

University of Mumbai
Examination 2020 under cluster - PCOE

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.	E ⁰ Cell in concentration cell is _____
Option A:	Positive
Option B:	Negative
Option C:	Zero
Option D:	Not always positive
Q2.	Emulsions get stabilized by _____
Option A:	Surfactants
Option B:	Gels
Option C:	Sols
Option D:	Ions
Q3.	Gas liquid chromatography can be applied to species that are _____
Option A:	Only Volatile
Option B:	Volatile and Thermally stable
Option C:	Non- volatile
Option D:	Only thermally stable
Q4.	In manufacture of sulphuric acid using platinum catalyst As ₂ S ₃ gets adsorbed on active sites of Platinum, therefore As ₂ S ₃ is called as _____
Option A:	Catalytic poison
Option B:	Negative catalyst
Option C:	Catalytic promotor
Option D:	Positive catalyst
Q5.	Which of the following molecules will not show infrared spectrum?
Option A:	H ₂
Option B:	HCl
Option C:	CH ₄
Option D:	H ₂ O
Q6.	How many pi electrons are present in Anthracene?
Option A:	7
Option B:	9
Option C:	10
Option D:	14
Q7.	Where is the intermediate formation theory of catalysis used?
Option A:	Heterogeneous components

University of Mumbai
Examination 2020 under cluster - PCOE

Option B:	Homogeneous components
Option C:	Miscible components
Option D:	Immiscible components
Q8.	Which one of the following is the electro-kinetic phenomena?
Option A:	Isometric phenomena
Option B:	Tyndall effect
Option C:	Hydrolysis
Option D:	Electrophoresis
Q9.	Hydrolysis of an ester is example of _____
Option A:	Positive catalysis
Option B:	Autocatalysis
Option C:	Negative catalysis
Option D:	Enzyme catalysis
Q10.	A method of multiple liquid - liquid extraction is known as _____
Option A:	Batch extraction
Option B:	Continuous extraction
Option C:	Counter current extraction
Option D:	Gravity extraction
Q11.	Where does colloidal solution find application in?
Option A:	In milk industries
Option B:	In chromatic chemical industries
Option C:	In crystallography
Option D:	In textiles
Q12.	Which of the following compound is not aromatic?
Option A:	Pyrrrole
Option B:	Pyridine
Option C:	Piperidine
Option D:	Thiophene
Q13.	Which force is involved in Chromatography?
Option A:	Covalent bonding
Option B:	Coordinate bonding
Option C:	Electrostatic force
Option D:	Electromagnetic force
Q14.	On dilution the specific conductance _____
Option A:	Increases
Option B:	Remains same
Option C:	Decreases
Option D:	increases abruptly
Q15.	The process in which substance loses electron is called as _____
Option A:	Oxidation

University of Mumbai
Examination 2020 under cluster - PCOE

Option B:	Hydrogenation
Option C:	Sublimation
Option D:	Reduction
Q16.	Solubility(S) of AgCl is ____ of solubility product (Ksp)
Option A:	Square root
Option B:	Square
Option C:	Half
Option D:	Double
Q17.	Which spectroscopy is working on the principle of magnetic level?
Option A:	U. V.
Option B:	I.R.
Option C:	Visible
Option D:	N.M.R.
Q18.	What is the size of colloidal particles?
Option A:	10-20 nm
Option B:	More than 20 nm
Option C:	Less than 10 nm
Option D:	30 to 50 nm
Q19.	Solvent extraction is governed by which law?
Option A:	Boyle's law
Option B:	Ostwald dilution law
Option C:	Nernst distribution law
Option D:	Beer's law
Q20.	All of the following statements are correct regarding potentiometric titrations, except
Option A:	They are suitable for colored or turbid reactions
Option B:	The emf of the cell is zero at the equivalence point
Option C:	These are not suitable for analysis of dilute solutions less than 0.001M
Option D:	Liquid junction potentials will not influence the study.
Q21.	Identify the incorrect statement regarding aromaticity
Option A:	It is the extra stability possessed by a molecule
Option B:	p orbitals must be planar and overlap
Option C:	Cyclic delocalization takes place
Option D:	It does not follow Huckel's rule
Q22.	Ion-exchange resin is-
Option A:	Linear
Option B:	Low molecular weight
Option C:	Organic polymer with porous structure
Option D:	Soluble in water
Q23.	The factor which determines the activity of a heterogeneous catalyst is

University of Mumbai
Examination 2020 under cluster - PCOE

Option A:	Total surface area only
Option B:	The number of active sites per unit amount of catalyst only
Option C:	Method of preparation, prior treatment only
Option D:	Total surface area, number of active sites and method of preparation
Q24.	In synthesis of 4-methyl Uracil which of the following compounds is condensed with Acetoacetic ester?
Option A:	Phenol
Option B:	Urea
Option C:	Thiourea
Option D:	Ethanol
Q25.	4.2 gm of common salt is passed through cation exchanger in H ⁺ form. Calculate the weight of HCl formed.
Option A:	2.540
Option B:	2.620
Option C:	2.720
Option D:	2.740