B. Pharmacy 5th Semester Question Paper 2018-2019

PHR-501 1019

Odd Semester Examination 2018-19

B. PHARMA. (SEMESTER-V)

PHARMACEUTICAL CHEMISTRY-V

Time: 03:00 Hours **Max Marks : 100**

Note: Attempt **all** questions. Each question carry equal marks.

Q1. Attempt any 4 of the following : (5X4=20 marks)

(a) Discuss enzyme kinetics. Give the significance of Michaelis-Menten constant.

(b) Enumerate vitamins used as coenzymes. Discuss any two of them.

(c) Write a short note on metals as co-enzymes and their significance.

(d) Discuss the reversible and allosteric inhibition of enzymes.

(e) Give the mechanism of enzyme action.

Q2. Attempt **any 4** of the following : (5X4=20 marks)

(a) Discuss aerobic glycolysis with energetics.

(b) Write a note on glycogenolysis.

(c) Give an account on ketone bodies and discuss their biosynthesis.

(d) Write the detail account on metabolism of galactose.

(e) What are essential fatty acids?

Q3. Attempt **any 4** of the following : (5X4=20 marks)

(a) Write a short note on biosynthesis of amino acids.

(b) Discuss the DNA replication process.

(c) What do you mean by biological oxidation?

(d) Write detail account on formation of deoxyribonucleotides.

(e) Give the metabolism of amino acids and conversion to specialized products.

Q4. Attempt **any 2** of the following : (10X2=20 marks)

(a) Describe the reaction, energetics and significance of citric acid cycle.

(b) Discuss the hexose monophosphate shunt and its significance.

(c) Explain the pathway of □-oxidation of palmitic acid. Add a note on its energetics.

Q5. Attempt **any 2** of the following : (10X2=20 marks)

(a) Define oxidative phosphorylation? Discuss its mechanism and energetics.

(b) Describe the biosynthesis of purine ribonucleotides.

(c) Discuss the biochemical aspects of carcinogensis and DNA repair mechanism.

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PHR-502 1069

Odd Semester Examination 2018-19

B. Pharma. (SEMESTER-V)

PHARMACEUTICAL TECHNOLOGY-I

Time: 03:00 Hours **Max Marks :100**

Note: Attempt **all** questions, each question carry equal marks.

Q1. Attempt **any 4** of the following : (5x4=20 marks)

(a) What is partition coefficient? Explain in detail about significance of partition coefficient as a preformulation parameter.

(b) Explain in detail about principle of working of aerosols.

(c) Write formulation and evaluation of suspensions.

(d) Write about different bases used for the formulation of suppositories.

(e) Dissolution and its importance.

Q2. Attempt **any 4** of the following : (5x4=20 marks)

(a) Displacement value

(b) Factors influencing drug penetration.

(c) Polymorphism

(d) Mechanisms of drug penetration

(e) Manufacturing procedure of suppositories.

Q3. Attempt **any 4** of the following : (5x4=20 marks)

(a) Evaluation parameters of suppositories.

(b) Dissociation constant

(c) Differences between cold cream and vanishing cream

(d) Shampoos

(e) Shaving and after shaving products

Q4. Attempt **any 2** of the following : (2 x 10 = 20)

(a) What are emulsions? Explain in detail about theories of emulsions.

(b) What are aerosols? Write in detail about evaluation parameters and packaging of aerosols.

(c) Explain liquid dosage form. Write different types of additives used in liquid dosage form with examples and evaluation parameters.

Q5. Attempt **any 2** of the following : (2 x 10 = 20)

(a) Write different mode of drug penetration across skin and factors influencing penetration of drug molecules through skin.

(b) Explain semi-solid dosage form and its type. Write different types of additives used in semi-solid dosage form with examples.

(c) Write different types of organoleptic properties and their effect on formulation.

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Odd Semester Examination 2018-19

B. PHARMA. (SEMESTER-V)

MEDICAL CHEMISTRY-I

Time: 03:00 Hours **Max Marks : 100**

Note: Attempt **all** questions, each question carry equal marks.

1. Attempt **any four** of the following : [5×4=20]

   (a) Discuss any four physicochemical properties of drug molecules which affect drug's biological action.

   (b) Define and classify Bioisosterism with suitable examples.

   (c) Explain the concept of Drug-receptor interaction with suitable diagram.

   (d) Write in detail about the concept of Prodrug. Enlist various advantages and disadvantages of Prodrugs.

   (e) What are receptors? Classify various types of receptors with their specific mechanism.

2. Attempt **any four** of the following : [5×4=20]

   (a) Write detail classification and SAR of Opioid analgesics.

   (b) Classify Sedatives and Hypnotics. Write Synthesis, MOA and Uses of Alprazolam.

   (c) Discuss Local Anaesthetics. Write Synthesis and MOA of Lignocain.

   (d) Classify General Anaesthetics with suitable examples and at least one structure of drug in each category.

   (e) Write synthesis, uses and MOA of Benzocain and Methadon.

