ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL
Approved by : All India Council for Technical Education, Council of Architecture, Pharmacy Council of India New Delhi,
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REV:00

QUESTION PAPER PERIODIC TEST 2

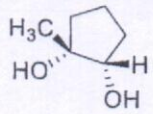
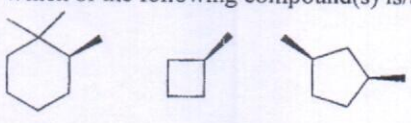
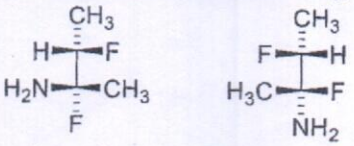
CLASS :- Second Year B. Pharm | SEM:- IV

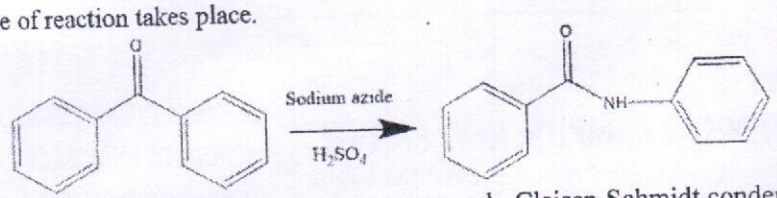
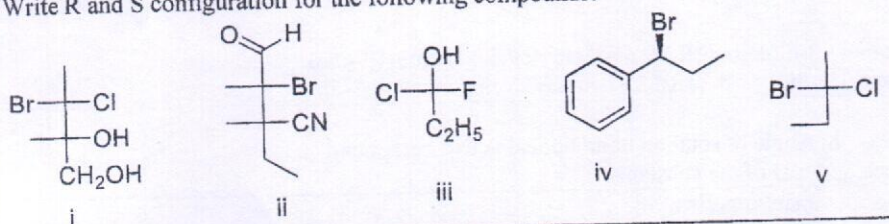
SCHEME:- R-CBCS

SUBJECT:- Pharmaceutical Organic Chemistry-III | DATE:- **27/ 03/2023**

DURATION:- 60 mins (Time 10.30 to 11.30am) | MARKS:- 30

Q.01: Attempt all MCQ questions (10 Marks).
Write the correct option (i.e. a/b/c/d) followed by answer in answer sheet.

		Marks	CO
1)	What is the complete IUPAC name of the following substance?  a. (1S,3S)-1-methylcyclopentane-1,3-diol b. (1R,3R)-1-methylcyclopentane-1,3-diol c. (1S,3R)-1-methylcyclopentane-1,3-diol d. (1R,3S)-1-methylcyclopentane-1,3-diol	1	1
2)	What does a polarimeter measure?? a. Polarity of the substance b. Angle of rotation of an optical active compound c. Concentration of the substance d. pH of the substance	1	1
3)	Which among the following is true about enantiomerism?? a. Assignments of R and S labels and (+) and (–) labels are not connected b. The labels R and S refer to different conformers c. The labels (+) and (–) are used to distinguish enantiomers d. The specific rotation of enantiomers is equal and opposite	1	1
4)	Which of the following compound(s) is/are chiral (Identify using elements of symmetry)?  I II III a. Only A and B b. Only B c. Only B and C d. Only A.	1	1
5)	Which of the following molecules exists as a pair of enantiomers a. 2-Bromopropane b. 1-Bromo-3-methylbutane c. 2-Cyclohexen-1-ol d. cis-1,2-Dichlorocyclobutane.	1	1
6)	What is the relation between the given compounds.  a) constitutional isomers b) enantiomers c) diastereomers d) identical	1	1,2, 3,5
7)	Conversion of primary or secondary alcohol into Ketone in presence of excess ketone reagent (acetone) is a. Schmidt rearrangement b. Claisen-Schmidt condensation c. Dakin oxidation d. Oppenauer oxidation	1	4

