ANJUMAN-I-ISLAM'S

KALSEKAR TECHNICAL CAMPUS, NEW PANVEL

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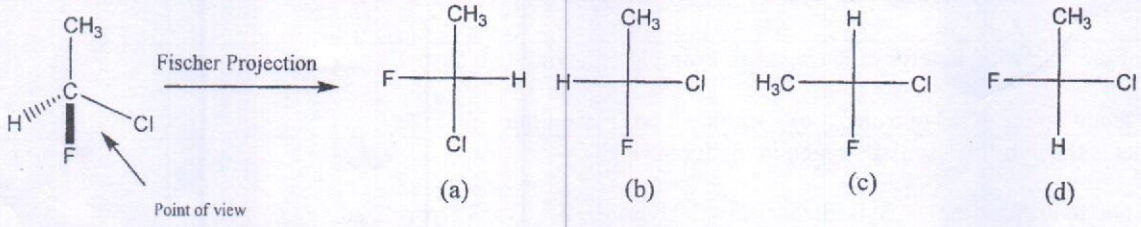
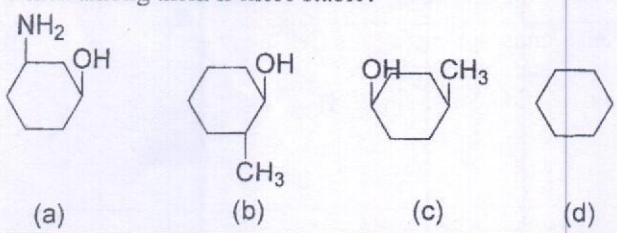
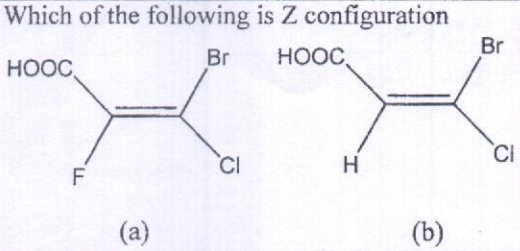
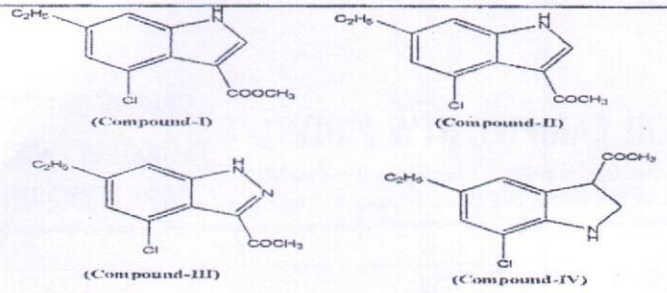
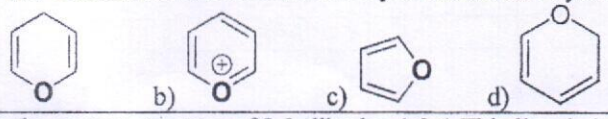
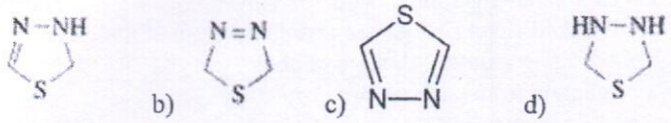
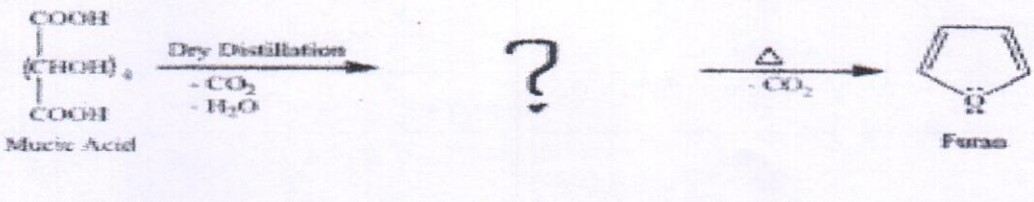
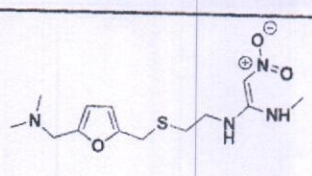
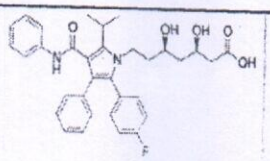
REV:00	**QUESTION PAPER PERIODIC TEST**	EXM-04(a)
CLASS :- Second Year B. Pharm		SEM:- IV
SCHEME:- R-CBCS		
SUBJECT:- Pharmaceutical Organic Chemistry-III		DATE:- 13/ 02/2023
DURATION:- 60 mins (Time 10.30 to 11.30am)		MARKS:- 30

