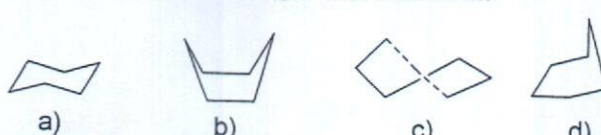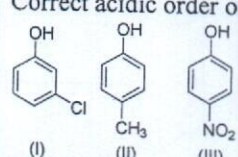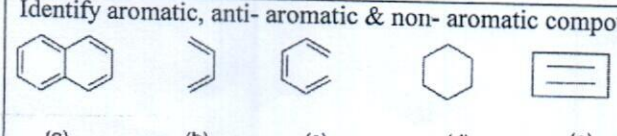**ANJUMAN-I-ISLAM'S**

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REV:00	**QUESTION PAPER: Sessional-II Exam**	EXM-04(a)
CLASS :- Direct Second Year B. Pharm		
SCHEME:- PCI Syllabus		SEM:- III
SUBJECT:- Pharmaceutical Organic Chemistry-II		TIME: 10.30 to 11.30 am
DURATION:- 60 mins		DATE:- 03/ 07/2023
		MARKS:- 30

Q.01: All questions are necessary

		Marks	CO
a)	Which hybridization state is present in the carbon atom in benzene and why a. sp3, due to its geometry, b. sp2, due to its planar nature c. sp2, as it has an hybridized orbital for delocalization of electrons, d. both b & c	1	2
b)	Which one of the following is half-chair form? a) b) c) d)	1	3
c)	Molecules must have_____number of π electrons to be aromatic a) 2n+2, b) 4n+2, c) 6n+2, d) 8n+2	1	2
d)	When a carbon atom is bonded to two other carbon atoms, the C-C-C bond angle should be? a. 109.5 b. 120 c. 60 d. 108	1	1
e)	Which one is the drawback of bayer's strain theory a. Planar geometry of cycloalkanes b. rings above cyclopentane will be highly strained c. larger rings will have higher combustion energy d. All of the above	1	3
f)	In mechanism of electrophilic aromatic substitution reaction a) Ist step is rate determining step, b) IInd step is slow step, c) IInd step is rate determining step, d) Ist step is Fast step	1	2
g)	Correct acidic order of the following is: a. I>II>III, b. III>I>II, c. II>III>I, d. I>III>II	1	2
h)	Effect of the ortho-NO2 group on the acidity of benzoic acid a. Increases, b. Decreases, c. No effect, d. Strongly increases	1	2
i)	Benzaldehyde is converted to benzylamine by: a) Reduction, b) Reductive amination, c) Oxidation, d) Amination	1	1
j)	Phenol reacts with bromine in carbon tetrachloride at low temperature to give which of the following product? a) m-bromophenol b) o-and p-bromophenol c) p-bromophenol d)2,4,6-tribromophenol	1	2

Q.02 : Short answers (Any two)

a)	Identify aromatic, anti- aromatic & non- aromatic compounds from following structures. (a) (b) (c) (d) (e)	5	2&3
b)	Write any two method of preparation of benzene? Discuss Friedel craft's alkylation.	5	2

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c)	Explain the reactions of aromatic amines. Discuss the effect of substituents on basicity aromatic amines. Give synthetic use of aryl diazonium salt.	5	2&5
Q.03 : Long Answers (Any one)			
I)	a) Explain: Sachse Mohr & Bayer's strain theory with limitations	10	2&3
II)	Write the structure & uses of following: a) resorcinol b) 1-Naphthol c) m-cresol d) phenol e) Coulson and moffitt's modification	10	1

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REV:00	**QUESTION PAPER PERIODIC TEST (UT2)**	EXM-04(a)
CLASS:-**SY B. Pharmacy**		SEM:- 3
SCHEME:-**R -CBCS**		
SUBJECT:- **Physical Pharmaceutics-1**		DATE:- **04/ 07/ 2023**
DURATION:- **60 mins**		MARKS:- 30M

		Marks	CO
Q.1	MCQ	10	

1. Gram equivalent weight of solute in one litre of solution

   a. Molarity b. Molality c. Normality d. Mol fraction

2. Solubility of substance depends on

   a. Solvent b. Temperature c. Pressure d. All of the above

3. Solubility of gas with rising temperature

   a. Increases b. Decreases c. Remain constant d. All of the above

4. Types of attractive forces are

   a. Van der waals forces b. hydrogen bonding c. ion-ion interaction

   d. All of the above

5. Dielectric constant has significance in _____ of drug molecule

   a. Solubilisation b. Structural elucidation c. Identification

   d. Deciding purity

6. pKa can be determined by

   a. pH Titration b. Solubility Method c. Distribution method

   d. Continuous Variation Method

7. Buffer capacity .... as the concentration of buffer increases

   a. Increases b. Decreases c. Remains constant d. Is unaffected

8. Swelling of blood cells takes place in...............solution

   a. Hypotonic b. Hypertonic c. Isotonic d. Neutral

I n n o v a t i v e   T e a c h i n g - E x u b e r a n t   L e a r n i n g

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	9. Optical Rotation is _____ property.
	
	    a. Constitutive b. Extensive c. Colligative d. Additive
	
	1. Polar solvents reduce the force of attraction between oppositely charged ions in crystals as they possess high
	
	    a. Dielectric Constant b. Refractive index c. Viscosity
	    d. Optically Activity		