8)	Observe the following reaction which is carried out by suitable reagent and identify the type of reaction takes place.  a. Schmidt rearrangement b. Claisen-Schmidt condensation c. Dakin oxidation d. Oppenauer oxidation	1	4
9)	In the Dakin reactions, the hydroxyl group must be present at which position of the reactant? a) ortho b) para c) meta d) a or b	1	4
10)	Schimdt rearrangement is used for the production of a) Ketone b) Alkene c) Amine d) Carboxylic acid	1	4
Q.02 : Attempt any one:			
a)	I. What are the different types of optical isomers? (2) II. Explain the following: 1. Resolution of racemic mixture. 2. Chiral reactions. (8)	10	1
b)	What is Oppenauer Oxidation? Give reaction, mechanism, advantage, disadvantage and synthetic applications for it?	10	4
Q.03 : Short Answers (Any two)			
I)	Write R and S configuration for the following compounds:  	5	1
II)	a) Write down the principle, construction and working of the polarimeter?	5	1
III)	Define and give synthetic application for Claisen - Schmidt condensation and Dakin reaction.	5	4

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REV:00	**QUESTION PAPER PERIDIC TEST (UT2)**	EXM-04(a)
CLASS:-**SY B. Pharmacy**		SEM:- 4
SCHEME:- **CBCS-R2019 (PCI)**		
SUBJECT:- **Physical Pharmaceutics 2**		DATE:- **28 / 03/ 2023**
DURATION:- **60 mins**		MARKS:- 30 (15 marks)

		Marks	CO
Q.1	1. For ideal suspension sedimentation volume should be _____ a) 1 b) 2 c) Zero d) 100 2. Structured vehicle is used in formulation of suspension in order to _____ a) Decrease interfacial tension b) Prevent caking of sediment c) Reduce rate of sedimentation of particles d) Reduce zeta potential 3._Density of dispersed phase is more than that of dispersion medium. As per stokes equation creaming is ….. a) At the centre of emulsion b) In both direction c) In downward direction d) In upward direction 4. HLB value for w/o emulsion is a) 3 to 6 b) 8 to 12 c) 13 to 15 d) 15 to 18 5. Bancroft's Rule states that "The phase in which an emulsifier is less soluble constitutes the continuous phase." a) True b) False	**10**	**1,2**

	6. Porosity is defined as ratio of a)bulk volume to true volume b)tapped volume to void volume c) void volume to bulk volume d)void volume to true volume 7. Which of the following method is used for direct determination of particle surface area a)Air permeability b)Sieve analysis c) Sedimentation studies d) Absorption studies 8. The unit of particle size used most frequently in micomeritics a)millimeter b)micrometer c)meter d)nanometer 9. All of the following are type of particle density EXCEPT a)true density b)granule density c)bulk density d)void density 10. Micromeritics is defined as a)science and technology of solids b)science and technology of powders c)science and technology of small particles d)science and technology of semisolids		
Q.2	Long Answers (Answer any **ONE out of TWO**) A) .Elaborate on Sedimentation method for Particle size determination. B) Explain the terms with respect to the powder properties a)Void volume b) Bulk density c) True density d) Granule density	**10**	**1,2**
Q.3	Short Answers (Answer any **TWO out of THREE**) A) Explain various factors affecting settling in suspension. B) Explain theories of emulsification C) Describe various factors influencing physical stability of emulsion.	**10**	**1,2**

Note: Draw well labelled diagram wherever necessary

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REV:00	QUESTION PAPER THEORY SESSIONAL II	EXM-04(a)
CLASS :- **SecondYear B.Pharm**		SEM:- IV
SCHEME:- PCI / **CBCS R 2019**		
SUBJECT:- Pharmacology-I		DATE:- 28/03/23
DURATION:- **60 mins**		MARKS:- 30

Note: 1. All questions are compulsory.
2. Draw structures and diagrams wherever applicable.

