Registration No : | | | | | | | | | | |

Total Number of Pages: 02 **B .Pharm.**
BP601T

6th Semester Regular / Back Examination: 2021-22
MEDICINAL CHEMISTRY-III
BRANCH(S): B Pharma
Time: 3 Hour
Max Marks : 75
Q.Code:J066

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) Write the structure and MOA of Cephalosporins.
b) Define Antibiotics and classify it.
c) Write the structure and uses of Amphotericin- B
d) Define Prodrug and Write it's application.
e) Write the structure and MOA of Clotrimazole.
f) Define drug design and Write the importance of drug design.
g) Define antiviral drug and classify it with examples.
h) Write the synthesis of Mebendazole and write it's use.
i) Write the MOA and use of Rifampicin.
j) Write the importance of Tetracyclines.

Part-II

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

a) Classify Anti-Malerial agents with suitable examples. Outline the synthesis of Chloroquine.
b) Define Anti Protozoalagents , classify it and write the synthesis, MOA and uses of Metronidazole.
c) Briefly explain the various Approaches used in drug design.
d) Define the following parameter of QSAR.
  I. Partition co- efficient
  II. Hammett's electronic parameter
  III. Tafts steric parameter
  IV. Hansen analysis
e) Write the MOA and uses of following drugs:-
  I. Azithromycin
  II. Streptomycin
  III. Ribavirin
  IV. Ivermectin
f) Write the synthesis and MOA of Isoniazid
g) Write the SAR of Quinolones and Nalidixic acid.
h) Write about PharmacophoreModeling and Docking technique.
i) Write the SAR and Importance of Penicilin and Tertracyclins.

Part-III

Long Answer Type Questions (Answer Any Two)

Q3	Define and classify Antibiotics with suitable examples. Give the synthesis, MOA and importance of Penicilin and Cephalosporins.	**(10)**
Q4	Define, Urinary tract anti- infective agents and classify it with examples. Write the synthesis of Ciprofloxacin.	**(10)**
Q5	Define, Anthelmintics and classify it with examples.Write synthesis and MOA of diethylcarbamazine.	**(10)**
Q6	Explain, the various approaches used in drug design and give a brief note on Docking techniques.	**(10)**

Registration No : | | | | | | | | | | |

Total Number of Pages : 02 **B.Pharm.**
BP602T

6th Semester Regular / Back Examination: 2021-22
PHARMACOLOGY- III
BRANCH(S): B.Pharm.
Time : 3 Hour
Max Marks: 75
Q.Code: J126

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 Digestants and carminatives with examples.
b) Define COPD. Classify drugs used for COPD.
c) Discuss the MOA of H_2-blockers.
d) What are prokinetics?
e) Write the MOA of Tetracycline.
f) Write the MOA of Fluoroquinolones.
g) What is Cotrimoxazole?
h) Define and classify antifungal drugs.
i) What is Nasal decongestant?
j) Define Teratogenicity.

Part-II

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

a) Anti-emetics
b) Respiratory stimulants
c) Chemotherapy of tuberculosis
d) Chemotherapy of STD
e) Expectorants and antitussives
f) Immunosuppressants
g) Organophosphate poisoning
h) Toxicity studies
i) Biological clock and their significance

Part-III

Long Answer Type Questions (Answer Any Two)

Q3 What is bronchial asthma. Classify drugs used in bronchial asthma. Write the Mechanism of action, pharmacological action, Adverse effects and uses of Theophylline. **(10)**

Q4 Answer the following questions:

a) Discuss the mechanism of gastric acid secretion and its regulation. **(5)**
b) Discuss the mechanism of different drugs used for reduction of gastric acid secretion. **(5)**

Q5 Define and classify antimicrobial agents. Write mechanism and adverse effect of beta-lactam antibiotics. **(10)**

Q6 **Write the mechanism and uses of the following drugs:** **(2.5 × 4)**

a) Methotrexate
b) Acyclovir
c) Azithromycin
d) Trimethoprim

Registration No: | | | | | | | | | | |

Total Number of Pages : 01 **B.Pharm.**
BP603T

6th Semester Regular / Back Examination: 2021-22
HERBAL DRUG TECHNOLOGY
BRANCH(S): B. Pharma
Time : 3 Hours
Max Marks : 75
Q. Code : J201
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 medicinal herb with example.
b) Write various sources of natural medicinal agents.
c) Define Nutraceuticals with example.
d) Differentiate Aristas and Asawas.
e) Define health foods with example.
f) What do you mean by ash value? Write significance of Total ash value.
g) Expand and define IPR.
h) Write biological source of any one natural colourant.
i) Differentiate churna and bhasma.
j) What is *similia similibus* doctrine in homoeopathy?

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

a) Discuss about the basic principles involved in Ayurveda.
b) Outline good agricultural practices in reference to cultivation of medicinal plants.
c) Write short notes on antioxidants of herbal origin.
d) Submit a brief note on nutraceuticals having health benefit in the Diabetes.
e) Discuss various standardization parameters for ghutika.
f) Write a brief note on Patenting aspects of traditional knowledge and natural products in reference to neem.
g) Write notes on Herb-Drug interaction.
h) Write notes on Herbal formulations.
i) Write notes on bio-insecticides.

