Pharmacology

ADICHUNCHANAGIRI UNIVERSITY

M.Pharm II Semester Examination – October 2020

TIME: 2 Hours **MAX.MARKS: 40**

SUB: Principles of Drug Discovery

QP CODE: 52203

Specific Instructions

1. Answer One Question from **Long Essay** (Each question carries 10 Marks).
2. Answer Six Questions from **Short Essay** (Each question carries 5 Marks).
3. Write the Question followed by Answer.
4. Write the same question numbers as they appear in this question paper.
5. Your answer should be specific to the questions asked.
6. Draw neat labelled diagrams wherever necessary.

Long Essay: Answer **any One** **1X10=10**

1. Explain the role of genomics, proteomics and bioinformatics in target discovery and validation
2. Write a note on lead identification and lead optimization.

Short Essay: Answer **any Six** **6X5=30**

3. Discuss the role of Nucleic acid microarrays in target discovery and validation.
4. What are the application of NMR and X-ray crystallography in protein structure prediction?
5. Write a note on rational drug design.
6. Describe the rationale prodrug design.
7. Write a note on 3D- QSAR.
8. Write the merits and demerits of Hansch analysis and Fee Wilson analysis.
9. Write a note on antisense technologies.
10. Explain the role of siRNAs in target identification and validation.

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ADICHUNCHANAGIRI UNIVERSITY

M.Pharm II Semester Examination – October 2020

TIME: 2 Hours **MAX.MARKS: 40**

SUB: Clinical Research and Pharmacovigilance

QP CODE: 52204

Specific Instructions

1. Answer One Question from **Long Essay** (Each question carries 10 Marks).
2. Answer Six Questions from **Short Essay** (Each question carries 5 Marks).
3. Write the Question followed by Answer.
4. Write the same question numbers as they appear in this question paper.
5. Your answer should be specific to the questions asked.
6. Draw neat labelled diagrams wherever necessary.

Long Essay: Answer **any One** **1X10=10**

1. Explain the different phases of clinical trials in detail.
2. Define ADR's. Explain with examples of different types of ADR's.

Short Essay: Answer **any Six** **6X5=30**

3. Write the structure and content of informed consent letter.
4. Describe the roles and responsibilities of investigators in clinical trials study team.
5. Explain different ADR'S reporting methods.
6. Write different roles and responsibilities of Pharmacovigilance.
7. Add a note on active and passive surveillance.
8. Explain ethical guidelines requirements in biomedical research and human participant.
9. Write the significance of safety monitoring in Pharmacovigilance.
10. What is Pharmacoeconomics? List out Pharmacoeconomics evaluation methods.

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ADICHUNCHANAGIRI UNIVERSITY

M.Pharm II Semester Examination – October 2020

TIME: 2 Hours **MAX.MARKS: 40**

SUB: Advanced Pharmacology II

QP CODE: 52201

Specific Instructions

1. Answer One Question from **Long Essay** (Each question carries 10 Marks).
2. Answer Six Questions from **Short Essay** (Each question carries 5 Marks).
3. Write the Question followed by Answer.
4. Write the same question numbers as they appear in this question paper.
5. Your answer should be specific to the questions asked.
6. Draw neat labelled diagrams wherever necessary.

Long Essay: Answer **any One** **1X10=10**

1. Classify Oral hypoglycemic agents. Explain in detail the Pharmacology of Biguenides.
2. Classify antibiotics. Explain the Pharmacology of aminoglycosides.

Short Essay: Answer **any Six** **6X5=30**

3. Discuss mechanism of action, adverse effects, contraindications and clinical uses of Proton pump inhibitors.
4. Discuss on drugs affecting calcium regulation.
5. List out antifungal agents with their mechanism of action.
6. Add a comment on Immunosuppressants.
7. Explain drugs used in the treatment of Protozoal infection.
8. Describe the application of chronopharmacology
9. Discuss drugs used in constipation with their adverse effects.
10. Add a note of oral contraceptives.