Q.01 Answer all the questions [MCQs] (1 x 10)	**Marks**	**CO**
1. Lidocaine is……. a) Soluble surface ANAESTHETICS b) Insoluble surface anaesthetics c) Low potency injectable anaesthetics d) High potency injectable anaesthetics	10	2,3, 4
2. Succinylcholine is …….. a) Peripherally acting Non-depolarizing blocker b) Peripherally acting Depolarizing blocker c) Centrally acting muscle relaxant d) Directly acting muscle relaxant		
3. Oxymetazoline is used as …….. a) CNS stimulant b) Anorectics c) Nasal decongestants d) Cardiac stimulants		
4. ……is Alpha-1 blocker. a) Phenoxybezamine b) Ergotamine c) Tolazoline d) Prazosin		
5. …… has ability to bind with SY2A protein present at the wall of vesicles that contain glutamate. a) Carbamazepine b) Pregabaline c) Levetiracetam d) Vigabatrine		
6. Lamotrigine inhibit…… a) Voltage gated sodium channel b) NMDA receptor c) T-type calcium channel d) AMPA receptor		

7. Transfer of inhalant anaesthetic between lung and brain depends on tension gradient as …… a) Brain…….Blood……..Alveoli b) Alveoli…….Bain…….Blood c) Alveoli…….Blood……..Brain d) Brain…….Blood……..Alveoli e) Brain…….Skin……..Alveoli 8. …… Is inhalant anaesthetics a) Diazepam b) Halothane c) Midazolam d) Lorazepam 9. Anti-emetic is…… a) Anti-psychotic b) Sedative c) Pr-anaesthetic medication d) Anti-anxiety 10. Pre-anaesthetic refers to use of drug after anaesthesia to make it more safe and pleasant. a) True b) False			
Q.02: Attempt any ONE (10 Marks)			
a.	Classify anti-epileptic drugs and explain mechanism of action of phenytoin	10	2,3, 4
b.	Define general anaesthetics? Explain in detail phases of anaesthesia.	10	
Q.03: Attempt any TWO (5 x 2 = 10 Marks)			
a	Write short note on pre-anaesthetic medication.	**5**	2,3, 4
b	Classify local anaesthetics? Explain mechanism of action of local anaesthetics.	**5**	
c	Classify alpha-adrenergic blocker and write note on prazosin.	**5**	
d	Classify general anaesthetics and define MAC.	**5**	

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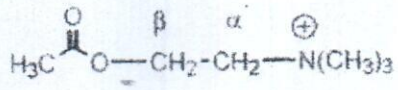
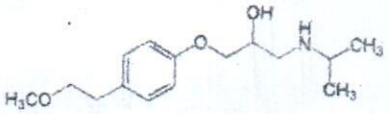
REV:00	**QUESTION PAPER PERIODIC TEST**	EXM-04(a)
CLASS:- S.Y.B.Pharm Div- A		SEM:- IV
SCHEME:- PCI Syllabus		
SUBJECT:-Medicinal chemistry-I		DATE:- 31/03/2023
DURATION:- 60 mins		MARKS:- 30

