DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2022

Date: 07/02/2023

Course:	**B. Pharmacy**	**Sem: IV**	
Subject Name:	Pharmaceutical Organic Chemistry-III	**Subject Code: BP401T**	
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 the structure and medicinal uses of Pyridine.
ii) What is Dakin reaction?
iii) Write the medicinal uses of Thiazole and Imidazole.
iv) Give the structure of Thiophene and Oxazole.
v) What are chiral and achiral molecules?
vi) Write a note on Metal hydride reduction.
vii) Define atropisomerism with example.
viii) What is optical activity?
ix) Give the structure and medicinal uses of Acridine.
x) Define and explain Mesocompound.

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

i) Write the EAS reactions, synthesis and medicinal uses of Pyrrole and Furan.

ii) Explain in detail about confirmations of n-Butane and Cyclohexane.

iii) Define racemic modification. Describe the methods of resolution of racemic mixture.

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

i) Explain the terms with suitable example
   a) Diastereoisomerism b) Enantiomerism
ii) Outline the methods of synthesis of Indole.
iii) Give the reaction and mechanism involved in Beckmann's rearrangement.
iv) Write a note on basicity of pyridine.
v) Describe the Birch reduction reaction.
vi) Write a note on R and S system of configuration.
vii) Give the reaction and mechanism of Oppenauer oxidation reaction.
viii) Explain in detail asymmetric synthesis.
ix) Give a brief account of stereospecific and stereoselective reactions.

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

New

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2022

Date: 09/02/2023

Course : B. Pharmacy **Sem: IV**

Subject Name : Medicinal Chemistry-I **Subject Code: BP402T**

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. One or Two answer sentence (Answer all the questions) **(10 x 2) = 20**

i) Describe in detail about Bioisosterism.

ii) Write down the synthesis of Tolazoline.

iii) Explain β adrenoreceptors.

iv) Draw the structure and IUPAC name of Tacarine hydrochloride

v) How does benzodiazepine affect the action of GABA?

vi) Write MOA of major tranquillizer

vii Why phenytoin does not give sedation through rest drugs of hydantoin class shows sedation

vii Write a note on Opioid antagonist.

ix) Write a MOA of Aspirin

x) What is partition coefficient?

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

i) Discuss the SAR of Sympathomimetic agent and write a note on Biosynthesis & Catabolism of Catecholamine.

ii) Classify narcotics analgesic. Add a note on SAR and MOA Fentanyl citrate and Methadone hydrochloride.

iii) Enlist various physicochemical properties affecting the biological activity of drug. Add a note on Phase-I reaction.

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

i) What is mean by drug metabolism? Describe the factors affecting drug metabolism.

ii) Write a note on biosynthesis and release of acetylcholine.

iii) Outline the synthesis of Salbutamol and Ibuprofen.

iv) Classify sedative and hypnotics. Write the SAR and MOA of Barbiturates.

v) Write a note on cholinergic blocking agent. And write the SAR of Ipratropium bromide.

vi) Classify antipsychotic drug. Add a note on Chlorpromazine hydrochloride.

vii Define epilepsy and describe general mechanism of action of anticonvulsant drug.

vii Write a note on adrenergic receptor. Classify sympathomimetic drugs with e.g.

ix) Describe the SAR of morphine analogues. Add a note on anti-inflammatory agent.

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

old

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2022

Date: 09/02/2023

Course :	**B. Pharmacy**	**Sem:**	**IV**
Subject Name :	**Medicinal Chemistry-I**	**Subject Code:**	**BP402T**
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) Discuss the importance of partition coefficient in relation to biological activity.

ii) What are neurotransmitters? Classify them with suitable examples.

iii) Outline the chemical classification of adrenergic drugs with suitable examples.

iv) Write the MOA of NSAIDs.

v) Give the biosynthetic pathway of Acetylcholine.

vi) Draw structure and IUPAC name of Piroxicam.

vii) What do you mean by tonic clonic seizures?

viii) Discuss the factors Stereo chemical aspects in relation to drug metabolism.

ix) Define and distribute adrenergic receptors.

x) Differentiate generalized seizures & partial seizures

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

i) Define & classify para sympathomimetic agents with suitable example. Give the SAR, mode of action & chemical features of each class.

ii) Outline the chemical classification of adrenergic drugs. Discuss their mechanism of action. Comment on the essential structural features required for the optimum activity of such drugs.

iii) Explain in detailed history and development of medicinal chemistry.

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

i) Outline the synthesis of diazepam and chlorpromazine hydrochloride

ii) Classify psychotherapeutic drugs with suitable example. . Discuss the SAR of phenothiazine's as tranquilizing agents.

iii) Discuss the influence of bioisosterism and partition coefficient on biological activity.

iv) What are synthetic analgesics? Explain the synthesis and uses of methadone hydrochloride.

v) Define & classify general anesthetics. Write in brief steps involved in general anesthesia.

vi) Write a note on biosynthesis and catabolism of catecholamine.

vii) Discuss on different beta receptor antagonists and write the limitations of non- selective beta blockers.

viii) What are synthetic analgesics? Explain the synthesis and uses of methadone hydrochloride.

ix) What are anticholinesterases? Classify & describe the chemistry, MOA & therapeutic uses of the same.

