

Registration No:

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Total Number of Pages: 02

Course: B. Pharm
Sub Code: BP401T

4th Semester Regular / Back Examination: 2022-23

SUBJECT: Pharmaceutical Organic Chemistry III

BRANCH(S): B. Pharm

Time: 3 Hour

Max Marks: 75

Q. Code: M627

Answer Question No.1 (Part-1) which is compulsory, any Seven from Part-II and any two from Part-III.

The figures in the right-hand margin indicate marks.

Part-I

Q1 Answer the following questions: (2 x 10)

- Write structure and use of a Pyrrazole containing compound.
- Distinguish between Z & E isomers.
- What is wolf – Kishner reaction?
- What is Enantioers?
- Write structure and use of isoquinoline.
- Explain about asymmetric synthesis.
- What are meso compounds?
- Write the different structure of conformational isomerism in cyclohexane.
- Outline the structure and medicinal uses of thiophene.
- Define stereoselective reaction.

Part-II

Q2 Focused-Short Answer Type Questions- (Answer Any Seven) (5 x 7)

- Describe the chemical reactions and medicinal uses of Indole.
- Write short note on preparation and chemical properties of Indole.
- Describe about the stereochemistry of Biphenyl compounds.
- Explain the synthetic applications of sodium borohydride.
- Illustrate the synthesis and medicinal uses of Purine and its derivatives.
- Discuss the Skraup's synthesis of Quinoline and its derivatives.
- State and Explain and give brief note on Atropisomers with suitable examples.
- Enumerate the applications of lithium aluminium hydride with examples.
- Explain the Canh Ingold Prelog (CIP) sequence rule system of nomenclature of Optical isomers.

Part-III

Long Answer Type Questions (Answer Any Two)

- Q3** What are optical isomers? What is the minimum requirement for the compounds to show optical activity? Describe any two methods to separate racemers. **(10)**
- Q4** Discuss the synthesis, chemical reaction and medicinal uses of Pyridine. **(10)**
- Q5** Illustrate various conformations of cyclohexane with its stability. **(10)**
- Q6** Give brief note on reaction involve in LiAlH_4 and NaBH_4 . Discuss the mechanism of reaction and applications of Clemmensen reduction. **(10)**

Registration No :

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Total Number of Pages: 01

Course: B .PHARM
Sub_Code-BP402T.

4th Semester Regular/Back Examination: 2022-23

SUBJECT: Medicinal Chemistry-I

BRANCH(S): B Pharm

Time: 3 Hour

Max Marks : 75

Q.Code:M637

Answer Question No.1 (Part-1) which is compulsory, any eight from Part-II and any two from Part-III.

The figures in the right hand margin indicate marks.

Part-I

Q1 Answer the following questions: (2 x 10)

- Define Bioisosterism.
- Define Phase-II reactions.
- What is enzymatic biotransformation?
- Which enzyme is responsible for conversion of tyrosine to DOPA?
- Write the structure of phenylephrine.
- Define adrenergic blockers.
- What are catecholamines?
- Define cholinergic system.
- Write MOA of antiepileptic drugs?
- Define both the terms sedative and hypnotics.

Part-II

Q2 Focused-Short Answer Type Questions- (Answer Any Seven) (5 x 7)

- Write down few examples of short acting barbiturates.
- What are antipsychotics? Give its classification.
- Give the structure and uses of Haloperidol and Promazine hydrochloride.
- What do you mean by tonic clonic seizures?
- Give synthesis and uses of Carbamazepine.
- Write the MOA of general anaesthetics.
- Write chemical synthesis of methadone.
- What are adverse effects of NSAIDs?
- Write structure and uses of atropine sulphate.

Part-III

Long Answer Type Questions (Answer Any Two)

- Q3 Explain clinical uses of Anticholinergic drugs. (10)**
- Q4 Classify parasympathomimetic agents with examples and uses. (10)**
- Q5 Define adrenergic blockers? Discuss the chemistry and SAR of β -adrenergic blocking agents with examples. (10)**
- Q6 Describe various physiochemical properties involved in drug action. (10)**

Registration No:

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Total Number of Pages: 02

Course: B.Pharm
Sub_Code: BP403T

4th Semester Regular/Back Examination: 2022-23

SUBJECT: Physical Pharmaceutics II

BRANCH(S): B.Pharma

Time: 3 Hour

Max Marks: 75

Q.Code: M647

Answer Question No.1 (Part-1) which is compulsory, any seven from Part-II, and any two from Part-III.

The figures in the right hand margin indicate marks.

Part-I

Q1 Answer the following questions :

(2 x 10)

- a) Define Thixotropy.
- b) Explain porosity with its application in pharmacy.
- c) What is compressibility index?
- d) List the ways to characterize a powder.
- e) Write any two methods to determine the particle size.
- f) Differentiate between creaming and cracking.
- g) Explain Spurs with example.
- h) Define microemulsions and multiple emulsions.
- i) Explain why suspension mostly follows zero order.
- j) Define Zero order reaction with suitable examples.