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ADICHUNCHANAGIRI UNIVERSITY

M.Pharm II Semester Examination – October 2020

TIME: 2 Hours **MAX.MARKS: 40**

SUB: Pharmacological and Toxicological Screening Methods II

QP CODE: 52202

Specific Instructions

1. Answer One Question from **Long Essay** (Each question carries 10 Marks).
2. Answer Six Questions from **Short Essay** (Each question carries 5 Marks).
3. Write the Question followed by Answer.
4. Write the same question numbers as they appear in this question paper.
5. Your answer should be specific to the questions asked.
6. Draw neat labelled diagrams wherever necessary.

Long Essay: Answer **any One** **1X10=10**

1. Discuss the methods and importance of test item characterization in regulatory toxicity studies.
2. Explain safety pharmacology studies.

Short Essay: Answer **any Six** **6X5=30**

3. Explain alternative methods to animal toxicity testing.
4. Discuss chronic toxicity study as per OECD guidelines.
5. Write EPA guidelines for conducting toxicity studies.
6. Explain the industry perspective of IND.
7. What is Good Laboratory Practices? Write its importance in drug development.
8. Briefly explain female reproductive toxicity studies.
9. Explain skin sensitization studies.
10. Briefly explain the toxicokinetic evaluation methods in preclinical studies.

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ADICHUNCHANAGIRI UNIVERSITY

M.Pharmacy II Semester Examination – December 2021

TIME: 3 HOURS **MAX.MARKS: 75 MARKS**

Sub: Advanced Pharmacology II

Q P Code:- 52201

INSTRUCTIONS: 1. Your answer should be specific to the questions asked.
2. Write legibly.
3. Write the same question numbers as they appear in this question paper.
4. Draw neat labelled diagrams wherever necessary.

Long Essay (Answer **any three**) **3X10=30**

1. Explain the regulation of release of anterior pituitary hormones and explain the physiological and pathological role thyroid hormone
2. Explain the mechanism of action and mechanism of development of resistance to beta lactam antibiotics and clinical uses of beta lactam antibiotics
3. Explain the mechanism of action of different class of oral hypoglycaemic agents.
4. Explain the pharmacotherapy of tuberculosis and multidrug resistant TB

Short Essays (Answer **any nine**) **9X5=45**

5. Explain the Mechanism of action of Prokinetic drugs.
6. Explain the life cycle malarial parasite.
7. Write the Mechanism of action and adverse effects of immuno suppressive agents.
8. Explain the drugs used in Asthma.
9. Write the applications of chronotherapy in cardiovascular disease
10. Discuss the mechanism of action and adverse effects of aminoglycosides.
11. Enumerate the various antioxidants and explain their protective role in mitigation of oxidative stress
12. Write about the recent advance in the treatment of cancer and Alzheimer's disease
13. Classify antifungal agents with examples. Write the mechanism of action of azoles
14. Write the sources of free radical generations and enumerate the different types of free radicals

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ADICHUNCHANAGIRI UNIVERSITY

M.Pharmacy II Semester Examination – December 2021

TIME: 3 HOURS **MAX.MARKS: 75 MARKS**

Sub: Pharmacological and Toxicological Screening Methods - II

Q P Code: - 52202

INSTRUCTIONS: 1. Your answer should be specific to the questions asked.
2. Write legibly.
3. Write the same question numbers as they appear in this question paper.
4. Draw neat labelled diagrams wherever necessary.