3. Attempt **any four** of the following: [5×4=20]

(a) Classify Cholinergic drugs. Write Synthesis, MOA and Uses of Physostigmine.

(b) Discuss in detail SAR of Adrenergic drugs with suitable structures.

(c) Classify Adrenergic drugs. Write Synthesis, MOA and Uses of Salbutamol.

(d) Discuss detail classification of Skeletal Muscle Relaxants. Write Synthesis, MOA and Uses of Mephenesin.

(e) Write synthesis, uses and MOA of Adrenaline and Neostigmine.

4. Attempt **any two** of the following : [10X2=20]

(a) Classify Anticonvulsant drugs. Discuss detailed SAR, Synthesis, MOA and Uses of Phenytoin.

(b) Classify Antidepressant drugs with at least one structure in each category. Discuss detailed SAR of Imipramine.

(c) Discuss Atypical Antipsychotics with suitable examples. Write detail SAR of Phenothiazines.

5. Attempt **any two** of the following : [10×2=20]

(a) Write detail note on CNS stimulants OR Antiparkinsonism drugs.

(b) Classify Antianxiety drugs. Discuss detailed SAR, Synthesis, MOA and Uses of Diazepam.

(c) Write synthesis and MOA of any two:

(i) Fluoxetine

(ii) Valproic Acid

(iii) Haloperidol

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PHR-504

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Odd Semester Examination 2018-19

B.PHARMA. (Semester-V)

Pharmacology-I

Time: 03:00 Hours **Max. Marks:100**

Note: Attempt **all** questions, each question carry equal marks.

1. Attempt the following **(any four)** : [5x4=20]

   (a) Define Pharmacology and discuss various routes of drug administration.

   (b) Define the terms affinity, intrinsic activity, agonist, partial agonist and inverse agonist.

   (c) Explain the terms LD_{50} and ED_{50}.

   (d) What are principles of drug action with suitable examples?

   (e) Write a note on enzyme induction and enzyme inhibition.

2. Write short notes on **(any four)** : [5x4=20]

   (a) Factors modifying drug action

   (b) Phase I drug metabolism

   (c) Synergism

   (d) Dose response curve

   (e) Nuclear receptors

3. Attempt the following **(any four)** : [5x4=20]

   (a) Classify cholinergic and adrenergic receptors with examples in each category.

(b) Explain therapeutic uses of anticholinergic drugs

(c) Discuss the synthesis and uptake of catecholamines.

(d) Explain the pharmacological actions of sympathomimetics.

(e) Write the therapeutic uses of beta blockers.

4. Attempt the following **(any two)** : [10x2=20]

(a) Classify anti-epileptic drugs and discuss the pharmacological actions of phenytoin.

(b) Classify antipsychotics. Also discuss the therapeutic uses and side effects of chlorpromazine.

(c) Classify sedative-hypnotics and explain the mechanism of action of barbiturates.

5. Discuss the following in detail **(any two)** : [10x2=20]

(a) Classify local and general anesthetics. Give the mechanism of local anesthetics.

(b) Classify skeletal muscle relaxants and discuss centrally acting muscle relaxants

(c) Describe the transducer mechanism of G-protein coupled receptors in detail

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Odd Semester Examination 2018-19

B. PHARMA. (SEMESTER-V)

PHARMACEUTICAL MICROBIOLOGY

Time: 03:00 Hours **Max Marks : 100**

Note: Attempt **all** questions, each question carry equal marks.

1. Attempt any **four** of the following: [5X4=20]

   (a) Write a Short note on Bacterial cell.

   (b) Discuss scope of microbiology in the field of pharmacy.

   (c) Distinguish between bacteria and virus.

   (d) Explain significance of electron microscope.

   (e) Give classification of virus with examples.

2. Attempt any **four** of the following: [5X4=20]

   (a) Discuss gram staining and its technique.

   (b) Write a brief note on isolation of bacteria.

   (c) Define culture media. Mention its classification.

   (d) Write a descriptive note on fungi.

   (e) Explain the factors influencing microbial growth.

   (f) Write a note on measurement of microbial growth.

3. Attempt any **four** of the following: [5X4=20]

(a) Write the difference between disinfectants and antiseptics. Discuss the evaluation of antiseptics in detail.

(b) Write a note on preservative efficacy. Discuss phenol coefficient.

(c) Explain control of microorganism by chemical method.

(d) Give dynamics of disinfection.

(e) Draw a well-labeled diagram of autoclave and mention its working.

4. Attempt any **two** of the following: [10X2=20]

(a) How sterilization processes are validated? Explain in detail.

(b) Discuss sterility testing as per I.P in detail.

(c) Explain the microbial standards of non sterile products.

5. Attempt any **two** of the following: [10X2=20]

(a) Discuss the microbial assay (as per I.P.) of Erythromycin.

(b) Describe the microbiological assay (as per I.P.) procedure of niacin.

(c) Give the microbiological assay (as per I.P.) procedure of penicillin.

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