

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Summer- 2023

Course: B. Pharmacy

Sem: 6th

Subject Name: Medicinal Chemistry-III

Subject Code: BP601T

Max Marks: 75

Date: 10/07/2023

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* 2) =20

- i. Write the structure and uses of Penicillin-G.
- ii. Give the synthesis of Isoniazid.
- iii. List out important anti-viral agents. Draw the structure of acyclovir.
- iv. Write the structure of any two anti-malarial drugs.
- v. What are antiprotozoal agents? Write the structure of metronidazole.
- vi. What are anthelmintics? Give examples.
- vii. Give the structure and IUPAC name of Dapsone.
- viii. Write the synthesis of para amino salicylic acid.
- ix. Define anti-tubercular agents? Name the causative organism for tuberculosis.
- x. Enlist the parameters of QSAR.

Q. 2. Long Answers (Answer 2 out of 3)

(2 x 10) = 20

- i. Define and Classify antimalarial agents with examples. Give the mechanism of action and outline the synthesis of chloroquine.
- ii. What are anthelmintics? Classify with suitable examples. Outline the synthesis and mechanism of action of Mebendazole.
- iii. What are antibiotics? Classify with examples. Discuss the SAR & MOA of tetracyclines.

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

(7 x 5) = 35

- i. What are aminoglycosides? Write the mechanism and SAR of aminoglycoside antibiotics.
- ii. Write a note on urinary tract anti-infective agents.
- iii. What are Sulphonamides? Explain their SAR.
- iv. Write a note on combinatorial chemistry and its applications.
- v. Define and classify anti-tubercular agents with examples. Write the MOA of isoniazid.
- vi. Add a note on synthetic antifungal agents. Give the synthesis of Tolnaftate.
- vii. Write a note on prodrug concept and applications of prodrugs design.

—END OF THE PAPER—

Course : B. Pharmacy
Subject Name : Pharmacology: III
Max Marks : 75

Sem:
Subject Code :
Duration:

VI
BP602T
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 reason: 'Chloramphenicol causes gray baby syndrome.'
- ii) Write mechanism of action of Cotrimoxazole.
- iii) What is mechanism of action of penicilin?
- iv) Define Antitussives along with Examples.
- v) Classify Antimicrobial agents based on chemical structure.
- vi) Give symptoms of morphine poisoning and specific antidote used for it.
- vii) Define emetics and antiemetics with example
- viii) What are immunosuppressants? Explain in brief.

- ix) Define carcinogenicity and teratogenicity.
- x) What is acute, sub acute and chronic toxicity?

Q. 2. Long Answers (Answer 2 out of 3)

(2 x 10) = 20

- i) Classify antineoplastic agents with examples and explain in detail mode of action, therapeutic uses and adverse effects of alkylating agents
- ii) Explain malaria cycle. Classify Antimalarial drugs with example and Discuss mechanism of action of Chloroquine.
- iii) What is peptic ulcer? Classify Antiulcer agents. Write the Pharmacology of PPIs

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

(7 x 5) = 35

- i) Discuss clinical symptoms and management of barbiturates poisoning
- ii) What is COPD ?Explain management of COPD
- iii) Define Respiratory stimulant with examples? Write MOA & therapeutic Uses of any one drug.

- iv) Define and classify Anti-fungal drugs. Explain anyone antifungal drug in detail.
- v) What are antibiotics? Give mode of action, adverse effect, therapeutic applications and contraindication for aminoglycoside antibiotics.
- vi) What is Tuberculosis? Classify Ant tubercular drugs and give mechanism of action for Isoniazid.
- vii) What is Urinary tract infection? Explain treatment for it.
- viii) Explain how biological clock works with significance of chronotherapy
- ix) Explain drugs used in the treatment of diarrhea.

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Course- B. Pharmacy

Subject Name- Biopharmaceutics & Pharmacokinetics

Max. Mark- 75

Sem-VI

Subject code- BP604T

Duration-3 hrs

Instructions:

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

(10 x 2) = 20

Q. 1. Objective Type Questions (Answer all the questions)

- i) Define i) Absorption ii) Distribution.
- ii) Define Volume of Distribution
- iii) Why there is need of Biotransformation.
- iv) Enlist Dissolution test apparatus according to USP.
- v) Define i) Cmax ii) Tmax.
- vi) Compare between Plasma protein binding & Tissue binding.
- vii) Draw a presentation for One compartment first order absorption model for extravascular route of administration.
- viii) Explain mixed order kinetics.
- ix) Draw a presentation for Two compartment open model for intravenous Infusion.
- x) Explain Zero order Kinetics.

Q. 2. Long Answers (Answer 2 out of 3)

(5x10) = 20

- i) Explain nonlinearity, methods to determine nonlinearity & causes of nonlinearity.
- ii) Explain one compartment open model for intravenous infusion.
- iii) Explain factor influencing drug absorption of drug.

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

(7x5) = 35

- i) Explain methods of measurement of Bioavailability.
- ii) Explain mechanism of drug absorption.
- iii) Explain chemical pathways of drug biotransformation.
- iv) Explain one compartment open model for intravenous injection.

- v) Explain Mammillary model
- vi) Write a note on protein binding of drugs.
- vii) Explain kinetics of multiple dosing.
- viii) Explain renal clearance with factors affecting renal clearance.
- ix) Explain factor affecting distribution of drug.

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Course: B. Pharmacy
Subject Name: Pharmaceutical Biotechnology
Max Marks: 75

Sem: VI
Subject Code: BP605T
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) What are plasmids? Give one example.
- ii) What is protein engineering?
- iii) Write the classification of hypersensitivity reactions.
- iv) Define terms: a) Transcription b) Translation
- v) Define antigen and antibody..
- vi) Differentiate the Vaccine and toxoid
- vii) Define vector. Write the features of a good vector.
- viii) What is gene therapy?
- ix) Enlist the enzymes used in DNA cloning
- x) Name four mutagenic agents.

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

- i) Explain in details about production and purification of monoclonal antibodies by hybridoma technology
- ii) Describe the general method of recombinant DNA technology.
- iii) Explain different methods of enzyme immobilization with their advantages and disadvantages

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

- i) What are biosensors? Write its principle and its functions.
- ii) Write a detailed note on cloning vectors.
- iii) What is PCR? Write the working principle of PCR.
- iv) Write in brief the Collection, Processing and Storage of whole human blood.
- v) Write in brief the southern blot technique and mention its applications.
- vi) Explain different types of mutations.
- vii) Write a note on microbial biotransformation in production of steroidal medicinal agents.
- viii) Describe the structure and functions of MHC.
- ix) Explain the production of Penicillin by fermentation technology with a neat labelled flow chart.

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