——END OF THE PAPER——

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Supplementary Winter 2022

			Date	:	**11/02/2023**
Course	:	**B. Pharmacy**	**Sem**	:	**IV**
Subject Name	:	**Physical Pharmaceutics II**	**Subject Code**	:	**BP403T**
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) Define angle of repose and give its importance.

ii) Elaborate the concept of thixotropy.

iii) Explain any 2 general characteristics of colloidal particles.

iv) Distinguish between flocculated and deflocculated suspension.

v) What is first order of reaction?

vi) Draw HLB scale.

vii) What measures you will take to improve the flow property of a granules?

viii) Define gold no and Schulze hardy rule.

ix) What is the principle of Coulter Counter?

x) Explain the mechanism of micelles formation.

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

i) What is drug stability? Explain in details accelerated stability testing.

ii) Define and classify colloidal dispersion. Add a note on comparative properties of different colloidal system.

iii) Elaborate any 4 derived properties of powder.

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

i) Explain different factors influencing the chemical degradation of pharmaceutical product.

ii) Differentiate between plastic and elastic deformation. Add a note on Heckel equation.

iii) Write a note on Non-Newtonian systems

iv) Enlist different methods to determine particle size and explain any one.

v) Discuss sedimentation parameter.

vi) Describe the electrical property of colloidal system.

vii) Explain application of micrometrics in pharmacy.

viii) Classify viscometer and explain working principle of Ostwald Viscometer.

ix) What is emulsion? Explain stability of emulsion.

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

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter-2022

Course: B. Pharmacy **Sem: IV**

Subject Name: Pharmacology-I **Subject Code: BP404T**

Max Marks: 75 **Day & Date: Tuesday, 14/02/2023** **Time: 02:00 pm to 05:00 pm**

Instructions –

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

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

1. Explain Pharmacokinetic and Pharmacodynamics.
2. What is enzyme induction phenomenon?
3. Write in brief, role and distribution of 5HT.
4. Enlist the neurotransmitter in CNS.
5. What do you mean by drug receptor interaction?
6. Write merits and demerits of rectal rout of drug administration.
7. Define drug addiction and drug dependence.
8. Write in brief the drug treatment in the Alzheimer's disease.
9. What is drug synergism? Give examples.
10. What does the term "bioavailability" mean?

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

1. Describe the mechanisms involved in drug excretion and the factors that influence it.
2. What are Parasympatholytics? Classify Parasympatholytic drugs with suitable examples and explain pharmacology of atropine.
3. Classify antipsychotic drug and explain pharmacology of chlorpromazine.

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

1. Take brief account of adverse drug reaction.
2. Classify Anti-Parkinsonian drugs with examples. Explain the pharmacology of Levodopa.
3. Explain the JAK-STAT binding receptor transduction mechanism.
4. Write the mechanism of action and pharmacology of sodium valproate.

5. Classify general anesthetic with example and stages of anesthesia.
6. Discuss pharmacotherapy of Alcoholism.
7. Classify Opioid analgesics and Explain pharmacology of Morphine.
8. Explain pharmacology of MAO inhibiters.
9. Note on Clinical trials.

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

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2022

Date: 16/02/2023

Course :	**B. Pharmacy**	**Sem:**	**IV**
Subject Name :	Pharmacognosy & Phytochemistry-I	**Subject Code :**	**BP405T**
Max Marks :	**75**	**Duration :**	**3 Hr.**

Instructions:

- **All questions are compulsory**
- **Draw diagrams / figures wherever necessary**
- **Figures to right indicate full marks**

Q. 1.	**Objective Type Questions (Answer all the questions)**	**(10 x 2) = 20**
i)	Define. a) Pharmacognosy b) Phytochemistry.	
ii)	Enlist sources of crude drugs with examples.	
iii)	Define a) Dried extracts b) Oleoresins.	
iv)	Write any two general identification tests of Alkaloids.	
v)	Write Biological source and uses of Honey.	
vi)	Define the term allergens with examples.	
vii)	What are Secondary Metabolites?	
viii)	Mention general properties of Volatile oils.	
ix)	Write Chemical constituents and uses of Wool fat.	
x)	Explain the term Plant Hormones.	
Q. 2.	**Long Answers (Answer 2 out of 3)**	**(2 x 10) = 20**
i)	Explain different methods of classification of crude drugs with examples.	
ii)	Define Evaluation of crude drugs. Explain Physical evaluation in detail.	
iii)	Write the principle, diagnosis and treatment involved in Ayurveda and Homeopathy system of medicine.	
Q. 3.	**Short Answers (Answer 7 out of 9)**	**(7 x 5) = 35**
i)	Define, classify and write general properties of Glycosides.	
ii)	Enlist factors affecting Cultivation. Write a note on edaphic factors	
iii)	Explain the concept of Hybridization. Mention its applications.	
iv)	Explain the steps involved in Plant Tissue culture technique.	
v)	What is quantitative microscopy? Write a note on Lycopodium spore method.	

vi)	Differentiate between organized and unorganized crude drugs.	
vii)	State biological source and chemical constituents of Castor oil and Acacia.	
viii)	Write biological source and preparation method of Gelatin and Papain.	
ix)	Give pharmacognostic account of Cotton.	

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