

4th Semester Regular Examination 2018-19

MEDICINAL CHEMISTRY -I

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 75

Q.CODE : F244

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.
The figures in the right hand margin indicate marks.

Part- A

Objective Answer Type Questions (Answer All)

(2 x 10)

- How Bio-isosters classified, give example.
- State Henderson-Hassel Bach equation for acid & base.
- Write the structure and IUPAC name of Bitolterol.
- Outline the importance of Partition coefficient in drug design.
- Write the chemistry & uses of Physostigmine.
- Outline the synthesis of Carbachol.
- Write the structure and IUPAC name of Morphine.
- How you differentiate sympathetic and Parasympathetic neurotransmitter.
- Write MOA of Tolazoline.
- Write Mechanism of action of Opioids.

Part- B

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

(5 x 7)

- Explain Phase-I Principle for Drug metabolism.
- Explain the bio-synthetic pathways of Catecholamine.
- Write down the synthesis MOA and uses of Salbutamol.
- Explain SAR of Aryl-Ethanol-amines as β - blocker.
- Write the synthesis, MOA and uses of Neostigmine.
- Distinguish between Cholinergic agonists and antagonist with example, write detail on Ipratropium bromide.
- Explain MOA of Anti-convulsant with reference to the drug Phenytoin.
- Explain the chemistry and outline the synthesis of Diazepam.
- Classify NSAID with example. Give synthetic route and uses of Mefenamic acid.

Part-C

Long Answer Type Questions (Answer Any Two)

Classify antipsychotics with suitable examples. Describe SAR of Butyrophenones, taking the example of Haloperidol.

(10)

Define Hypnotic and sedative. Classify it with examples. Discuss SAR of Barbiturates.

(10)

Classify Parasympatholytics drugs with examples. Discuss SAR of Cholinolytic agent. Write structure and uses of Atropine Sulphate.

(10)

Classify General anaesthetics with examples. Describe synthetic route, MOA and uses of Methohexital sodium and Ketamine Hydrochloride

(10)



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B.Pharm
BP405T

4th Semester Regular Examination 2018-19

PHARMACOGNOSY I

BRANCH : B.Pharma

Max Marks : 75

Time : 3 Hours

Q.CODE : F668

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.
The figures in the right hand margin indicate marks.

- Q1** **Part- A** **Objective Answer Type Questions (Answer All)** **(2 x 10)**
- a) Write the biological source and uses of Agar.
 - b) Define Ayurveda.
 - c) Write about organoleptic evaluation of crude drugs.
 - d) What is soil fertility?
 - e) State the definition of hybridization.
 - f) Write the general properties of volatile oil.
 - g) Write the biological source and therapeutic uses of Papain.
 - h) Define optical rotation.
 - i) Write the biological source and uses of Bees wax.
 - j) State the biological source and chemical constituents of Hemp.

- Q2** **Part- B** **Focused-Short Answer Type Questions- (Answer Any Seven)** **(5 x 7)**
- a) Write a note on Soil.
 - b) Differentiate organized and unorganized drugs with examples.
 - c) What is mutation? Write the different types of mutation.
 - d) Write the applications of Auxin and Cytokinin.
 - e) Illustrate the applications of plant tissue culture.
 - f) Explain in details about natural allergens with examples.
 - g) Illustrate the pharmacognostical profile of Honey.
 - h) Distinguish between primary and secondary metabolites.
 - i) Explain the biological source, chemical nature and uses of Cotton.

- Part-C**
Long Answer Type Questions (Answer Any Two)
- Q3** Describe the different conditions involved in adulteration and different types of adulterants. **(10)**
 - Q4** Discuss in detail about the culture media used in plant tissue culture. **(10)**
 - Q5** Classify crude drugs with suitable examples in details. **(10)**
 - Q6** Describe the different methods of pest control management. **(10)**



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B.Pharm
BP404T

4th Semester Regular Examination 2018-19

PHARMACOLOGY-I

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 75

Q.CODE : F520

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.
The figures in the right hand margin indicate marks.

Part- A

(2 x 10)

- 1 **Objective Answer Type Questions (Answer All)**
- Define therapeutic index. How it will be calculated?
 - What is competitive antagonism? Write one example.
 - Define synergism with examples.
 - What is Co-transmission?
 - Benzodiazepines are preferred over barbiturates –comment.
 - Differentiate Tolerance & Dependence.
 - What is vesicular reuptake during neurohumoral transmission of noradrenaline? Write one example of its vesicular reuptake inhibitor.
 - State the mechanism of local anaesthetics with one example.
 - Name any two opioid antagonist with their uses.
 - What are anorectics? Write their uses.

