PAPER ID-420677

Roll No: | | | | | | | | | | | | |

BPHARMA
(SEM VI) THEORY EXAMINATION 2021-22
MEDICINAL CHEMISTRY III – THEORY

Time: 3 Hours *Total Marks: 75*

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	What is B-lactam antibiotics? Give some examples.
b.	Draw the chemical structures of minocycline and doxycycline.
c.	Write the mechanism of action of Chloramphenicol.
d.	Define prodrugs with examples.
e.	Enlist urinary tract anti-infective agents.
f.	Write the mode of action and uses of zidovudine.
g.	Write mode of action and synthesis of isoniazid.
h.	Define anthelmintic agents. Write the synthesis of Mebendazole.
i.	Define QSAR.
j.	Describe applications of combinatorial Chemistry.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Discuss in detail about cephalosporins with suitable examples.
b.	Explain SAR of tetracycline. Discuss its mechanism of action and uses.
c.	Describe structure activity relationship of 4-amino quinolone. Explain mechanism of action and synthesis of Chloroquine.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Explain substituent hydrophobicity constant in relation to drug design.
b.	Explain in detail about aminoglycosides with examples.
c.	Discuss chemistry, classification and SAR of Sulfonamides with suitable examples.
d.	Classify synthetic antifungal agents. Describe mechanism of action, synthesis and uses of Miconazole.
e.	Define combinatorial chemistry and explain in detail about solid phase synthesis.
f.	Define and classify anti tubercular agents. Explain in detail with suitable example.
g.	Describe the synthesis and uses of Acyclovir, Ciprofloxacin and Dapsone.

Printed Pages: 01 **Sub Code: BP - 602T**

Paper Id: 231728 **Roll No.** | | | | | | | | | | |

B PHARM
(SEM VI) THEORY EXAMINATION 2022-23
PHARMACOLOGY-III

Time: 3 Hours ***Total Marks: 75***

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **2 x 10 = 20**

a. Differentiate Antitussives and Expectorants.

b. Enlist the name of emetics.

c. Quote the adverse effects of Chloramphenicol.

d. Give the uses of Cephalosporins.

e. Classify anti-malarial drugs.

f. Enlist anti-amoebic drugs.

g. Give mechanism of action of Muromonab CD3.

h. What is genotoxicity?

i. Define teratogenicity.

j. Demonstrate Chronopharmacology.

SECTION B

2. Attempt any *two* parts of the following: **10 x 2 = 20**

a. Classify Anti-asthmatic drugs. Write mode of action, adverse drug reactions and uses of Sympathomimetics.

b. Classify Anti-viral drugs. Write mode of action, adverse drug reactions and uses of Acyclovir.

c. Explain Immunomodulator drugs. Write mode of action, adverse drug reactions and uses of Cyclophosphamide.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a. Classify Anti-ulcer drugs. Write mode of action, adverse drug reactions and uses of proton pump inhibitors.

b. Classify Sulfonamides. Write mode of action, adverse drug reactions and uses of Cotrimoxazole.

c. Enlist Anti-fungal drugs. Write mode of action, adverse drug reactions and uses of Polyene antibiotics.

d. Write mode of action, adverse drug reactions and uses of Dapsone and Clofazimine.

e. Write a detailed note on biosimilars.

f. Explain the treatments and management of barbiturates and arsenic poisoning.

g. Illustrate the treatment of urinary tract infections.

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Subject Code: BP602T

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BPHARMA
(SEM VI) THEORY EXAMINATION 2021-22
PHARMACOLOGY III – THEORY

Time: 3 Hours *Total Marks: 75*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 10 x 2 = 20

a.	Mention four antidiarrhoeal drugs.
b.	Define genotoxicity.
c.	What is biosimilars?
d.	Enlist nonsystemic antacids.
e.	What is biological clock?
f.	How does cotrimoxazole acts in our body?
g.	Suggest antidote for heavy metal poisoning.
h.	Mention few examples of uses of corticosteroids.
i.	Name the drugs used in the treatment of leprosy.
j.	Define chronotherapy and rhythm.

SECTION B

2. Attempt any *two* parts of the following: 2 x 10 = 20

a.	Classify antiemetics. Explain mechanism of action, uses and side effects of domperidone.
b.	Narrate the various reasons for drug resistance and suggest some measures to control them.
c.	Explain the various categories of antitubercular drugs with examples and their mechanism of action. What is DOTS therapy?

SECTION C

3. Attempt any *five* parts of the following: 7 x 5 = 35

a.	What is bronchial asthma? Classify the drugs used for its treatment suggesting their mechanism of action.
b.	Briefly narrate the various categories of antibiotics suggesting their mechanism of action with examples.
c.	Write an exhaustive note on Sexually transmitted diseases.
d.	Illustrate with suitable examples the various types of immunostimulants.
e.	Explain the clinical symptoms and management of barbiturates and arsenic poisoning.
f.	Write short notes on: i. Acute and chronic toxicity ii. Protein drugs
g.	Explain the mechanism of action, side effects and therapeutic uses of alkylating agents.

