DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular/Supplementary Summer Examination – 2024

Course: B. Pharmacy **Semester:IV**

Subject Name: Pharmaceutical Organic Chemistry-III **Subject Code: BP401T**

Max Marks: 75 **Date: 13-06-2024** **Duration: 3 Hr.**

Instructions to the Students:

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 optical activity with suitable example	
ii)	Give the Structure and medicinal uses of azepine	
iii)	Define Meso compound with suitable example	
iv)	Define Chiral and Achiral Molecule	
v)	How will you obtain 2-nitro pyrrole from pyrrole?	
vi)	Write down structure and medicinal uses of quinoline and imidazole	
vii)	Write Paul-Knorr synthesis for pyrrole.	
viii)	Define heterocyclic compound and classify them	
ix)	What is E Z geometrical isomerism? Give suitable example	
x)	What id Wolff-Kishner reduction reaction? Give general reaction	
Q.2.	**Long Answers (Answer 2 out of 3)**	**(10 X 2) = 20**
i)	Explain Stereospecific and Stereoselective reactions with suitable example	
ii)	What is racemic modification? Explain resolution of racemic mixture	
iii)	Define Conformation. Explain in detail about conformation of ethane and n-butane.	
Q.3.	**Short Answers (Answer 7 out of 9)**	**(5 X 7) = 35**
i)	Distinguish between enantiomerism and diasteroisomerism	
ii)	Explain in detail sequence rule with suitable example	
iii)	What is geometrical isomerism? Write method of determination of geometrical isomerism	
iv)	Write Skraup Quinoline synthesis with any two chemical reactions	
v)	Write the EAS reactions, synthesis and medicinal uses of Furan	
vi)	Give the reaction and mechanism involved in Schmidt reaction	
vii)	What is metal hydride reaction? Explain reaction and mechanism involved in $NaBH_4$	
viii)	Explain elements of symmetry	
ix)	Explain relative aromaticity and reactivity of Pyrrole, Furan and Thiophene	

***** END OF THE PAPER *****

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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular & Supplementary Summer Examination – 2024

Course: B. Pharmacy **Semester: IV**

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

Max Marks: 75 **Date: 15-06-2024** **Duration: 3 Hr.**

Instructions to the Students:

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)	Classify General anaesthetics with examples.	
ii)	Write a note on Cholinesterase reactivator.	
iii)	Describe effect of Ionization on drug action.	
iv)	Discuss alpha adrenergic antagonists with examples.	
v)	Write about partition coefficient in relation to biological action.	
vi)	Explain mechanism of action of non-narcotic anti-inflammatory agent with example.	
vii)	Give structure and mechanism of action of Neostigmine.	
viii)	Define Bio-isosters and classify with examples.	
ix)	Outline the synthesis of salbutamol	
x)	What are cholinergic receptors? How will you classify them.	
Q.2.	**Long Answers (Answer 2 out of 3)**	**(10X2) =20**
i)	What are antipsychotic agents? Write classification of antipsychotic agents with examples. Write SAR of Phenothiazines as antipsychotic agents.	
ii)	What are sympathomimetics? Elaborate on biosynthesis and metabolism pathway of Noradrenaline.	
iii)	What are Narcotic analgesics? Write a note on modifications of Morphine nucleus.	
Q.3.	**Short Answers (Answer 7 out of 9)**	**(5 X 7) = 35**
i)	Give SAR of Beta adrenergic blockers and synthesis of Propranolol.	
ii)	Write a note on Phase II Biotransformation.	
iii)	Give SAR of Cholinergic agonists.	
iv)	What are different factors affecting drug metabolism.	
v)	Write a detailed note on AChE inhibitors.	
vi)	Write SAR of Benzodiazepines as sedative and hypnotic agents.	
vii)	Explain Narcotic antagonists in detail.	
viii)	Classify anticonvulsants with examples and discuss Hydantoins as anticonvulsants.	
ix)	Classify Cholinergic blocking agents and give synthesis of dicyclomine hydrochloride.	