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)	Geometrical Isomerism is shown by alkenes with: a. Two different atoms are attached to each carbon having double bond b. Same atoms are attached to each carbon having double bond c. Two different atoms are attached to one of the carbon having double bond while other might have same groups d. none of above	1	1
2)	Which one of the following is correct fischer's projection from dash-wedge projection? 	1	1
3)	Which among them is more stable? 	1	1
4)	Which is/are true regarding pair of geometrical isomers? a. They are non-interconvertible by rotation b. They may have axis of symmetry but must not have plane of symmetry c. They can be separated by fractional distillation d. symmetrical alkenes follow cis-trans category whereas non-symmetrical ones follow E & Z nomenclature.	1	1
5)	Which of the following is Z configuration 	1	1
6)	Identify the structure of 3-Acetyl-4-chloro-6-ethyl-1H-indole.	1	1,2, 3,5

	 (Compound-I) (Compound-II) (Compound-III) (Compound-IV) a) Compound-I b) Compound-III c) Compound-IV d) Compound -II		
7)	The correct structure of the heterocycle named 2H-Pyran is:  a) b) c) d)	1	1,2, 3,5
8)	Give the correct structure of 2,3-dihydro-1,3,4-Thiadiazole is  a) b) c) d)	1	1,2, 3,5
9)	Which of the following heterocyclic ring is an example of having two nitrogen heteroatoms in it. a) Isoquinoline b) pyrrole c) Pyridine d) Pyrimidine	1	1,2, 3,5
10)	What is the hybridization of oxygen in the furan ring? a) Not hybridized b) sp hybridized c) sp2 Hybridized d) sp3 Hybridized	1	1,2, 3,5
Q.02 : Attempt any one			
a)	Describe stereoselective and stereospecific reactions with two examples each?	10	1
b)	1. Explain the detailed synthesis reaction mechanism by Paal-Knorr synthesis for a five membered heterocyclic ring containing nitrogen, oxygen and sulfur as a heteroatom?(8M) 2. Convert the following (Write reactions with reagents and reaction condition)(2M) a) Thiophene to Tetrahydrothiophene b) Furan to 2-bromo furan	10	3
Q.03 : Short Answers (Any two)			
I)	Draw newman's projection for conformational isomers of : a) cyclohexane b) ethane	5	1
II)	a) Explain electrophilic substitution reaction of pyrrole in detail?(4M) Draw resonating structures of thiophene? (1M)	5	1
III)	Classify six membered heterocyclic compounds with suitable examples?(2M) Predict:(1M)  Mucic Acid Dry Distillation $-CO_2$ $-H_2O$? Δ $-CO_2$ Furan Complete the table:(2M)	5	1,2, 3,5

		STRUCTURE				
		NAME OF THE DRUG				
		HETEROCYCLE PRESENT				
		MEDICINAL USE				

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REV:00	QUESTION PAPER THEORY SESSIONAL – I	EXM-04(a)
CLASS :- **SecondYear B.Pharm**		SEM:- IV
SCHEME:- PCI / **CBCS R 2019**		
SUBJECT:- Pharmacology-I		DATE:- 14-02-23
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. An agent which activates a receptor to produce an effect similar to that of the physiological signal molecule is called as..... a) Antagonist b) Agonist c) Partial agonist d) Partial antagonist		1,2, 3
2. .....is the appearance of a progressive decrease in response to a given dose. a) Tachyphylaxis b) Addiction c) Dependence d) Idiosyncrasy		
3. .....is the study of the effects of the drugs on the body and their mechanisms of action, i.e. what the drug does to the body. a) Pharmacokinetics b) Pharmacovigilance c) Pharmacodynamics d) Pharmacoeconomics		
4. .....is the transfer of drugs against a concentration gradient (Low to high) and needs energy. a) Active transport b) Passive transport c) Facilitated diffusion d) Filtration		
5. .....is defined as the passage of the drug from the site of administration into the circulation. a) Absorption b) Distribution c) Metabolism d) Excretion		

