DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary End Semester Examination – Winter 2023

Date	: 30/12/2023		
Course	: B. Pharmacy	**Sem:** VI	
Subject Name	: Medicinal Chemistry III	**Subject Code:**	BP601T
Max Marks	: 75	**Duration**	: 3 Hr.

Instructions:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q. 1. Objective Type Questions (Answer all the questions) **(10 x 2) = 20**

i) Draw the structure of two tetracyclines.

ii) Outline synthesis of chloroquine.

iii) Enlist the physicochemical parameters used in QSAR.

iv) What is the mechanism of action of isoniazid?

v) What are the antimalarial derived from natural source?

vi) Draw any two structures from quinolone.

vii) Write examples the antifungal antibiotics.

viii) Write down mechanism of action of metronidazole.

ix) What is the category of Thiabendazole, Amodiaquine?

x) Enlist applications of combinatorial chemistry

Q. 2. Long Answers (Answer 2 out of 3) **(2 x 10) = 20**

i) Write in detail about classification of antibiotics depending on its chemical structure. Give emphasis on β-lactum antibiotics mechanism of action, examples.

ii) Give detailed account on sulfonamides and sulfones with its nomenclature, mechanism of action, spectrum.

iii) What is drug design? What are the various approaches used in drug designing detail?

Q. 3. Short Answers (Answer 7 out of 9) **(7 x 5) = 35**

i) Write a note on combinatorial chemistry.

ii) Discuss about benzimidazole derivatives as the antiprotozoal?

iii) Give emphasis on reverse transcriptase inhibitor.

iv) Write a note on agents used as urinary tract anti-infective.

v) Enlighten aminoglycoside antibiotics.

vi) Draw the synthesis of: Chloramphenicol and Para Amino Salicylic Acid.

vii) Explain the basic concept of prodrugs and its applications.

viii) Write a note on chemical classification of antimalarial agents.

ix) What are synthetic antitubercular agents?

——END OF THE PAPER——

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2023

Date: 01/01/2024

Course:	**B. Pharmacy**	**Sem:**	**VI**
Subject Name:	**Pharmacology III**	**Subject Code:**	**BP602T**
Max Marks:	**75**	**Duration:**	**3 Hr.**

Instructions:

1. **All questions are compulsory**
2. **Draw diagrams / figures wherever necessary**
3. **Figures to right indicate full marks**

Q. 1. Objective Type Questions (Answer all the questions) **(10 x 2) = 20**

i) Write MOA and Adverse effect of Sulfonamide.
ii) Write about the mode of action of macrolide antibiotics with examples.
iii) Write mechanism of action and therapeutic uses of fluoroquinolones.
iv) Define Digestants & Carminatives with suitable examples for each
v) Enlist the classification of Anti-Tuberculosis drugs
vi) Write MOA and Adverse effect of Tetracycline.
vii) Define the terms term acute, subacute and chronic toxicity.
viii) Classify anti-emetic agent with suitable examples
ix) Classify Immunosuppressive drug. Write MOA and Adverse effect of Cyclosporin
x) Write a note on management of Barbiturate poisoning

Q. 2. Long Answers (Answer 2 out of 3) **(2 x 10) = 20**

i) Summarize in detail life cycle of malaria parasite. Classify anti-malarial drugs with suitable examples. Add a note on MOA, Pharmacokinetics, ADR's, uses of Chloroquine.
ii) Classify Anti-ulcer drugs. Discuss in detail the management of Peptic ulcer.
iii) Illustrate anti-fungal agents with examples and write MOA, ADR's and therapeutic uses of Triazoles derivatives and Amphotericin B

Q. 3. Short Answers (Answer 7 out of 9) **(7 x 5) = 35**

i) Classify anti-asthmatic agents. Explain in detail pharmacology of Theophylline.
ii) Define Diarrhoea. Classify Anti-diarrhoeals with examples.
iii) Classify anti-viral drugs with examples. Write MOA, Uses & ADR of Zidovudine and Acyclovir.
iv) Classify penicillin. Explain in detail pharmacology of penicillin.
v) Classify anti-cancer agents with example. Give account of MOA & Uses of alkylating agents & 5 Fluorouracil
vi) Classify Cephalosporins. Enumerate the pharmacological classification of anti-neoplastic drugs with suitable examples.
vii) Classify anti-tubercular agents. Write MOA &Uses of isoniazid and rifampicin.
viii) Briefly highlight about the general principles for treatment against barbiturate and atropine poisoning.
ix) Write detailed note on chronopharmacology

