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B.Pharm
BP401T

4th Semester Regular / Back Examination: 2021-22

PHARMACEUTICAL ORGANIC CHEMISTRY III

BRANCH(S): B. Pharma

Time: 3 Hour

Max Marks: 75

Q. Code: J366

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 × 10)

- What is Atropisomers?
- What is E-Z System of geometrical isomers?
- Why Friedel crafts reaction is not possible on pyridine?
- Differentiate between diastereomers and enantiomers.
- Write the Structure and Medicinal use of Imidazole.
- Write the Structure and Medicinal use of Purine.
- What is the use of NaBH₄ and LiAlH₄?
- Why Pyrrole is weak base than pyridine
- Describe the isomerism exhibited by maleic acid and fumaric acid.
- What is the necessary condition for a compound to show optical isomerism?

Part-II

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

(5 × 7)

- Explain about asymmetric synthesis.
- Write short note on preparation and chemical properties of Indole.
- State and explain with structural mechanism - Electrophilic substitution reaction favour C2 position in Furan.
- Write a Short Note on Geometric Isomerism.
- Discuss the chemical properties of Imidazole.
- Discuss the conformational isomerism in cyclohexane.
- What is Stereospecific and Stereoselective reactions?
- Write in brief note on chromatographic and biochemical methods used for resolution of racemic mixture.
- Discuss the mechanism and synthetic applications of Beckmann rearrangement.

Part-III

Long Answer Type Questions (Answer Any Two)

Q3 Explain R and S system of nomenclature with examples. Discuss the Sequence rule to assign configuration with example

(10)

Q4 Discuss the synthesis, chemical reaction and medicinal uses of Pyrazole.

(10)

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B.Pharm
BP402T

4th Semester Regular / Back Examination: 2021-22

MEDICINAL CHEMISTRY- I

BRANCH(S): B.Pharm

Time : 3 Hour

Max Marks : 75

Q.Code : J440

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 × 10)

- What do you mean by future medicine?
- Give two examples of non classical Bioisosters.
- Define phase II reactions.
- What is methylation?
- Write the name of COMT and MOA.
- Write down the use of dopamine.
- Define adrenergic blockers.
- Define cholinergic system and its functions.
- Write two examples of synthetic amino-alcohol ester drugs.
- Define the term sedative and hypnotics.

Part-II

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

- Write down few examples of short acting barbiturates with their uses
- Give the classification and use of antipsychotic drugs with examples.
- What do you mean by tonic clonic seizures.
- Give classification of anticonvulsant drugs with examples.
- Write the mechanism of action of general anesthetics.
- Write a brief note on Nalorphine and Naloxone.
- Write the mechanism of action of NSAIDs.
- Explain briefly about beta adrenergic blockers.
- Write the factors affecting drug metabolism.

Part-III

Q3 Long Answer Type Questions (Answer Any Two) (10)
Explain the types of bondings involved in drug metabolism and specify importance of these bondings.

Q4 Explain various enzymes involved in drug metabolism and their importance. (10)

Q5 Explain the mechanism of action and functions of Terbutaline, Salbutamol and Naphazoline. (10)

Q6 Write the SAR of Anticholinergic drugs. (10)

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**B.Pharm
BP403T**

4th Semester Regular / Back Examination: 2021-22

PHYSICAL PHARMACEUTICS-II

BRANCH(S): B.Pharma

Time : 3 Hour

Max Marks : 75

Q.Code : J513

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 × 10)

- a) Define Colloidal and Coarse dispersion.
- b) Write Gold number with its Significance.
- c) What is glidant? Write two suitable examples of it.
- d) Define Rheology. Give any two applications
- e) What is yield value? Write it's application.
- f) What are Bulges and Spurs?
- g) Differentiate between emulsions and suspensions
- h) Describe carr's index
- i) Define rate and order of a reaction
- j) Zero order reactions are dependent upon the concentration of reactant. Comment.

