

University of Mumbai
Examination 2020 under cluster ___ (Lead College Short Name)

Program: Chemical Engineering

Curriculum Scheme: Rev2012

Examination: Second Year 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.	Specific conductance _____ on dilution
Option A:	Increases
Option B:	Unchanged
Option C:	Decreases
Option D:	increases suddenly
Q2.	Solvent extraction principle is governed by _____
Option A:	Boyle's law
Option B:	Charles's law
Option C:	Nernst distribution law
Option D:	lambert's law
Q3.	A method of single liquid - liquid extraction is _____
Option A:	Batch extraction
Option B:	Continuous extraction
Option C:	Counter current extraction
Option D:	Auto extraction
Q4.	The process of decomposition of an electrolyte by passing the electric current through its solution is called _____
Option A:	Electrolyte
Option B:	Electrode
Option C:	Electrolysis
Option D:	Electrochemical cells
Q5.	CH ₃ -CO-O-CO-CH ₃ is _____
Option A:	Acetic aetate
Option B:	Ethyl acetate
Option C:	Acetic anhydride
Option D:	Formic anhydride
Q6.	_____ is electro-kinetic phenomena
Option A:	Tyndall effect
Option B:	Electrophoresis
Option C:	Hydrolysis
Option D:	Electrolysis
Q7.	_____ is a nonaromatic compound
Option A:	Thiophene

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Option B:	Pyridine
Option C:	Piperidine
Option D:	Anthracene
Q8.	Which molecule is IR inactive?
Option A:	HCl
Option B:	CO ₂
Option C:	O ₂
Option D:	NH ₃
Q9.	Which of the following statement is true for all the catalysts?
Option A:	They increase the product of reaction
Option B:	They consumed very large amount in the reaction
Option C:	They take part in the reaction.
Option D:	They increase the rate of reaction
Q10.	Electrophoretic mobility is not influenced by _____
Option A:	Molecular weight
Option B:	Stereochemistry of molecule
Option C:	Shape of molecule
Option D:	Size of molecule
Q11.	_____ Spectroscopic technique works on the principle of electronic transition
Option A:	IR
Option B:	NMR
Option C:	Microwave
Option D:	UV and visible
Q12.	In this Autocatalysis reaction, which one act as a catalyst? $\text{CH}_3\text{COOC}_2\text{H}_5 + \text{H}_2\text{O} \rightarrow \text{CH}_3\text{COOH} + \text{C}_2\text{H}_5\text{OH}$
Option A:	CH ₃ COOC ₂ H ₅
Option B:	H ₂ O
Option C:	CH ₃ COOH
Option D:	CH ₃ COOC ₂ H ₅
Q13.	Colloidal solution do not find application in _____
Option A:	Dairy products
Option B:	Fiber optics
Option C:	Rubber
Option D:	Paints
Q14.	A polymeric cation to which active anion are attached is _____
Option A:	Cation exchanger
Option B:	Anion exchanger
Option C:	Resin exchanger
Option D:	Ion exchanger
Q15.	Planer molecule is considered as aromatic When it contains _____

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Option A:	$4n + 1$ pi electrons
Option B:	$4n + 2$ pi electrons
Option C:	$4n + 3$ pi electrons
Option D:	$4n + 4$ pi electrons
Q16.	In HPLC the stationary phase is _____
Option A:	Gas
Option B:	Solid
Option C:	Liquid
Option D:	Semi solid
Q17.	In conductometric titration of strong acid verses strong base conductance _____
Option A:	Decreases and then increases
Option B:	Increases and then decreases
Option C:	Remains constant and then increases
Option D:	Decreases and then remains constant
Q18.	5 gms of common salt is passed through cation exchanger in H ion form. calculate the weight of HCl that will be formed
Option A:	3.1196 gm
Option B:	3.1245 gm
Option C:	2.1194 gm
Option D:	2.1239 gm
Q19.	In Active methylene compounds methylene group is _____
Option A:	Acidic and reactive
Option B:	Phenolic and reactive
Option C:	Neutral and reactive
Option D:	Basic and reactive
Q20.	Positive catalyst is _____
Option A:	Promotor
Option B:	Inhibitor
Option C:	Auto catalyst
Option D:	Enzyme catalyst
Q21.	In the sample cell which of the following is selected to give maximum optical transmission in UV visible region
Option A:	Tungsten
Option B:	Quartz
Option C:	Phosphor
Option D:	Potassium
Q22.	How many number of π electrons are present in Thiophene?
Option A:	6
Option B:	9
Option C:	10
Option D:	12

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Q23.	Lanthanides exhibit different oxidation states, but most stable oxidation state is _____
Option A:	+1
Option B:	+2
Option C:	+3
Option D:	+4
Q24.	The process in which substance loses electron is called as _____
Option A:	Oxidation
Option B:	Hydrogenation
Option C:	Sublimation
Option D:	Reduction
Q25.	Which of the following ions gets released from the anion exchange column?
Option A:	CO_3^{2-}
Option B:	OH^-
Option C:	Cl^-
Option D:	SO_4^{2-}