------END OF THE PAPER------

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
Supplementary Semester Examination – Winter 2023

Date: 03/01/2024 Time: - 10.00 AM to1.00PM

Course: B.Pharmacy Sem: VI
Subject Name: Herbal Drug Technology Subject code: BP603T
Max Marks: 75 Duration: 3 hr

Instructions:
1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

Q. 1. Objective Type Questions (Answer all the questions) (10x2)= 20

i) Enlist different plants used as Biopesticides.
ii) Give any one side effects and drug interaction of Hypercium
iii) What are probiotics? Give examples.
iv) Give any four examples of Natural sweeteners.
v). What are polyherbal tablets? Discuss their evaluation parameters
vi). List any four plant-based industries in India
vii). Give evaluation parameters of Asava
viii). Define Bioprospecting.
ix). Enlist four dietary supplements under nutraceuticals.
x). Mention the evaluation parameters for herbal syrups

Q.2. Long answers (Answers 2 out of 3) (2x10)= 20

i) Write in detail processing of herbal raw material.
ii) What do you know about Health food? Explain health benefits of Garlic, Ginger and Amla.
iii) Discuss the Part-I components of GMP.

Q.3 Short answers (Answers 7 out of 9)

(7x5)=35

i). Discuss principle involved in Ayurveda
ii) Give the role of neutraceutical in treatment of cancer.
iii) Describe any five raw material of herbal origin used in hair care product with examples.
iv) Write the composition and function of ASU DTAB.
v) Write a note on Organic farming.
vi) Write present scope and future prospects of herbal drugs industry.
vii) Write a note on Phytosomes.
viii) What is Biopiracy? Explain with one case study.
ix) Write a note on stability testing of herbal drugs.

——END OF THE PAPER——

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary End Semester Examination – Winter 2023

Course : B. Pharmacy **Date:- 05/01/24** **Sem : VI**

Subject Name –Biopharmaceutics and Pharmacokinetics **Subject Code : BP604T**

Max Marks: 75 **Duration : 3 Hr**

Instructions:

1. **All Questions Are Compulsory**
2. **Draw diagrams / figures wherever necessary**
3. **Figures to right indicate full marks**

Q.1 Objective Type Questions (All Questions are compulsory) **(10 x 2) = 20**

i. Enlist different mechanisms of drug absorption.
ii. Define volume of distribution with example.
iii. Enlist non oral extra vascular route of drug administration.
iv. Enlist different routes of drug elimination.
v. Enlist factors affecting renal excretion.
vi. Discuss in brief about Phase I biotransformation reactions of metabolism
vii. Write the formula for Renal clearance (Cl_R) & Total Clearance (Cl_T).
viii. Explain steady state drug level.
ix. Define dosage regimen.
x. Write Michaelis-menton equation.

Q.2 Long Answer Question (Answer any 2 out of 3) **(2 x 10) = 20**

i. Define Bioavailability and Bioequivalence. Explain the objectives of bioavailability studies. Describe in detail methods used for determination of bioavailability.
ii. Discuss the concept of drug absorption. Enlist factors influencing absorption of drugs. Discuss pharmaceutical factors in detail.
iii. Explain in detail two compartment open model. Illustrate assessment of Pharmacokinetic parameters after IV bolus administration of drug for two compartment open model.

Q.3 Short Answer Questions (Solve any 7 out of 9) **(7 x 5) = 35**

i. Explain any 2 Mechanisms of drug absorption through GIT.
ii. Explain the concept of protein binding and illustrate any 4 factors affecting drug distribution.
iii. Illustrate Non renal routes of drug excretion of drugs.
iv. Explain Wagner Nelson method for estimation of Ka.
v. Describe compartment models.
vi. Explain the concept of loading and maintainance dose.
vii. Explain the factors causing Non-linearity in pharmacokinetics with suitable examples.
viii. Enlist USP *In vitro* dissolution test apparatus and illustrate any 4 apparatus.
ix. Describe physiological models.