Part-III

Long Answer Type Questions (Answer Any Two)

Q3 Give a note on herbal cosmetics. **(10)**

Q4 Write in detail about Herbal excipients. **(10)**

Q5 Discuss in detail on evaluation methods for herbal drugs as per WHO guidelines. **(10)**

Q6 Present an account of plant based industries and institutions involved in work on medicinal and aromatic plants in India **(10)**

Registration No : | | | | | | | | | | |

Total Number of Pages : 01

B.Pharm
BP604T

6th Semester Regular / Back Examination: 2021-22
BIOPHARMACEUTICS AND PHARMACOKINETICS
BRANCH(S): B.Pharma
Time : 3 Hour
Max Marks : 75
Q.Code : J244

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 Biopharmaceutics.
b) What is $t_{1/2}$ of drugs?
c) What do you mean by apparent volume of distribution?
d) What is intrinsic dissolution rate?
e) Define therapeutic window of a drug.
f) What is blood-brain barrier?
g) What do you mean by clearance?
h) Give one example of acetylation reaction.
i) Define Bioavailability and Bioequivalence.
j) What do you mean by Mean residence time?

Part-II

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

a) Describe briefly carrier-mediated transport.
b) How polymorphism affects bioavailability?
c) What is pH partition hypothesis?
d) What are the various patient related factors for protein-drug binding? Give Examples.
e) Describe the major physiological biological barriers for distribution of drugs.
f) Describe briefly *in-vitro in-vivo* correlation.
g) Describe Noyes-Whitney equation.
h) Discuss various factors causing Non-linearity.
i) Which metabolic reactions are considered as phase III reactions?

Part-III

Long Answer Type Questions (Answer Any Two)

Q3 Describe different theories of drug dissolution. **(10)**

Q4 Write the different processes involved in urinary excretion of drugs. **(10)**

Q5 Discuss different Pharmacokinetic Parameters for one compartment open model for Extravasuclar Administration. **(10)**

Q6 Describe the methods used to enhance the bioavailability of poorly soluble drugs. **(10)**

Registration No : | | | | | | | | | | |

Total Number of Pages : 01 **B.Pharm**
BP605T

6th Semester Regular / Back Examination: 2021-22
Pharmaceutical Biotechnology
BRANCH(S): B.Pharma
Time : 3 Hour
Max Marks : 75
Q.Code : J287

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 transducers.
b) Define Haptens.
c) What are plasmids?
d) Define Sparger.
e) What is DNA Ligase?
f) Define primers.
g) Define mutation.
h) Write two important characteristics of IgM.
i) Define transduction.
j) Define subunit vaccines.

Part-II

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

a) Discuss in detail about Biosensors and its different parts.
b) Discuss about Southern blotting technique.
c) Define cloning vector? Discuss about an ideal vector with neat labeled diagram.
d) Discuss briefly about biotransformation and write its advantages.
e) Define immunoglobulins and discuss about typical structure of an immunoglobulin.
f) Discuss in detail about downstreaming of penicillin after completion of fermentation.
g) Define hypersensitivity reaction and write in detail about Type I hypersensitivity reaction.
h) Discuss in detail about Fermentor and its different parts.
i) Write about different types of mutation.

Part-III

Long Answer Type Questions (Answer Any Two)

Q3 What is enzyme immobilization? Write its methods and applications **(10)**

Q4 Write in detail about insulin production by genetic engineering technique. **(10)**

Q5 Discuss hybridoma technology. Write its application for production of monoclonal antibody. **(10)**

Q6 **Write notes on :**

a) Transformation **(5)**
b) Transduction **(5)**

Registration No : | | | | | | | | | | |

Total Number of Pages : 02

B.Pharm
BP606T

6th Semester Regular / Back Examination: 2021-22
QUALITY ASSURANCE
BRANCH(S): B. Pharma
Time : 3 Hour
Max Marks : 75
Q.Code : J356

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) Potency complaint is which type of complaint?
b) Mention the importance of Distribution record.
c) What is P-D-C-A
d) Write the importance and efficacy of HEPA filter
e) What do you mean by NABL accreditation?
f) Mention the need of ISO14000.
g) Define quarantine area.
h) What is validation master plan?
i) Define the importance of Master Formula Record.
j) Define Total Quality Management.

Part-II

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

a) What are GLP and GMP? Write the relationship between GLP and GMP.
b) Write the differences between calibration and validation.
c) What is quality audit?
d) Write the principles of GLP and briefly write the non-clinical study protocol.
e) What are the responsibilities of QA personnel in pharmaceutical industry?
f) White a short note on TQM.
g) Discuss the ISO 9000 series in brief.
h) What is QbD? Why QbD is essential in pharmaceutical industry?
i) Write the importance of material management in pharmaceutical industries?

Part-III

Long Answer Type Questions (Answer Any Two)

Q3 Write the types of complaints. Write briefly good complaint handling system according to GMP in compliance with EU and USA regulations. **(10)**

Q4 What is stability testing? List the categories of ICH topics. Write in detail about ICH stability testing guidelines. **(10)**

Q5	What is SOP? Describe the format of technical SOP. Mention the benefits of the SOP.	**(10)**
Q6	What is secondary packing? Write in detail about quality control test for containers, and closures.	**(10)**