Part-II

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

- a) State Edmundson's equation.
- b) Give expressions for rate constant and half-life of first order reaction.
- c) What is specific surface area? How is it measured by air permeability method
- d) Explain porosity. Give it's applications in pharmacy.
- e) Differentiate between flocculated and deflocculated suspensions.
- f) Write HLB scale showing classification of surfactant function
- g) Discuss plastic and pseudoplastic system of flow
- h) Explain the principle of cup & bob viscometer
- i) Explain kinetic properties of colloids

Part-III

Long Answer Type Questions (Answer Any Two)

Q3 Define how shelf life of a medicinal product is determined (10)

Q4 What are colloids? Give example. Explain any four methods of preparation of different types of colloids. (10)

Q5 Define Thixotropy, mention the basic mechanism and give its applications in pharmacy. (10)

Q6 Explain in detail interfacial properties of suspended particles. (10)

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B. Pharm.
BP404T

4th Semester Regular / Back Examination: 2021-22

PHARMACOLOGY- I
BRANCH(S): B.Pharma

Time : 3 Hour

Max Marks: 75

Q.Code: J594

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 × 10)

- Define Agonist and Antagonist with examples.
- Define Bioavailability and write its significance.
- Define the term drug dependence and drug addiction.
- Define plasma half-life ($t_{1/2}$) and write its significance.
- Write different factors governing for the choice of route of drug administration.
- Write the mechanism of action of Salbutamol.
- What is SSRIs?
- Define synergism with examples.
- Write the mechanism of action of Salbutamol.
- Name two drugs used in glaucoma.

Part-II

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

- Describe the different routes of drug administration with their advantages and disadvantages.
- Write the differences in pharmacological actions of Anti-cholinesterase and Anti-cholinergic drugs.
- Describe the pharmacology of Beta adrenergic blockers.
- Describe the pharmacology of Local anesthetics.
- Describe the pharmacology of skeletal muscle relaxants.
- Classify the antiepileptic drugs with examples. Write the mechanism of action of phenytoin.
- Classify antidepressants. Write the pharmacological actions of Tricyclic antidepressants.
- Write note on CNS stimulants.
- Write note on Plasma protein binding.

Part-III

Long Answer Type Questions (Answer Any Two)

- Q3** a) Define and classify receptor. (3)
b) Explain the G-protein coupled receptor mediated mechanism of drug action. (7)
- Q4** a) Define neurohumoral transmission and explain briefly the neurohumoral transmission of cholinergic nerves. (5)
b) Write the pharmacological action, side effects and uses of cholinergic drugs. (5)
- Q5** a) Define and classify Sedatives and Hypnotics. (4)
b) Write the mechanism of action, adverse effects and therapeutic uses of Benzodiazepines. (6)
- Q6** a) Classify the drugs used in Parkinsonism. (5)
b) Write pharmacological action and adverse effects of levodopa. (5)

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B.Pharm
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4th Semester Regular / Back Examination: 2021-22

PHARMACOGNOSY & PHYTOCHEMISTRY-I

BRANCH: B.Pharma

Time : 3 Hour

Max Marks : 75

Q.Code: J674

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 × 10)

- a) Define Pharmacognosy.
- b) Write the biological source and uses of Chaulmoogra oil.
- c) What is stomatal index?
- d) What is mutation?
- e) Define secondary metabolites.
- f) Write the applications of Auxin.
- g) Write the biological source and chemical constituents of Acacia.
- h) Define Glycosides.
- i) Write the biological source and uses of Tragacanth.
- j) Define Foreign organic Matter.

Part-II

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

- a) Lycopodium spore method.
- b) Ash value.
- c) Write a note on Edible vaccines.
- d) Write the general chemical tests of alkaloids.
- e) Give a note on Resins.
- f) Define and write the principle of Ayurveda.
- g) Explain about natural allergens with suitable examples.
- h) Write the pharmacognostical profile of cotton.
- i) Give a note on marine drugs.

Part-III

Long Answer Type Questions (Answer Any Two)

Q3 What are crude drugs? Write the classification of crude drugs in detail with suitable examples. **(10)**

Q4 Describe the various factors affecting cultivation of medicinal plant. **(10)**

Q5 Define adulteration of crude drugs and Explain about different types of adulterants with suitable examples. **(10)**

Q6 What is plant tissue culture? Write about types of cultures, Nutritional requirements and applications of plant tissue culture in pharmacognosy. **(10)**