6. ..... refers to the rate and extent of absorption of a drug from a dosage form.
   a) Bioavailability
   b) Bioequivalence
   c) Absorption
   d) Volume of distribution
7. .....is the pharmacological science relating to the collection, detection, assessment, monitoring, and prevention of adverse effects with pharmaceutical products.
   a) Phase-II Clinical trial
   b) Phase-I Clinical trial
   c) Pharmacovigilance
   d) Pharmacology
8. Neostigmine is.....
   a) Reversible Anticholinesterases
   b) Irreversible Anticholinesterases
   c) Cholinomimetic Alkaloids
   d) Ester of choline
9. N_M is present at
   a) Heart
   b) CNS
   c) Gastric gland
   d) Neuromuscular junction
10. .....may be used in hypotonia of bladder in some cases of postoperative paralytic ileus and urinary retention.
    a) Bethanechol
    b) Pilocarpine
    c) Methacholine
    d) Acetylcholine

Q.02: Attempt any ONE (10 Marks)			
a.	Enlist different types of receptor. Explain in detail G-protein coupled receptor.	10	1,2, 3
b.	Define Absorption. Explain factor affecting absorption in detail.	10	
Q.03: Attempt any TWO (5 x 2 = 10 Marks)			
a	Classify Cholinergic drug.	**5**	1,2, 3
b	Write short note on drug interaction.	**5**	
c	Discuss drugs used in the treatment of Myasthenia gravis	**5**	
d	Define biotransformation. Explain in detail phases of biotransformation.	**5**	

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FirstSessionalTheoryExam Feb 2023 DIV B

SUB: Pharmaceutical Inorganic Chemistry **Marks-30**

Time-3pm to 04 pm (1hr) **Date – 14/02/2023**

Q.01MultipleChoiceQuestions(MCQ):	Marks
Q1. Inorganic antimicrobial agent can be divided into	10
(a) oxidation	
(b) halogenation	
(c) protein precipitate	
(d) all of the above	
Q2. Compounds capable of function as antimicrobial agent through oxidative mechanism are	
1. (a) H2O2	
2. (b) halogen	
3. (c) KMnO4	
4. (d) all of these	
3. What is the effect of astringents on tissues ?	
A. Relaxation	
B. Shrinkage	
C. Both a and b	
D. None of these	
4. A parameter prescribed in I.P for bentonite is:	
A. Bulkiness	
B. Swelling power	
C. Solubility	
D. All	
5. Povidone is chemically:	
A. Poly pyrrolidine	
B. Iodine + Potassium iodide	
C. Polyvinyl pyrrolidine	
D. Iodine	
6. Which is used as styptic.	
A. Zinc oxide	
B. KMN04	
C. Sodium sulphate	
D. Alum	
7. Which one of the following drug is a saline cathartic?	
A. Magnesium sulphate	
B. Magnesium trisilicate	
C. Magnesium carbonate	
D. Bismuth subcarbonate	

1 of 02

8. Sodium Potassium Tartrate is also known as, Rochelle Salt is used as, a) An Antacid. b) Adsorbent. c) Saline Cathartic. d)Protective. 9. Saline cathartic used in barium and lead poisoning is: A. Copper sulphate B. Magnesium sulphate C. Ferrous sulphate D. Sodium sulphate 10. Ammonium Chloride is useful in maintaining in acid base equilibrium of the body is also useful as, a) Expectorant. b) Antacid. c) Antioxidant. d) Protective.	