Printed Pages: 01 **Sub Code: BP603T**

Paper Id: 232117 **Roll No.** | | | | | | | | | | |

B PHARM
(SEM VI) THEORY EXAMINATION 2022-23
HERBAL DRUG TECHNOLOGY

Time: 3 Hours ***Total Marks: 75***

Note: 1. Attempt all Sections.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a. What is Schedule T

b. Write the advantage of Biopesticides.

c. Write the Characteristics of Hair dye.

d. Give the source chemical constituents and uses of any two natural gums.

e. What is Gutika?

f. Define flavors. Mentioned two examples of natural flavoring agents.

g. Write down the biological source of Any two natural coloring agents.

h. Define organic forming.

i. Mentioned the constituents and uses of spirulina.

j. Write a short note on natural binders and diluents used in herbal excipients.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a. Explain the need for quality control of Raw materials and extracts. Describe WHO guidelines for quality control of herbal drugs.

b. Define and classify nutraceuticals with examples. Gives the source and uses of Spirulina.

c. Define and classify herbal excipients with examples. Describe herbal excipients in cosmetics.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a. Explain the health benefits of Nutraceuticals for diabetes.

b. Role of Antioxidants for the skin disorder. Support your answer with suitable examples.

c. Write a note on morphological authentication of medicinal plants.

d. Write a scope and future prospects of the herbal drug industry.

e. Write a note on binders and diluents used as an herbal excipients.

f. Discuss Herbal drugs and Herbal- food interactions with examples.

g. Write a note on

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BPHARMA
(SEM VI) THEORY EXAMINATION 2021-22
HERBAL DRUG TECHNOLOGY – THEORY

Time: 3 Hours *Total Marks: 75*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION: A

1. Attempt *all* questions. **10 x 2 = 20**

a.	Define herb and herbal medicine .
b.	What do you mean by Bio-insecticides?
c.	Define neutraceuticals.
d.	Write botanical source and uses of Feenugreek.
e.	What are viscosity builders? Give example.
f.	What is the significance of natural colorants? Give example of one natural colorant.
g.	Define Patent.
h.	Differentiate between bioprospecting and biopiracy.
i.	What are bleaching agent?
j.	Gives two examples of natural sweeteners.

SECTION: B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Write an exhaustive note on WHO guidelines on Quality Control of herbs.
b.	What do you mean by GMP? Write its components and objectives in detail.
c.	What is herb-drug interaction? Discuss with examples.

SECTION: C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Write about principles of Ayurveda and Homeopathy systems of medicines.
b.	Write a note on nutraceuticals.
c.	Write an exhaustive note on excipients, their individual significance along with examples.
d.	What are IPR? Give its types. Explain in detail about the case of biopiracy of Neem.
e.	Write composition of ASU-DTAB and ASU-DCC and their responsibilities.
f.	What are Novel Dosage forms? How they differ from conventional dosage forms? Explain phytosomes in detail.
g.	Write a note on Arishtha or Bhasams.

Printed Pages: 01 **Sub Code: BP-604T**

Paper Id: 231887 **Roll No.** | | | | | | | | | | |

B PHARM
(SEM VI) THEORY EXAMINATION 2022-23
BIOPHARMACEUTICS AND PHARMACOKINETICS

Time: 3 Hours ***Total Marks: 75***

Note: Attempt all Sections.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a. Write the name the various barriers for drug distribution.

b. Define apparent volume of distribution and protein binding of drug.

c. Define renal clearance. Give the name of non-renal routes of drug excretion of drugs.

d. Define bio-availability and bio-equivalence.

e. Write the difference between absolute with relative bioavailability.

f. Give the advantages of physiological models.

g. Define total clearance.

h. What is the significance of maintaining steady state drug levels in pharmacokinetics?

i. Define non-linearity.

j. Give Michaelis-Menten equation.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a. Enlist various factors influencing GI absorption of a drug from its dosage form and explain physicochemical factors affecting drug absorption in detail.

b. Discuss in detail two-compartment open model for a drug administered as IV Bolus. Give the schematic representation, graphs and equations for the same.

c. What is the difference between linear and non-linear pharmacokinetic? List out the reasons for non-linearity in pharmacokinetic studies.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a. Discuss in detail the various pharmaceutical factors affecting drug absorption.

b. Explain the following terms- Clearance, Total body clearance, Hepatic clearance and Renal clearance.

c. Describe the method to calculate absorption rate constant for one compartment open model extra vascular first order kinetics.

d. What is the reason behind initial rapid decline and terminal slow decline of the conc. of drug in the central compartment? Discuss the reason.

e. How will you affect dosage adjustment in renal failure?

f. Describe the various methods aimed at enhancing bioavailability of drug from its dosage form.

g. Describe the kinetics of capacity-limited or saturable processes of non-linearity.