Q.2	Long Answers (Answer any **ONE out of TWO**) 1. Derive expression for dissociation constant of weak electrolytes. 2. Explain in detail deviation from Raoult's law or Explain Azeotropic mixture in detail	10	

Q.3	Short Answers (Answer any **TWO out of THREE**)
	  1. What is optical activity? Give its applications.
	  2. .Define pH and Explain in detail methods for determination of pH.
	  3. Classify the methods to adjust tonicity. Explain any one class in detail/
		10	

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REV:00	QUESTION PAPER PERIODIC TEST	EXM-04(a)
CLASS:- Second Year B. Pharm		SEM:- III (DSY)
SCHEME:- PCI Syllabus		
SUBJECT:- Pharmaceutical Engineering		DATE:- 05/07/2023
DURATION:- 60 mins		MARKS:- 30

	Q.01: Multiple Choice Questions	Marks	CO

a)	Which of the following is not a type of solid mixing mechanism?
	  a. Turbulent mixing b. Shear mixing
	  c. Convective mixing d. Diffusion mixing
		1	1,3

b)	Which of the following is false about ribbon blender?
	  a. It is more efficient than sigma blender b. Dead spots are observed
	  c. Movement of particles is two dimensional d. It has fixed speed drive.
		1	1,3

c)	Who has proposed that the filtration process is like the streamlined flow of liquid under pressure through capillaries?
	  a. Carman b. Poiseuille
	  c. Darcy d. Kozeny
		1	1,3

d)	The cellulose membrane filter is an example of which type of filtration
	  a. Cake b. Screen
	  c. Depth d. Decantation
		1	1,3

e)	Which one of the following CAN NOT be used to combat corrosion?
	  a. pumping of inert gas into solution b. removing air from boiler feed water
	  c. increasing the temperature of storage d. Shortening the time of exposure
		1	1,3

f)	Which one of the following is not a mechanism of filtration?
	  a. Entanglement b. Impingement
	  c. Impact d. Straining
		1	1,3

g)	In which type of mixer, the trough is stationary?
	  a. Barrel mixer b. Double cone blender
	  c. Zigzag mixer d. Ribbon mixer
		1	1,3

h)	Which is the principle difference (in the properties) that influences centrifugation
	  a. Particle size b. Interfacial tension
	  c. Viscosities d. Densities
		1	1,3

i)	Corrosion of metals is fairly high in one of the following mediums.
	  a. Acidic b. Alkaline
	  c. Neutral d. Non-aqueous
		1	4

j)	The fluid flows through the filter medium by virtue of?
	  a. Pressure difference across the filter b. The potential difference across the filter
	  c. Temperature difference across the filter d. Volume difference across the filter
		1	1,3

	Q.02 : Long answers (Any one)		
a)	Write in detail Principle, construction, working, uses, merits and demerits of Rotary drum filter.	10	1,3
b)	Explain mechanisms of solid mixing. Write Principle, construction, working, advantages and disadvantages of ribbon blender.	10	1,3

	Q.03: Short Answers (Any two)		
a)	What are the theories of corrosion? Describe methods to prevent corrosion.	5	4
b)	Elaborate theories of filtration and factors influencing filtration.	5	1,3

c)	Write a short note on- (any one)
	  A. Non-perforated basket centrifuge
	  B. Liquid mixing (Mechanisms, Instruments used)
		5	1,3

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DSY- Q.P
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S-I

REV:00	**QUESTION PAPER PERIDIC TEST**	EXM-03(B)
CLASS:- **DSY**		SEM:- III
SCHEME:- **R-CBCS**		
SUBJECT:- **PHARMACEUTICAL MICROBIOLOGY**		DATE:- **06/07/2023**
DURATION:- **60 mins**		MARKS:-

Q.01. MCQ'S

1. The study of fungi is known as (mycology/ bacteriology/ taxonomy)
2. .... Is used to make soy sauce (aspergillus/asergillus niger/mycobacterium)
3. 3. Flagellated motile spores produced inside structure are known as .... (zoosporangia/ zoospores/zoosporangium)
4. They do not have cellular organisation .... (bacteria/ fungi/ virus)
5. Reproduction occurs via fusion of gamets .... (asexual/ sexual/ bisexual)
6. Fungi which produce inside the sac like structure is .... (oidia/ chalmydospores/sporangiospores)
7. Cultivation of virus can be done through .... (animal inoculation/ embryogenated egg culture/ both of these)
8. Cell culture technique is also known as .... (tissue culture/ organ culture/ cell line culture)
9. Chemical method of disinfectant based on .... (radiation/ heat/ consistency)
10. The test carried out for the antibiotic susceptibility (in-vitro / in-vivo / both)

Q.02 Answer in brief Any 1 (10M Each)		Marks	CO
a)			
b)	Explain in brief tissue culture and preservation of pharmaceutical products		
c)	Factors influencing disinfection, antiseptics and their evaluation for bacteriostatic and bactericidal action		

Q.03 Answer in short Any 2 (5M)			
a)	Classification, reproduction/replication and cultivation of Fungi and Viruses		
b)	Explain in detail aseptic area, laminar flow		
c)	Define sources and types of microbial contaminants, assessment of microbial contamination and spoilage		

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