University of Mumbai

Examination 2020 under cluster ___ (Lead College Short name)

Program: Bachelor of Engineering

Curriculum Scheme: **Rev2016**

Examination: First Year Semester I

Course Code: FEC103 and Course Name: Applied Chemistry-I

Time: 1 hour Max. Marks: 50

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

Q1.	Temporary Hardness is due to presence of
Option A:	Carbonates
Option B:	Sulphates
Option C:	Nitrates
Option D:	Chlorides
Q2.	Complete the following reaction: $Mg(HCO_3)_2 \rightarrow$ _____ + $2CO_2$
Option A:	Mg
Option B:	$Mg(OH)_2$
Option C:	$MgCO_3$
Option D:	H_2O
Q3.	[M-EDTA] complex is _____
Option A:	Blue in colour
Option B:	Wine-red in colour
Option C:	Colourless
Option D:	Green
Q4.	Permanent hardness in water is caused by presence of
Option A:	Magnesium chloride
Option B:	Calcium carbonate
Option C:	Sodium bicarbonate
Option D:	None of these
Q5.	EDTA method of determining hardness of water can be used to determine
Option A:	All types of hardness
Option B:	Permanent hardness
Option C:	Temporary hardness
Option D:	Alkaline hardness
Q6.	Brackish water mostly contains dissolved
Option A:	Ca salts
Option B:	Mg salts
Option C:	NaCl
Option D:	Suspended impurities
Q7.	Ideal disinfectant is
Option A:	Bleaching water

Option B:	Ozone
Option C:	Chlorine
Option D:	Lime
Q8.	Which of the following method is used to separate both ionic and non-ionic impurities from water
Option A:	Electrodialysis
Option B:	Reverse-Osmosis
Option C:	Deionization
Option D:	All of the above
Q9.	Thermoplastics becomes _____ on heating
Option A:	Rigid
Option B:	Moulded
Option C:	Soft
Option D:	Brittle
Q10.	When rubber is heated with sulphur, its tensile strength, elasticity and resistance to swelling are increased tremendously. This process is known as -
Option A:	Purification
Option B:	Vulcanization
Option C:	Annealing
Option D:	Sulphonation
Q11.	Plasticizers _____ flexibility of the plastics
Option A:	Decreases
Option B:	Increases
Option C:	Do not affect
Option D:	None of these
Q12.	Fabrication of plastics can be done by__
Option A:	Compression moulding
Option B:	Transfer moulding
Option C:	Extrusion moulding
Option D:	All of these
Q13.	Glass transition temperature is denoted as
Option A:	Tg
Option B:	Tm
Option C:	Gt
Option D:	Mt
Q14.	Engineering plastics possess
Option A:	High mechanical strength
Option B:	High Tensile Strength
Option C:	High abrasion resistance
Option D:	All of these

Q15.	The monomers of Buna-S are
Option A:	Ethyl chloride and Styrene
Option B:	Butadiene and Styrene
Option C:	Sulphur and Butane
Option D:	Butane and Styrene
Q16.	Example/s of viscoelastic materials is/are
Option A:	Synthetic Polymers
Option B:	Human Tissue
Option C:	Wood
Option D:	All of these
Q17.	In thick-film lubrication, coefficient of friction is in the range of
Option A:	0.001 to 0.03
Option B:	0.5 to 0.10
Option C:	1 to 2
Option D:	0.1 to 0.2
Q18.	Select the incorrect statement from the following option.
Option A:	Lubricant keeps out dirt
Option B:	Lubricant act as a seal
Option C:	Lubricant transmit fluid power
Option D:	Lubricant enhance corrosion
Q19.	The lowest temperature at which the lubricating oil gives off enough vapours that ignite for a moment when a tiny flame is brought near it, is called-
Option A:	Fire point
Option B:	Viscosity
Option C:	Flash point
Option D:	Acid value
Q20.	On increasing the lubrication, the efficiency of the machine _____
Option A:	Increases
Option B:	Decreases
Option C:	Remains same
Option D:	Does not get affected
Q21.	What is Gibbs phase rule for general system?
Option A:	$P = C - 1 - F$
Option B:	$P = C + 1 - F$
Option C:	$P + F = C - 2$
Option D:	$P + F = C + 2$
Q22.	The degree of freedom at a triple point in the phase-diagram for water is _____
Option A:	2
Option B:	3
Option C:	0

Option D:	1
Q23.	_____ is not use to make Portland Cement (PC).
Option A:	Calcareous Rocks
Option B:	Argillocalcareous Rocks
Option C:	Argillaceous Rocks
Option D:	Sand
Q24.	Fullerene or bucky ball is made up of ____ carbon atoms.
Option A:	100
Option B:	20
Option C:	75
Option D:	60
Q25.	CNT stands for
Option A:	Carbon Nitogen Tube
Option B:	Calcium Nitrate
Option C:	Carbon Nano Tube
Option D:	None of these