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BPHARMA
(SEM VI) THEORY EXAMINATION 2021-22
BIOPHARMACEUTICS AND PHARMACOKINETICS – THEORY

Time: 3 Hours *Total Marks: 75*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 10 x 2 = 20

a.	Classify different types of pharmacokinetic models.
b.	Compare absolute bioavailability with relative bioavailability.
c.	Define clearance. What are its units?
d.	Define volume of distribution.
e.	What are the advantages of IV infusion injection?
f.	Enumerate the factors affecting drug absorption.
g.	Mention the non-renal routes of drug excretion of drugs.
h.	How will you define steady state drug levels?
i.	Define Nonlinear Pharmacokinetics.
j.	Enlist the various methods to enhance the dissolution rates of poorly soluble drugs.

SECTION B

2. Attempt any *two* parts of the following: 2 x 10 = 20

a.	Discuss the various mechanisms of drug absorption through GIT.
b.	How will you calculate loading dose? Discuss its role in maintenance of dose.
c.	Describe Michaelis-menton method of estimating pharmacokinetic parameters.

SECTION C

3. Attempt any *five* parts of the following: 7 x 5 = 35

a.	Describe the various factors causing nonlinearity.
b.	Write a detailed note on Wagner Nelson method for the calculation of absorption rate constant for extravascular administration.
c.	Explain in detail the plasma level time curve for a two compartment open model.
d.	What do you mean by drug metabolism? Explain factors affecting renal excretion of drugs.
e.	Enumerate the objectives of bioavailability. Discuss the direct methods for tis assessment.
f.	Give the kinetics of protein binding along with its clinical significance.
g.	What is AUC? Describe the trapezoidal method for its calculation.

Printed Pages: 01 **Sub Code: BP-605T**

Paper Id: 231973 **Roll No.** | | | | | | | | | | |

B PHARM
(SEM VI) THEORY EXAMINATION 2022-23
PHARMACEUTICAL BIOTECHNOLOGY

Time: 3 Hours ***Total Marks: 75***

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a. Explain role of catalase and peroxidase enzymes.

b. What is protein engineering.

c. Define vectors along with two examples.

d. What do you mean by PCR.

e. Define cellular and humoral immunity.

f. Define monoclonal antibodies.

g. Explain mutation and mutagens with examples.

h. Explain ELISA.

i. Define fermenter and their types.

j. Write name of any two microorganisms used in production of citric acid.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a. Explain biosensors and their types along with applications.

b. Explain in detail about production and purification of monoclonal antibodies by hybridoma technology.

c. Explain in detail PCR and its applications.

SECTION C

3. Attempt any *five* parts of the following: **5 x 7 = 35**

a. Explain scope and application of pharmaceutical biotechnology.

b. Write in detail different methods of enzyme immobilization.

c. Write in detail the method of preparation of insulin by recombinant DNA technology.

d. Differentiate between prokaryotes and eukaryotes.

e. Explain the production of vitamin B12 by fermentation.

f. Explain general method of preparation and storage of bacterial vaccines.

g. Explain different types of hypersensitivity reactions with example.

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BPHARMA
(SEM VI) THEORY EXAMINATION 2021-22
QUALITY ASSURANCE– THEORY

Time: 3 Hours *Total Marks: 75*

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **10 x 2 = 20**

a.	Define the term Calibration.
b.	Compare the qualification and validation of instruments.
c.	What is the definition of Quality by design (QbD).
d.	Define the Quality Control.
e.	Outline the role of quality documentation in pharmaceutical industries.
f.	Define the applications of Q-series guidelines in quality control and assurance.
g.	List the requirements for good laboratory practices.
h.	Summarize the role of environmental control for quality control.
i.	Define Batch formula record.
j.	Define the term GMP.

SECTION B

2. Attempt any *two* parts of the following: **2 x 10 = 20**

a.	Write the principles and procedures of NABL Accreditation.
b.	Write a note on Total Quality management.
c.	Discuss the types of validation processes with their importance and the scope.

SECTION C

3. Attempt any *five* parts of the following: **7 x 5 = 35**

a.	Explain the ISO 9000 guidelines.
b.	Discuss the procedure for maintenance of sterile areas and control of contamination in pharmaceutical industries.
c.	Write a note on Master formula record and SOP.
d.	Define complaints. Discuss the procedure for evaluation of complaints.
e.	Discuss the General Provisions of Good Laboratory Practices.
f.	Construct a short note on good warehousing practices.
g.	Outline the concept of total quality management with its elements and philosophies.