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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)

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

Part-II

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

(5 x 7)

- Size distribution curve.
- Single point viscometer.
- Order of reaction.
- Physical stability of suspension.
- Derived properties of powders.
- Controlled flocculation.
- Instability markers of emulsion.
- Factors affecting degradation of drugs.
- 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)**



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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-I) 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 Pyrazole containing compound.
- Distinguish between Z & E isomers.
- What is wolf – Kishner reaction?
- What is Enantiomers?
- 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 Cahn 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)**

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Total Number of Pages : 02

Course: B.Pharm

Sub_Code: 15PH403

4th Semester Back Examination: 2022-23

SUBJECT : Biochemistry

BRANCH(S): B.Pharma

Time : 3 Hour

Max Marks : 100

Q.Code : M646

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 coenzyme with examples.
- Define glycogenolysis.
- What is detoxification?
- What do you mean by denaturation of proteins?
- What is the first product of Krebs cycle?
- Define glycosidic Linkage with example.
- What is ketosis?
- Define energy rich compounds with examples.
- What are cofactors? Give examples.
- Write down the functions of m-RNA.

Part-II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- Define and explain metastasis.
- Explain the structure and function of DNA.
- Write a brief note on factors affecting enzyme action.
- What are isoenzymes, explain?
- Explain glycogen storage disease.
- Write about gluconeogenesis and glycogenesis.
- Write a brief note on pentose phosphate pathway.
- Explain the energetics of TCA cycle.
- Explain β -oxidation and its energetics.
- Explain the double helical structure of DNA.



- k) What are essential fatty acids, explain?
l) Write a brief note on electron transport chain.

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

- Q3** Briefly explain the glycolysis pathway and write its energetics. (16)
- Q4** Explain the principle of biological oxidation and detoxification mechanism. (16)
- Q5** Write about brief note on Biosynthesis of eicosanoids. (16)
- Q6** Explain the mechanism of protein synthesis. (16)

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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)**

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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)

- Differentiate organized and unorganized crude drugs.
- What are Oleo-gum resins? Give two examples.
- Define callus and totipotency.
- What is Ash value?
- Source and uses of papain.
- What is tridosha?
- What are teratogens?
- Write the chemical constituents and uses of Agar.
- What are flavonoids?
- Write the biological source and uses of Castor oil.

Part-II

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

(5 x 7)

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