Q. 2 Long Questions (Answer ANY 01 out of 02)		10
1.	List the ideal properties of antacids Preparation, assay and medicinal uses of sodium bicarbonate. Discuss the method of preparation, assay, properties and uses of sodium bicarbonate.	10
2.	Explain Iodine and Its preparation and Aluminium Hydroxide gel in detail. OR	10
2.	What are saline cathartics? Give the properties and uses of magnesium Sulphate, Bentonite and Kaolin.	
Q. 3 Short Questions(AnswerANY02outof03)		10

ANY 02 out of 03

1.	Enlist different mechanism of antimicrobial agent. Explain any one. Writemethodofpreparation andassayofHydrogenperoxide.	5
2.	What are expectorants? How do they act ?. Write an account of preparation, properties, assay and various applications of Potassium Iodide.	5
3.	Explain the term achlorhydria .How is this condition treated? Add a note on Dil.HCl.	5

— END —

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First Sessional Theory Exam DIV-A Feb-2023

SUB: Pharmaceutical Inorganic Chemistry **Marks - 30**

Time- 3pm to 04 pm (1 hr) **Date -14/02/2023**

Q. 01 Multiple Choice Questions (MCQ):	Marks
1. Impurities in pharmaceutical preparation may be due to following sources: (a) Raw material (b) Manufacturing process (c) Chemical instability (d) All of the above 2.Ammonium chloride is used as (a) Diuretic (b) Expectorants (c) Systemic acidifier (d) All of these 3. Identify the Dental Product (a) Sodium hydroxide (b) Mercuric oxide (c) Potassium permanganate (d) Strontium chloride 4. Replacement therapy is needed (a) Heavy loss of water (b) Prolonged fever (c) diarrhea (d) all of above 5. Impurities in pharmaceutical preparation may be due to (a) manually (b) instrumentally (c) by error (d) all of these 6. ORS stands for (a) oral rehydration salt b) oral dehydration salt c) oral restoration salt d) None of Above 7. Hyperchloremia can be caused by (a) Salt losing nephritis (b) Metabolic acidosis (c) Both a and b (d) Metabolic alkalosis 8. Identify the Dental Product (a) Sodium hydroxide (b) Mercuric oxide (c) Potassium permanganate (d) Strontium chloride 9. Antidote used in Cyanide poisoning is- (a) Sodium chloride b) Potassium iodide c) sodium thiosulphate d) sodium bicarbonate	10

10. Amchlor is a synonym of- a) Sodium chloride b) Potassium chloride c) Ammonium Chloride d) None of Above		
Q. 2 Long Questions (Answer any 01 out of 02)		**10**
1.	**Explain sources of impurity in detail. Explain limit test of Arsenic in detail. why is nitric acid used in limit test of chloride and Citric acid added in limit test of Iron?**	**10**
2. 2.	**Write a note on electroytes used in Replacement Therapy. What is electrolyte combination therapy? explain ORS and physiological role of calcium ions.** **OR** **Define Buffer capacity. what is buffer solution, Explain Pharmaceutical Application of Buffers in detail? Explain Handerson Hasselbatch Equation for Acid and Base..**	**10**
Q. 3 Short Questions (Answer any 02 out of 03)		**10**
1.	**Explain in Detail Zinc Sulphate and Potassium Iodide. Add a note on sodium potassium tartarate with mechanism of emetics.**	**5**
2.	**Explain Types of Poisoning in detail.add a note on Sodium Nitrite and Sodium Thiosulphate.**	**5**
3.	**Write in detail about role fluoride in treatment of dental carries. Write properties and uses of Sodium fluoride.**	**5**

Best of Luck!!!!!!!!

Pg - (2)

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REV:00	**QUESTION PAPER PERIODIC TEST (UT1)**	EXM-04(a)
CLASS:-SY B. Pharmacy		**SEM:**- IV
SCHEME:- CBCS (R-2019) PCI		
SUBJECT:- Physical Pharmaceutics 2		**DATE:**- 14 / 02/ 2023
DURATION:- 60 mins		**MARKS:**- 30 marks

