

University of Mumbai
Examination 2020 under cluster PCOE (Lead College Shortname)

Program: Chemical Engineering

Curriculum Scheme: Rev2016

Examination: Second Year Chemical Engineering Semester IV

Course Code: CHC402 and Course Name: Engineering Chemistry-II

Time: 1 hour

Max. Marks: 50

For the students:- All the Questions are compulsory and carry equal marks .

Q1.	Long form of SHE?
Option A:	Sample electricity across electrode
Option B:	Electrode potential
Option C:	Standard Hydrogen Electrode
Option D:	Sample High Electricity
Q2.	Which is an example of weak electrolyte?
Option A:	HCl
Option B:	CH ₃ -COOH
Option C:	NaOH
Option D:	NaCl
Q3.	Conductometric Titrations are preferred over volumetric titrations because of which reason?
Option A:	Indicator not required in titration
Option B:	Colored, diluted solutions can be used for titrations
Option C:	End point can be determined accurately
Option D:	All of the above
Q4.	Unit of Conductance is..?
Option A:	Per ohm(ohm inverse)
Option B:	Mhos
Option C:	Siemens
Option D:	All of the above
Q5.	Which types of development is observed in paper chromatography?
Option A:	Ascending
Option B:	Descending
Option C:	Radial
Option D:	All of the above
Q6.	What is mean by R _f ?
Option A:	Retention Factor
Option B:	Refractive Index
Option C:	Reflex ion function
Option D:	None of the above
Q7.	In Column Chromatography stationary Phase is?

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Option A:	Solid
Option B:	Liquid
Option C:	Gas
Option D:	None of the above
Q8.	Which compound gives only one NMR Signal?
Option A:	Acetone(CH ₃ -CO-CH ₃)
Option B:	Ethyl Bromide(CH ₃ -CH ₂ -Br)
Option C:	Methanol(CH ₃ -OH)
Option D:	Ethanol(CH ₃ -CH ₂ -OH)
Q9.	IR spectroscopy is used to determine?
Option A:	Bond strength (Force constant)
Option B:	H-Bonding(Hydrogen Bonding)
Option C:	Conjugation
Option D:	All of the above
Q10.	Constant D stands for?
Option A:	Difference between any Concentrations
Option B:	It is a deviation in concentration
Option C:	Distribution ration between concentrations of aqueous layer and organic layer
Option D:	None of the above
Q11.	Lanthanide extraction is difficult due to gradual decrease in size. Which is known as?
Option A:	Lanthanide selectivity
Option B:	Lanthanide contraction
Option C:	Lanthanide reactivity
Option D:	None of the above
Q12.	Solution is a single phase homogeneous system of...?
Option A:	Only solute
Option B:	Only solvent
Option C:	Solute and solvent
Option D:	It is a Heterogeneous system
Q13.	Which group is an example of Anion exchanger?
Option A:	-NR ₂
Option B:	-COOH
Option C:	-SH
Option D:	-SO ₃ H
Q14.	The rate of ion exchange is...?
Option A:	Directly proportional to the concentration of ions in solution
Option B:	Directly proportional to charge on the ions in solution
Option C:	Inversely proportional to size of the hydrated ions
Option D:	All of the above

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Q15.	Heterogeneous catalysts are preferred over homogeneous catalyst because of..?
Option A:	Easy separation & recovery
Option B:	More selectivity
Option C:	Convenient for large scale separation.
Option D:	All of the above
Q16.	Which technique is used to purify colloids?
Option A:	Electro dialysis
Option B:	Ultra filtration
Option C:	Ultra centrifugation
Option D:	All of the above
Q17.	Which of the following will decrease rate of reaction?
Option A:	Catalytic poisoning
Option B:	Positive catalyst
Option C:	Catalytic Promoter
Option D:	None of the above
Q18.	Which is an example of Solid-liquid colloidal system?
Option A:	Milk
Option B:	Jelly
Option C:	Smoke
Option D:	Pigment Ink
Q19.	Glucose in presence of zymase gives ethanol is an example of....?
Option A:	Rearrangement reaction
Option B:	Acid catalyzed reaction
Option C:	Enzyme catalyzed reaction
Option D:	None of the above
Q20.	Huckels rule of Aromaticity is.....pi electrons?
Option A:	$4n+0$
Option B:	$4n+1$
Option C:	$4n+2$
Option D:	$4n$
Q21.	Acetoacetic Ester and Urea in presence of sodium ethoxide gives?
Option A:	Adipic Acid
Option B:	4-Methyl uracil
Option C:	n-Butyric acid
Option D:	Valeric acid
Q22.	Which compound does not show keto-enol tautomerism?
Option A:	Diethyl malonate
Option B:	Acetoacetic Ester
Option C:	Dimethyl malonate
Option D:	Primary Amine

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Q23.	Which reaction is used for synthesis of Nylon-6?
Option A:	Favorskii reaction
Option B:	Beckmann reaction
Option C:	Reformatsky reaction
Option D:	Fischer Indole synthesis
Q24.	In which reaction Zinc (Zn) is used as catalyst?
Option A:	Beckmann reaction
Option B:	Favorskii reaction
Option C:	Reformatsky reaction
Option D:	Fischer Indole synthesis
Q25.	Fischer Indole synthesis reaction is used for...?
Option A:	Synthesis of Indole
Option B:	Synthesis of Pyridine
Option C:	Synthesis of Aniline
Option D:	Synthesis of Pyrrole