***** END OF THE PAPER *****

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular/Supplementary Summer Examination – 2024

Course: B. Pharmacy **Semester: IV**

Subject Name: Physical Pharmaceutics II **Subject Code: BP403T**

Max Marks: 75 **Date: 19-06-2024** **Duration: 3 Hr.**

Instructions to the Students:

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 is the molecularity of a reaction?	
ii)	What is a gold number? Write down their significance.	
iii)	Define following terms; a. stokes diameter b. projected diameter.	
iv)	Explain the concept of bulges.	
v)	What is dilatancy? Give the reasons for the dilatancy.	
vi)	What is the order of reaction? Enlist the factors that affect the order of reaction.	
vii)	What is the Hardy Schulze rule for colloids?	
viii)	Define suspensions and write down the ideal properties of suspensions.	
ix)	Define micromeritics write about the importance of micromeritics in pharmacy.	
x)	Why do suspensions follow the zero order and tablets follow the order of reaction?	
Q.2.	**Long Answers (Answer 2 out of 3)**	**(10 X 2) = 20**
i)	Describe the colloidal dispersion. Explain in detail the different properties of colloids	
ii)	Define the emulsion and classify it. Discuss in detail the instability of emulsions and theories of emulsions.	
iii)	Describe the different methods for determining the particle size using different methods. Discuss the advantages and disadvantages of each method for particle size determination.	
Q.3.	**Short Answers (Answer 7 out of 9)**	**(5 X 7) = 35**
i)	Derive the equation for the first order of reaction.	
ii)	Explain the different preparation and purification methods of colloids.	
iii)	Differentiate between elastic deformation and plastic deformation. Explain the heckle equation.	
iv)	List the factors that affect the viscosity of liquids. Explain a cup- and bob type viscometer.	
v)	Illustrate the distinguishing features of flocculated and deflocculated suspensions.	
vi)	Write notes on thixotropy and the measurement of thixotropy.	
vii)	Describe the flow behaviour of shear thickening and shear thinning systems.	
viii)	What is drug stability? Explain in detail about accelerated stability testing.	
ix)	Write a note about the about the spreading coefficient.	

***** END OF THE PAPER *****

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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
Supplementary Summer Examination – 2024

Course: B. Pharmacy **Semester: IV**
Subject Name: PHARMACEUTICAL ENGINEERING **Subject Code: BP304T**
Max Marks: 75 **Date: 20-06-2024** **Duration: 3 Hr.**

Instructions to the Students:
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)	In short explain size separation and its importance in pharmacy.	
ii)	Give mechanism of size reduction	
iii)	Draw neat and labelled diagram for plate & frame filter used in filtration process.	
iv)	Define centrifugation. Give applications of centrifugation.	
v)	Ball mill is not useful for size reduction of fibrous material. Explain.	
vi)	What are manometers? What different types of manometers do you know?	
vii)	Give statement for, along with equation, for Fourier's law.	
viii)	What is sieve shaker?	
ix)	Give heat transfer mechanisms	
x)	Give mechanism of size separation	
Q.2.	**Long Answers (Answer 2 out of 3)**	**(10 X 2) = 20**
i)	Define distillation. Explain the principle and working of steam distillation	
ii)	Classify equipments used for mixing of semisolids. Describe the principle, construction and working of ribbon blender.	
iii)	What do you mean by fluid flow, fluid statics and fluid dynamics? Differentiate between orifice meter and venturimeter. Describe venturimeter in detail.	
Q.3.	**Short Answers (Answer 7 out of 9)**	**(5 X 7) = 35**
i)	Explain the Reynold's experiment, give its significance.	
ii)	Explain principle, construction, working of perforated basket centrifuge.	
iii)	Explain principle, construction & Working of Ball mill.	
iv)	Explain theory & factors affecting filtration.	
v)	Explain principle, construction & working of cyclone separator.	
vi)	Explain principle, construction, working & uses of fluidized bed dryer.	
vii)	Differentiate between evaporation, distillation and drying. Explain the factors affecting evaporation.	
viii)	Explain the principle of molecular distillation.	
ix)	Explain principle, construction, working & uses of planetary mixer.	