End Of Paper

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2023

Date: 08/01/2024

Course	**:**	**B. Pharmacy**	**Sem: VI**		
Subject Name	**:**	**Pharmaceutical Biotechnology**	**Subject Code**	**:**	**BP605T**
Max Marks	**:**	**75**	**Duration**	**:**	**3 Hr.**

Instructions:

1. **All questions are compulsory**
2. **Draw diagrams / figures wherever necessary**
3. **Figures to right indicate full marks**

Q. 1. Objective Type Questions (Answer all the questions) **(10 x 2) = 20**

i) Draw neat labelled diagram of structure of immunoglobulin.

ii) What are mutants? Give their examples.

iii) Differentiate between genetic organization of eukaryotes and prokaryotes.

iv) Define biotechnology. Give its scope in pharmaceutical sciences.

v) State the uses of microbes in industry.

vi) What are the functions of DNA ligase and restriction endonucleases?

vii) Write the importance of aeration and stirring in fermentation.

viii) Define: Transformation and transduction.

ix) Differentiate between cellular and humoral immunity.

x) What is cold chain storage? State the storage conditions of vaccines.

Q. 2. Long Answers (Answer 2 out of 3) **(2 x 10) = 20**

i) What are biosensors? Explain the working and applications of biosensors in Pharmaceutical sciences.

ii) Illustrate the principle of rDNA technology with neat labelled diagram. Give the detailed account on human insulin production by rDNA technology.

iii) Explain the production and purification of monoclonal antibodies by hybridoma technology. Give their applications in pharmaceutical industry.

Q. 3. Short Answers (Answer 7 out of 9) **(7 x 5) = 35**

i) Explain in detail ELISA technique with neat labelled diagram.

ii) Illustrate the design of large scale production fermenter and explain its various controls.

iii) Explain the Collection and Storage of whole human blood. Extend the note on plasma substitutes.

iv) Give comparative explanation of hypersensitivity reactions.

v) Explain the structure and functions of Major Histocompatibility Complex (MHC).

vi) Write a note on Polymerase Chain Reaction (PCR).

vii) Explain the principle and methods of protein engineering.

viii) Explain the methods of enzyme immobilization.

ix) Write a note on cloning vectors in rDNA technology.

------END OF THE PAPER------

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Supplementary Examination - Winter 2023

Date: 10/01/2024

Course:	**B. Pharmacy**	**Sem :**	**VI**
Subject Name:	**Quality Assurance**	**Subject Code :**	**BP606T**
Max Marks :	**75**	**Duration :**	**3 Hr.**

Instructions:

1. **All questions are compulsory**
2. **Draw diagrams/figures wherever necessary**
3. **Figures to right indicate full marks**

Q.1. Objective Type Questions (Answer all the questions) **(10 x 2) = 20**

i) Give difference between QA and QC.

ii) Enlist Q series of ICH guidelines.

iii) Write down the importance of documentation in pharma industry.

iv) Define NABL acceleration.

v) What is mean by warehousing

vi) What is SOP?

vii) Enlist benefits of ISO 9000.

viii) What is mean by complaints and recalling?

ix) Classify packing material with examples.

x) Define GMP and give its importance.

Q. 2. Long Answers (Answer 2 out of 3) **(2 x 10) = 20**

i) What is mean by BFR and MFR? Explain them in detail.

ii) Write the principles of Calibration, Validation and Qualification.

iii) How to maintain organization and personal in pharmaceutical industry.

Q. 3. Short Answers (Answer 7 out of 9) **(7 x 5) = 35**

i) Explain in detail Quality control test for containers.

ii) Which are the various elements of TQM?

iii) Explain QSEM guidelines as per ICH.

iv) Explain steps involved in complaint handling.

v) What is mean by premises in the consideration of control of contamination in pharmaceutical industry?

vi) Discuss in brief different elements of GLP.

vii) Write a note on QbD.

viii) Mention the various steps for registration of ISO 9000 and 14000.

ix) Give the general principles of Analytical Method Validation.

------ END OF THE PAPER ------