Part- B

(5 x 7)

- Q2 **Focused-Short Answer Type Questions- (Answer Any Seven)**
- Explain different Phase-II metabolic reaction with suitable examples.
 - Briefly describe about the different types of drug interactions with examples.
 - Briefly enumerate about the different phases of clinical trial.
 - Give a brief account on the treatment of parkinsonism disease.
 - Classify and write about the common pharmacological actions of alpha adrenergic blockers.
 - Write the mechanism, adverse effect and uses of phenytoin.
 - Write a note on centrally acting muscle relaxants,
 - Describe any five factors modifying the action of drugs.
 - Explain about the different types of adverse drug reactions with suitable examples.

Part-C

- Q3 **Long Answer Type Questions (Answer Any Two)** (10)
- Classify β adrenergic blockers. Describe the pharmacology of propranolol.
- Q4 (10)
- Define analgesics. Classify opioid analgesics with examples and write about the pharmacological action of morphine.
- Q5 (10)
- Classify anticholinergic drugs with examples. Explain about the pharmacological action of atropine.
- Q6 (10)
- Classify sedatives and hypnotics. Write M.O.A., adverse effect and uses of benzodiazepines.



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B.Pharm
BP403T

4th Semester Regular Examination 2018-19

PHYSICAL PHARMACEUTICS-II

BRANCH : B.Pharma

Time : 3 Hours

Max Marks : 75

Q.CODE : F381

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.
The figures in the right hand margin indicate marks.

Part- A

Q1 Objective Answer Type Questions (Answer All) (2 x 10)

- State mobility and kinematic viscosity.
- Define light powders and heavy powders with example.
- Differentiate between under size and over size frequency distribution in powders.
- Zero order reactions are dependent upon the concentration of reactant. Comment.
- What is plug flow? How can it be minimized?
- State porosity. Derive the expression to determine it.
- Write the relationship among true solution, coarse suspension and colloids.
- Write Gold number with its Significance.
- State electro-kinetic and electro-dynamic in colloids.
- How does suspension differ from emulsion?

Part- B

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

- Describe briefly the applications of micromeritics in pharmacy.
- State Specific surface. Write down any two methods for its determination.
- Differentiate between Newtonian flow and non-Newtonian flow.
- Write down any two methods to purify colloids.
- Explain rheological properties of suspension.
- State half-life and shelf life of drug, and derive these for a drug following 1st order degradation kinetics.
- Explain Donnan membrane effect with suitable example.
- Describe different graphic presentations of size distribution data in powders.
- Explain briefly different types of tests to identify the types of emulsion.

Part-C

Q3 Long Answer Type Questions (Answer Any Two) (10)

Define Non-Newtonian flow of liquid. Describe the principle, construction of cup-bob over the advantage point in cone-plate method.

Q4 Discuss accelerated stability study for determining the shelf life of drug. Write down its applications and limitations. (10)

Q5 State colloid. Classify different type of colloid with suitable examples. (10)

Q6 Write the principle, construction and working of Coulter-Counter apparatus for the determination of particle size of powders. (10)



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B.Pharm
BP401T

4th Semester Regular Examination 2018-19
PHARMACEUTICAL ORGANIC CHEMISTRY - III
BRANCH : B.Pharma

Max Marks : 75

Time : 3 Hours

Q.CODE : F124

Answer Question No.1 (Part-A) and 02 (Part-B) which are compulsory and any TWO from Part-C.
The figures in the right hand margin indicate marks.

- Q1** **Part-A** **Objective Answer Type Questions (Answer All)** (2 x 10)
- Write down the structures of stereoisomers formed when cis-2-butene is reacted with bromine.
 - Differentiate between diastereomers and enantiomers.
 - Describe the isomerism exhibited by maleic acid and fumaric acid.
 - Explain the term chiral molecule.
 - State the necessary condition for a compound to show optical isomerism.
 - Explain the term Meso compound.
 - Write about conformational isomerism.
 - Why do not you expect geometrical isomers in case of 2-butyne.
 - Write down the structure of the following compounds:
i) Imidazole ii) Indole iii) Quinoline iv) Thiazole
 - State Clemmensen reduction.
- Q2** **Part-B** **Focused-Short Answer Type Questions- (Answer Any Seven)** (5 x 7)
- Define the term stereoisomerism and classify it with examples.
 - Write notes on Fischer's projection.
 - Explain E and Z system of nomenclature with examples.
 - Write short notes on resolution of racemic modification.
 - Explain R and S system of nomenclature with examples.
 - Write notes on conformational isomerism of n-Butane.
 - Explain stereospecific reaction.
 - Discuss the general methods of preparations of Furan.
 - Discuss the chemical properties of Imidazole.
- Q3** **Part-C** **Long Answer Type Questions (Answer Any Two)** (10)
- Discuss the synthesis, chemical reaction and medicinal uses of Pyrrole. (10)
- Q4** Discuss the synthesis, chemical reaction and medicinal uses of Pyrazole. (10)
- Q5** Explain the methods of preparation and chemical reaction of Pyridine. (10)
- Q6** **Write short notes on :**
- Wolff-Kishner reduction
 - Claisen Schmidt reaction