

SUB: Physical Pharmaceutics- II

QP CODE: 11423

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

I. LONG ESSAYS (Answer any Two)

2X10=20

1. Define Thixotropy. Explain the different methods to determine the thixotropic behaviour of liquids. Write a note on its applications in pharmacy.
2. Define the term "instability" in emulsion systems? Describe in detail various methods for the evaluation of emulsion stability.
3. Enumerate the different methods for the determination of particle size. With neatly labelled diagram explain any two methods in detail.

II. SHORT ESSAYS (Answer any Seven)

7X5=35

4. Define Arrhenius plot and give its significance in calculation of shelf life.
5. Explain the plastic and pseudoplastic curves with examples. What are the reasons for such behaviour?
6. Define order of reaction. Explain the substitution method for determination of order of reaction.
7. With the help of relevant equations and neat diagram explain the working of stalagmometer.
8. Describe different graphic presentations of size distribution data in a powder.
9. Discuss the general properties of colloids.
10. Discuss in detail accelerated stability testing.
11. Explain in detail formulation of suspensions. Write a note on settling of suspensions.
12. Enumerate different methods for the determination of specific area. Explain any one method in detail.

III. Short Answers (Answer all the questions)

10X2=20

13. Define 'Newtonian Flow'. Give two examples
14. Define microemulsions.
15. Define porosity and write any two applications.
16. Define dilatancy with examples.
17. What do you mean by phase equilibria.
18. Classify dispersed systems with examples.
19. Write the formula for average particle size.
20. What is Negative thixotropy?
21. Significance of kinematic viscosity.
22. Write any four applications of angle of repose.

ADICHUNCHANAGIRI UNIVERSITY

B.Pharmacy IV Semester Examination – August 2021

TIME: 3 Hours

MAX.MARKS: 75

SUB: Pharmacology – I

QP CODE: 11424

- Instructions:** 1. Your answer should be specific to the questions asked.
2. Write the same question numbers as they appear in this question paper.
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I. LONG ESSAYS (Answer any Two)

2X10=20

1. Give a detailed account of major effector pathways of G-protein coupled receptors.
2. Classify alpha adrenergic blockers with examples. Explain their general effects and uses.
3. Classify sedative hypnotics with examples and write their mechanism of action.

II. SHORT ESSAYS (Answer any Seven)

7X5=35

4. Explain the consequence of microsomal enzyme induction with examples on biotransformation of drugs.
5. Enlist the factors modifying drug action and explain any three.
6. Explain allergy and idiosyncrasy as adverse drug effects.
7. Explain the four phases of clinical trial of a drug.
8. Explain the muscarinic actions of cholinergic drugs.
9. Explain the mechanism of action of skeletal muscle relaxant drugs.
10. Classify the general anaesthetics with examples and explain the stages of anaesthesia.
11. Write about the uses of barbiturates as anti-epileptic drugs.
12. Explain the pharmacological actions of chlorpromazine.

III. Short Answers (Answer all the questions)

10X2=20

13. Enlist the factors governing the choice of route of drug administration.
14. Define apparent volume of distribution and drug clearance.
15. Write a note on case control studies.
16. Write briefly about adverse drug reaction reporting.
17. Write a note on anticholinesterase poisoning.
18. Explain the mechanism of action of local anaesthetics.
19. Write the action of alcohol on central nervous system.
20. Write a note on Gabapentin.
21. Classify anti-Parkinson drugs with examples.
22. Write the uses of opioid drugs.

SUB: Pharmacognosy and Phytochemistry –I

QP CODE: 11425

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

- I. LONG ESSAYS (Answer any Two) 2X10=20**
1. a) Define crude drugs. Differentiate between organised and unorganised crude drugs 1+2=3
b) Describe pharmacological classification with examples. Give its merits and demerits 5+2=7
 2. Give a detail note on various plant hormones and its applications in cultivation of crude drugs.
 3. Define and classify tannins with suitable examples. Discuss qualitative chemical tests for the identification of tannins. 1+5+4=10
- II. SHORT ESSAYS (Answer any Seven) 7X5=35**
4. Explain ash values and extractive values with suitable examples.
 5. Define and discuss various scope of Pharmacognosy
 6. What is hybridization? Describe various types and applications of hybridization. 1+2+2=5
 7. Define cultivation. Discuss various advantages and disadvantages of cultivation.
 8. Give a descriptive note on callus culture and embryo culture.
 9. Describe protoplast culture with its applications.
 10. Define and classify volatile oil with suitable examples.
 11. Give the source, method of preparation and uses of Acacia.
 12. Write a note on papain and Bromelain.
- III. Short Answers (Answer all the questions) 10X2=20**
13. Abscissic acid.
 14. Different methods of collection of bark drugs.
 15. Surface sterilization and explant in plant tissue culture.
 16. Advantages and applications of edible vaccine.
 17. Write the basic principles involved in Chinese system of medicine.
 18. General tests for Alkaloids.
 19. Role of Pharmacognosy in Ayurvedic system of medicine
 20. Method of preparation of Cotton.
 21. Give any two cardiovascular and antineoplastic drugs from marine source.
 22. What are teratogens? Give examples.