Part-II

Q2 Focused-Short Answer Type Questions- (Answer Any Seven)

(5 x 7)

- a) Size distribution curve.
- b) Single point viscometer.
- c) Order of reaction.
- d) Physical stability of suspension.
- e) Derived properties of powders.
- f) Controlled flocculation.
- g) Instability markers of emulsion.
- h) Factors affecting degradation of drugs.
- i) Classification of colloidal systems with examples.

Part-III

Long Answer Type Questions (Answer Any Two)

- Q3** Discuss the instability reasons of lyophobic colloidal system. (10)
- Q4** Define emulsifier; Discuss their mechanism of action in detail. (10)
- Q5** Define rheology, Discuss briefly various flow patterns associated with liquids. (10)
- Q6** Discuss in detail the various physical and chemical factors influencing the chemical degradation of pharmaceutical products. (10)

Registration No:

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Total Number of Pages: 02

Course: B.Pharm.
Sub_Code: BP404T

4th Semester Regular/Back Examination: 2022-23

SUBJECT: PHARMACOLOGY - I

BRANCH(S): B.Pharma

Time: 3 Hour

Max Marks: 75

Q.Code: M657

Answer Question No.1 (Part-1) which is compulsory, any seven from Part-II, and any two from Part-III.

The figures in the right hand margin indicate marks.

Part-I

Q1 Answer the following questions :

(2 x 10)

- Define receptor. Classify them with examples.
- Define Bioavailability and write its significance.
- Define apparent volume of distribution.
- What is 1st pass metabolism?
- Mention the enzymes involved in metabolism of catecholamines.
- Name two CNS stimulants.
- Define Affinity and Efficacy.
- What is nootropics?
- Define and classify Sedatives and Hypnotics.
- Name two drugs act as ganglionic blocker.

Part-II

Q2 Focused-Short Answer Type Questions- (Answer Any Seven)

(5 x 7)

- Write note on Plasma protein binding and its significance.
- Explain the G-protein coupled receptor mediated mechanism of drug action.
- Describe the pharmacology of Local anaesthetics.
- Write the mechanism of action, adverse effects and therapeutic uses of Levodopa.
- Write the differences in pharmacological actions of Anti-cholinesterase and Anti-cholinergic drugs.
- Write the differences in centrally acting muscle relaxants and peripherally acting muscle relaxants.
- Write different stages of anaesthesia.
- Write briefly about pharmacokinetic and pharmacodynamic drug interactions.
- Write the pharmacological actions of Tricyclic antidepressants.

Part-III

Long Answer Type Questions (Answer Any Two)

- Q3** Write different factors governing for the choice of route of drug administration. Describe the different routes of drug administration with their advantages and disadvantages. **(10)**
- Q4** Explain the neurohumoral transmission of adrenergic nerves. Briefly describe the pharmacology of adrenaline. **(10)**
- Q5** What is epilepsy? Classify the antiepileptic drugs with examples. Write the pharmacological action and adverse effects of phenytoin. **(10)**
- Q6** Write note on drug discovery and clinical evaluation of new drugs. **(10)**

Registration No:

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Total Number of Pages: 02

Course: B.PHARM
Sub Code: BP405T

4th Semester Regular/Back Examination: 2022-23
PHARMACOGNOSY & PHYTOCHEMISTRY-I
BRANCH: B.Pharma

Time : 3 Hour

Max Marks : 75

Q.Code: M668

Answer Question No.1 (Part-1) which is compulsory, any seven from Part-II, and any two from Part-III.

The figures in the right hand margin indicate marks.

Part-I

Q1 Answer the following questions : (2 x 10)

- a) Differentiate organized and unorganized crude drugs.
- b) What are Oleo-gum resins? Give two examples.
- c) Define callus and totipotency.
- d) What is Ash value?
- e) Source and uses of papain.
- f) What is tridosha?
- g) What are teratogens?
- h) Write the chemical constituents and uses of Agar.
- i) What are flavonoids?
- j) Write the biological source and uses of Castor oil.

Part-II

Q2 Focused-Short Answer Type Questions- (Answer Any Seven) (5 x 7)

- a) Explain various nutritional requirements of plant tissue culture.
- b) Describe anticancer agents from marine source.
- c) What is hybridization with special reference to medicinal plants?
- d) Chemotaxonomical and Serotaxonomical classification.
- e) What are plant fibers? Write the preparation of cotton.
- f) Write about Conservation of medicinal plants.
- g) Give a note on Tannins.
- h) Write the preparation and uses of Streptokinase.
- i) Write note on Edible vaccines.

Part-III

Long Answer Type Questions (Answer Any Two)

- Q3** Discuss the various factors affecting cultivation of medicinal plants. (10)
- Q4** Define evaluation of crude drugs. Describe microscopical methods of evaluation of crude drugs. (10)
- Q5** What are alkaloids? Write the classification, properties and tests for identification of Alkaloids. (10)
- Q6** What is adulteration of crude drugs? Explain different types of adulteration with suitable examples. (10)