Long essay (answer **any three**) **3X10=30**

1 Explain the OECD principles of Good Laboratory Practice (GLP). Write the benefits of GLP

2 Explain the principle and method involved in Guinea Pig Maximisation Test (GPMT) as per the OECD 406 test guideline

3 Describe the procedures for Segment I and II in reproductive and developmental toxicity

4 Write the principle and method involved in in-vivo micronucleus assay as per the OECD test guideline 474

Short essays (answer **any nine**) **9X5=45**

5 Write the functions of Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA) and Institutional Animal Ethic Committee (IAEC)

6 Write minimum five difference between OECD test guidelines 423 and 425

7 Write the procedure for eye irritation/corrosion as per OECD 405

8 Explain the procedure involved in-vitro chromosomal aberration assay as per OECD test guideline 473

9 Explain the male and female specific end point assessed in segment I of reproductive toxicity study

10 What is hERG assay? Explain briefly the whole-cell patch clamping assay procedure

11 Define Safety Pharmacology. Explain the core battery tests and follow-up studies required for cardiovascular drug screening

12 Define toxicokinetics. Explain two compartment model

13 Define Investigational New Drug (IND) and enlist the studies required for IND submission

14 Write the alternate models (in-vitro / in-situ) used for ocular toxicity testing

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ADICHUNCHANAGIRI UNIVERSITY

M.Pharmacy II Semester Examination – December 2021

TIME: 3 HOURS **MAX.MARKS: 75 MARKS**

Sub: Principles of Drug Discovery

Q P Code: - 52203

INSTRUCTIONS: 1. Your answer should be specific to the questions asked.
2. Write legibly.
3. Write the same question numbers as they appear in this question paper.
4. Draw neat labelled diagrams wherever necessary.

Long essay (answer **any three**) **3X10=30**

1 Explain lead identification and lead optimization techniques.

2 Explain how combinatorial chemistry helps in modern drug discovery process along with the methods involved in combinatorial chemistry

3 Explain the basic concepts of pro-drugs in drug design process. Write a note on Rationale of pro-drug design.

4 Explain principles and applications of QSAR in drug discovery process.

Short essays (answer **any nine**) **9X5=45**

5 Explain the role of transgenic animals in target validation.

6 Explain various steps involved in the De novo drug design

7 What is microarray technique? Explain its principle and applications

8 Explain the differences between traditional vs rational drug design

9 Explain the importance of proteomics in drug discovery

10 Explain in detail about the rationale of Prodrug design.

11 Explain the application of NMR and X-ray crystallography in protein structure prediction

12 Explain in-silico lead discovery techniques.

13 Explain the pharmacophore-based drug design involved in the modern drug discovery process.

14 Write a note on Antisense technologies.

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ADICHUNCHANAGIRI UNIVERSITY

M.Pharmacy II Semester Examination – December 2021

TIME: 3 HOURS **MAX.MARKS: 75 MARKS**

Sub: Clinical Research and Pharmacovigilance

Q P Code: - 52204

INSTRUCTIONS: 1. Your answer should be specific to the questions asked.
2. Write legibly.
3. Write the same question numbers as they appear in this question paper.
4. Draw neat labelled diagrams wherever necessary.

Long essay (answer **any three**) **3X10=30**

1 Explain in detail the monitoring visits in initiation, conduction and closing of clinical trials.

2 Define clinical trials. Write the requirements to conduct clinical trials as per schedule Y.

3 Explain in detail the assessment of severity, seriousness and preventability of adverse drug reactions.

4 Explain the Principles of International Conferences Harmonization – Good Laboratory Practice (ICH-GLP) guidelines.

Short essays (answer **any nine**) **9X5=45**

5 Explain the different types of cost in Pharmacoeconomic study.

6 Describe the different types of error that occur in Pharmacoepidemiological study.

7 What is Contract research Organization (CRO) and write its management.

8 Explain various guidelines for preparing clinical trial documents.

9 Explain about case control and cross sectional studies.

10 Explain various National programmes related to Pharmacovigilance in India.

11 Write about Aris G and VigiFlow Pharmacovigilance system.

12 Explain in detail about randomized control trial.

13 Enumerate ICMR guidelines.

14 How will you establish the Pharmacovigilance centre in Hospitals?

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