SUB: Medicinal Chemistry I
QP CODE: 11422

- Instructions:** 1. Your answer should be specific to the questions asked.
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4. Draw neat labelled diagrams wherever necessary.

I. LONG ESSAYS (Answer any Two) **2X10=20**

1. What is Bioisosterism? Explain Phase I and Phase II drug metabolism.
2. What is catabolism? Classify Drugs acting on Autonomic Nervous System, and explain SAR of B-blockers.
3. Classify narcotic and non-narcotic agents. Write synthesis of mefenamic acid and ibuprofen

II. SHORT ESSAYS (Answer any Seven) **7X5=35**

4. Write brief synthesis of phenylephrine and salbutamol
5. Explain SAR of phenothiazine.
6. Write the various factors affecting drug metabolism.
7. Write the synthesis of Phenytoin and Carbamazepine.
8. Explain SAR of Para-sympathomimetic agents
9. Discuss the synthesis of Dicyclomine hydrochloride,
10. Write a mechanism of action and specific side effects of Diclofenac and Acetaminophen.
11. Write chemical classification of Solanaceous alkaloids and analogues.
12. Explain SAR of Benzodiazepines.

III. Short Answers (Answer all the questions) **10X2=20**

- 13 Write chemical structure and specific use of Piroxicam.
- 14 Write MAO and uses of Atropine.
- 15 Draw the structure and specific use of Tacrine hydrochloride.
- 16 Write therapeutic application of Ketamine hydrochloride.
- 17 Write chemical structure and specific use of Valproic acid
- 18 What is xenobiotic?
- 19 Differentiate between sedative and hypnotics.
- 20 Draw structure and MAO of haloperidol.
- 21 Write chemical structure and specific use of Risperidone.
- 22 What is Hydrogen bonding

ADICHUNCHANAGIRI UNIVERSITY

B.Pharmacy IV Semester Examination – August 2021

TIME: 3 Hours

MAX.MARKS: 75

SUB: Pharmaceutical Organic Chemistry III

QP CODE: 11421

- Instructions:**
1. Your answer should be specific to the questions asked.
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 3. Write Legibly.
 4. Draw neat labelled diagrams wherever necessary.

II. LONG ESSAYS (Answer any Two)

2X10=20

1. Write the rules in nomenclature of optical isomers by R S and D L Configuration?
2. Discuss the methods used to determine the configuration of geometrical isomers.
3. Define and classify heterocyclic compounds with examples.

II. SHORT ESSAYS (Answer any Seven)

7X5=35

4. Discuss the various conformational isomers of cyclohexane
5. Write a note on Fischer-Indole synthesis.
6. Outline the Skraups synthesis of Quinoline.
7. Explain the mechanism involved in Beckmanns rearrangement.
8. Write the synthesis and reactions of Pyridine.
9. Write the mechanism of Oppenauer-oxidation reaction.
10. Write the possible stereoisomers of 2,3-dichlorobutane and identify the different types of isomers.
11. Write the mechanism involved in the nitration reaction of pyrrole
12. Mention the any four biologically active compounds containing oxazole ring with two preparation methods of oxazole.

III. Short Answers (Answer all the questions)

10X2=20

- 13 Define Stereospecific reaction with example.
- 14 What are Atropisomerism? Write the example.
- 15 What happens when pyrrole reacts with concentrated HCl.
- 16 Write the basic structure and uses of Purine.
- 17 Write any one method of synthesis of Acridine.

PTO

- 18 Give the structure and use of Lithium Aluminium hydride.
- 19 Give the structure and numbering of phenothiazine.
- 20 Give the reason for basicity of Pyridine.
- 21 Explain Paal-Knorr Synthesis of five membered rings.
- 22 What are Meso compounds? Give example.