		Marks	CO
Q.1	1. Yield value is the property of _____ A. Newtonian flow B. Pseudo plastic flow C. Plastic flow D. Dialatant flow 2. Capillary viscometer is used to measure viscosity of _____ A. Suspension B. Emulsion B. Solution D. All of them 3. Stokes is the unit of _____ A. Dynamic viscosity B. Kinematic viscosity C. Fluidity D. Intrinsic viscosity 4. _____ is the cup and bob viscometer in which cup rotates. A. MacMichael B. Stromer C Ferranti Shirley D. Brookfield 5. Magnesia magma shows _____ A. Pseudo plastic property B. Newton flow C. Thixotropy D. Anti-thixotropy 6. There are _____ types of colloidal dispersions A. 2 B. 3 C. 4 D. 5 7. Association colloids are _____ A. Lyophilic B. Amphiphilic C. Lyophibic D. Thermophilic	10	1,3,4,

	8. Which of the following statement is correct regarding Gold number A. Higher the gold number higher is the protective ability of the colloid B. Gold number does not indicate protective ability of the colloid C. Lower the gold number higher is the destabilizing ability of the colloid D. Lower the gold number higher is the protective ability of the colloid 9. Which of the following is the correct order of size of particles? A. Suspension > Colloidal solution > True Solution B. Suspension = Colloidal solution = True Solution C. Suspension < Colloidal solution < True Solution D. Suspension > True solution > Colloidal solution 10.With which property of colloid Tyndall effect is associated A. Mechanical B. Colligative B. Optical D. Electrical		
Q.2	Long Answers (Answer any **ONE out of TWO**) A. Explain viscosity, Newtonian and non-Newtonian system B. Explain thixotropy and measurement of thixotropy	**10**	**1**
Q.3	Short Answers (Answer any **TWO out of THREE**) A. Explain the concept of gold number and Schulze Hardy rule in detail. B. Describe the types of colloidal dispersion in detail C. Enlist different properties of colloid and write any one in detail.	**10**	**3,4**

Note: Draw well labelled diagram wherever necessary

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REV:00	**QUESTION PAPER – Sessional -I**	EXM-04(a)
CLASS:- Second Year B.Pharm		SEM:- IV
SCHEME:- PCI (R-2019)Syllabus		
SUBJECT:-Medicinal Chemistry-I		DATE:-
DURATION:- 60 mins		MARKS:- 30

	Q.01: MCQs	**Marks**	**CO**
a)	Which of the following is not a phase 1 reaction. a) Oxidation b) Reduction c)Acetylation d) Hydrolysis	1	2
b)	Intermediate of aromatic hydroxylation is a) Aldehyde b) Ketone c)Epoxide d) Arene	1	2
c)	Oxidation of olefin results in a) Aldehyde b) Ketone c) Diol d)Carboxylic acids	1	2
d)	The sulphate conjugation process involves activation of inorganic sulphate to the coenzyme a) PAPS b) UDPGA c) SAM d)Acetyl CoA	1	2
e)	Bioisostere are similar in their a) Physical Character b) Chemical character b) c) Both A and B d) Biochemical character	1	1
f)	Which of the following is a natural chemical messenger for the adrenergic receptor? a) Dopamine b) Tyrosine c) norepinephrine d) acetylcholine	1	3
g)	Catecholamine includes the following EXCEPT: a) Ephedrine b) Epinephrine c) Isoproterenol d) Norepinephrine	1	4
h)	Sympathetic stimulation is mediated by: a) Release of norepinephrine from nerve terminals b) Activation of adrenoreceptors on postsynaptic sites c) Release of epinephrine from the adrenal medulla d) All of the above	1	4
i)	(+)-dobutamine is a potent a) α2-antagonist, β1-agonist b) α1-antagonist, β1-agonist c) α1-antagonist, β2-agonist d) α2-antagonist, β1-agonist	1	4
j)	The active metabolite of bitolterol is a) Albuterol b) Salbutamol c) Colterol d) Isoproterenol	1	2
	Q.02 : Long answers (Any one)		
a)	Enlist and elaborate factors affecting Metabolism	10	2

b)	Explain in detail SAR of sympathomimetic agents with examples (structures required)	10	5
	Q.03: Short Answers (Any two)		
a)	What changes need to be made to the structures of sympathomimetics such that they are 1. Resistant to COMT 2. Resistant to MAO	5	5
b)	Outline the synthesis of Phenylephrine with proper reaction conditions.	5	6
c)	Write a short note on Bioisosterism.	5	1