods for estimation of bioequivalence parameters. **(08)**
- b) Give an account of physiological modelling. **(07)**
- Q.8** Write short notes on any **TWO** of the following: **(15)**
- a) In vitro-in vivo correlation
 - b) Methods for enhancement of bioavailability
 - c) Sigma minus method

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PURUS-VII (2011 COURSE): SUMMER 2016

SUBJECT: PHARMACOGNOSY-III

Day: Saturday
Date: 02-05-2016

Time: 2:00 P.M. TO 5:00 P.M.
Max. Marks: 80.

N.B.:

- 1) Q. No. 1 and Q. No. 5 are **COMPULSORY**. Out of the remaining solve any TWO questions from each section.
- 2) Figure to the right indicate full marks.
- 3) Draw neat labeled diagrams **WHEREVER** necessary.

SECTION-I

- Q.1** Answer **ANY FIVE** of the following: (10)
- a) Differentiate between Pale catechu and Black catechu
 - b) Give biological source and chemical constituents of Gingko
 - c) Define anthocyanins
 - d) Compare hydrolysable tannins and non hydrolysable tannins
 - e) Give biological source and chemical constituents of Silymarin
 - f) Give adulterants of Senna
- Q.2** a) Write an exhaustive note on phenolics and give its classification with suitable examples (08)
- b) Give Pharmacognostical details of Podophyllum (07)
- Q.3** a) Give Pharmacognostical details of Turmeric (08)
- b) Write an exhaustive note on Aloe (07)
- Q.4** Write short notes on **ANY THREE** of the following: (15)
- a) Rosemary
 - b) Hirda
 - c) Benzoin
 - d) St. John's Wort

SECTION-II

- Q.5** Answer **ANY FIVE** of the following: (10)
- a) Compare volatile oils and fixed oils with suitable examples
 - b) Define Enflurage
 - c) Give biological source and chemical constituents of Guggul
 - d) Give biological source and chemical constituents of Pilocarpus
 - e) Give general test for alkaloids
 - f) Give biological source and chemical constituents of Neem
- Q.6** a) Write an exhaustive note on Volatile oils. Give their classifications and biosynthesis. (08)
- b) Give Pharmacognostical details of Ephedra (07)
- Q.7** a) Write an exhaustive note on Alkaloids. Give their classifications and discuss Vinca (08)
- b) Give Pharmacognostical details of Cinchona (07)
- Q.8** Write short notes on **ANY THREE** of the following: (15)
- a) Tea
 - b) Belladonna
 - c) Opium
 - d) Digitalis