***** END OF THE PAPER *****

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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular/Supplementary Summer Examination – 2024

Course: B. Pharmacy | **Semester: IV**
Subject Name: Pharmacology I | **Subject Code: BP404T**
Max Marks: 75 | **Duration: 3 Hr.**
Instructions to the Students: | **Date: 21-06-2024**

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) **(2 X 10) = 20**

i) Define the following terms: i) Pharmacokinetics ii) Pharmacodynamics

ii) Differentiate between Sympathetic and Parasympathetic agents.

iii) Enlist the steps involved in neurohumoral transmission.

iv) Write mechanism of action of Chlorpromazine and Succinylcholine.

v) Write any four factors modifying drug action.

vi) Classify Antianxiety drugs with examples of each class.

vii) Enumerate the techniques of administration of Local Anesthetics.

viii) Enlist the antidote used in Morphine and Belladonna poisoning respectively.

ix) Classify nootropics with suitable examples.

x) Classify different types of receptors with examples.

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

i) Define Sympathomimetic drugs. Classify sympathomimetic drugs with suitable example. Explain the biosynthesis, storage, release, pharmacological actions and metabolism of catecholamine.

ii) Classify General Anesthetic drugs with examples. Explain in detail various stages of General Anesthesia. Give an account of inhalational anesthetic agents.

iii) Explain in detail the process of drug absorption and factors affecting drug absorption.

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

i) Describe Ligand Gated Ion Channel linked receptor with the help of a schematic diagram.

ii) Explain the pharmacotherapy of Glaucoma.

iii) Discuss the term Epilepsy and add note on Antiepileptic agents.

iv) Classify Sedative Hypnotics. Write a note on Benzodiazepines.

v) Define and classify Antidepressants. Explain pharmacological actions of Tricyclic Antidepressants.

vi) Discuss various phases of clinical trials add a note on Pharmacovigilance.

vii) Classify Anti-Parkinsonian drugs with examples. Explain the pharmacology of Levodopa.

viii) Discuss different types of dose response curves.

ix) Define and classify Adverse Drug Reactions with suitable examples.

***** END OF THE PAPER *****

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular/Supplementary Summer Examination – 2024

Course: B. Pharmacy **Semester: IV Semester**

Subject Name: Pharmacognosy & Phytochemistry-I **Subject Code: BP405T**

Max Marks: 75 **Date: 25-06-2024** **Duration: 3 Hr.**

Instructions to the Students:

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 a) Pharmacognosy b) Phytochemistry.	
ii)	What are Primary Metabolites?	
iii)	Write any four general properties of Volatile oil.	
iv)	Explain two chemical tests for Tannins.	
v)	State biological source and uses of Acacia.	
vi)	What are edible vaccines?	
vii)	Differentiate between organised & unorganized crude drugs.	
viii)	Define a) Teratogens b) Hallucinogens.	
ix)	Write the uses of Pepsin & Wool Fat.	
x)	What is Polyploidy?	
Q.2.	**Long Answers (Answer 2 out of 3)**	**(10 X 2) = 20**
i)	Enlist methods of classification of crude drugs. Write a detailed note on Morphological and Chemical classification of crude drugs with examples.	
ii)	Define Plant Tissue Culture Technique. Explain different steps of PTC with its applications in Pharmacognosy.	
iii)	Discuss the different methods used in adulterations of crude drugs. Write a detailed note on Microscopical evaluation of crude drugs.	
Q.3.	**Short Answers (Answer 7 out of 9)**	**(5 X 7) = 35**
i)	Explain different factors affecting the cultivation.	
ii)	Write a note on Plant Growth Regulators.	
iii)	Define Glycosides? Give its classification.	
iv)	Write the biological source, chemical constituents and uses of Cotton and Agar.	
v)	Give an account on Marine Drugs.	
vi)	Write history and scope of Pharmacognosy.	
vii)	Write Principle, diagnosis and treatment of Homeopathic system of Medicine.	
viii)	Write a note on Natural allergens.	
ix)	Give pharmacognostic account of Castor oil.	

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