Q.01:		**Marks**	**CO**
1	Which of the following Acetylcholine esterase inhibitor does not contain quaternary ammonium group? a) Physostigmine b) Neostigmine c) Pyridostigmine d) Edrophonium	1	4
2	Which Acetylcholine esterase inhibitor is used for treatment of Alzheimer disease? A] Tacrine B] Physostigmine C] Neostigmine D] Pyridostigmine	1	1
3	Identify selective α1 antagonist containing quinazoline nucleus from the following agents. a) Tolazoline b) Phentolamine c) Phenoxybenzamine d) Prazosin	1	4
4	In the structure of Acetylcholine (shown below), substitution of α-methyl group---- --.  a) Increases muscarinic activity b) Increases nicotinic activity c) Increases antagonistic activity d) No change in activity	1	5
5	Identify the cholinesterase reactivator a) Pralidoxime b) acetylcholine c) pyridostigmine d) Tacrine	1	3
6	The drug used to treat glaucoma and is obtained from plants a) Pilocarpine b) neostigmine b) ephedrine d) tacrine	1 1	4
7	Which one is also used as insecticide and in the treatment for scabies a) Pralidoxime b) parathione c) pyridostigmine d) Tacrine	1	1
8	Which of the following is the beta halo alkylamine derivative a) Phentolamine b) toalzoline c) phenoxybenzamine d) none	1	4
9	Prazosin contains _____ as the basic moiety. (a) Quinoline b) Isoquinoline c) Quinazoline d) None	1	3
10	Which of the following is use in the diagnosis of myasthenia gravis? (a) Physostigmine b) Neostigmine c) Both d) None	1	1
Q.02 : Long answers (Any one)			
1	a)Explain the hydrolysis of acetylcholine by acetylcholine esterase. b) Give structures and mechanistic use of two carbamates . 4M	10	4
2	a) Explain SAR of acetylcholine . b) Write the synthesis of carbachol	10	4
Q.03: Short Answers (Any two)			

1	Identify the drug and write down its MOA 1)  2) 	5	4
2	Draw the metabolites of tolazoline and timolol.	5	2
3	Give structures of two acetylcholinesterase inhibitors and write down synthesis any one.	5	2,6

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REV:00	**QUESTION PAPER PERIODIC TEST**	EXM-04(a)
CLASS :- Second Year B. Pharm B - DIV		SEM:- IV
SCHEME:- PCI Syllabus		
SUBJECT:- Medicinal Chemistry-I		DATE:- **31/3/2023**
DURATION:- 60 mins		MARKS:- 30

	Q.01: MCQs	**Marks**	**CO**
a)	2-pyridine aldoxime methylchloride is IUPAC name of Pralidoxime b) Tacrine c) Parathion d) Malathion	1	3
b)	The scaffold belongs to α1- blockers is a) Quinazoline b) Benzimidazole c) Indole d) Imidazole	1	4
c)	G*i* binds with a) M2, M4 b) M1, M3,M5 c)M1, M2, M4 d) M2,M4,M5	1	4
d)	Muscarinic receptor agonists containing a choline component have preferred_____ conformation a) cis b) trans c) gauche d) anti	1	4
e)	Imidazole containing natural nonselective muscarinic agonist is a) Methacholine b) Carbachol c) Bethanechol d) Pilocarpine	1	3
f)	Amphetamine analogue acting as indirect sympathomimetic is Propylhexedrine b) Ephedrine c) Metaraminol d) Tolazoline	1	5
g)	An antidote for poisoning by parathion is a) Pralidoxime b) Malathion c) Tacrine d) Isofluorphate	1	4
h)	With respect to SAR of irreversible AchE inhibitors, R moiety imparts____ and contribute to_____. a)Lipophilicity,Absorption b)Hydrophilicity,Absorption c)Lipophilicity,Distribution d)Hydrophilicity,Distribution	1	1
i)	Identify a drug with oxazolidinedione nucleus a) Phensuximide b) phenytoin c) clonazepam d) trimethadione	1	3
j)	Hydantoin is found which drug a) Carbamazepine b) Methabarbital c) Ethotoin d) Primidone	1	3
	Q.02. Long answers (Any one)		
a)	Describe the development of β-blockers. Outline the synthesis of Propranolol.	10	4,6
b)	State any two points of difference between muscarinic and nicotinic receptors. Explain biosynthesis, stereochemistry and SAR of Acetylcholine.	10	4
	Q.03 : Short Answers (Any two)		
a)	Identify the structures and comment.  1) Identify the structures , number them and write down the therapeutic use and one example of drug containing the scaffold. 2) Indicate the nature of substitution on each N and comment on its activity.	5	5
b)	Draw the structures of metabolism of **(Any 2)** Propranolol, Malathion, Physostigmine.	5	2
c)	Describe the mechanism of hydrolysis of Ach by acetylcholinesterase.	5	4