University of Mumbai

Examination 2020 under cluster ___ (Lead College Short name)

Program: First Year Engineering

Curriculum Scheme: Rev2016

Examination: First Year Semester II

Course Code: FEC203 and Course Name: Applied Chemistry II

Time: 1 hour Max. Marks: 50

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

Q1.	Unit of calorific value of coal by Dulong's formula is _____
Option A:	Cal/g
Option B:	Kcal/g
Option C:	Kcal/kg
Option D:	Cal/cm^3
Q2.	2.5g of coal after heating in oven at 1050-1100C gives 2.410g residue.Calculate moisture content of coal sample.
Option A:	3.6 %
Option B:	3.3 %
Option C:	0.036 %
Option D:	0.033 %
Q3.	Kevlar is an example of _____
Option A:	Glass fibres
Option B:	Carbon fibres
Option C:	Aramid fibres
Option D:	whiskers
Q4.	Intergranular corrosion occurs at _____
Option A:	Grain center
Option B:	Grain boundaries
Option C:	Whole grain
Option D:	Anywhere inside grain
Q5.	Which type of composites do Cermets belong to?
Option A:	Layered composites
Option B:	Particulate composites
Option C:	Fibre reinforced composites
Option D:	Natural composites
Q6.	In Kjeldahl's method 1.5 g coal sample required15 ml of 0.1 N H2SO4. Calculate % of nitrogen in coal.
Option A:	1.8 %
Option B:	1.4 %
Option C:	2.4 %
Option D:	1.6 %
Q7.	Which of the following is an example of heat resisting steel?
Option A:	Nichrome

Option B:	Alnico
Option C:	Monel metal
Option D:	German silver
Q8.	What is the amount of oxygen required for complete combustion of 1 kg of carbon?
Option A:	1.33 kg
Option B:	2.66 kg
Option C:	1 kg
Option D:	2 kg
Q9.	In which of the following media rate of corrosion of zinc is faster?
Option A:	Acidic
Option B:	Neutral
Option C:	Alkaline
Option D:	Organic solvent
Q10.	In bomb calorimeter experiment 1.5 g coal sample gave 0.3 g BaSO4. Calculate % of sulphur in coal.
Option A:	2.55 %
Option B:	2.8 %
Option C:	2.75 %
Option D:	3.05 %
Q11.	Which of the following is a green solvent?
Option A:	Carbon tetrachloride
Option B:	Acetic acid
Option C:	Supercritical CO_2
Option D:	chloroform
Q12.	Caustic embrittlement causes due to _____
Option A:	Acidic environment
Option B:	Alkaline environment
Option C:	Water
Option D:	Acid fumes
Q13.	% of aluminium in duralumin is _____
Option A:	90
Option B:	95
Option C:	93
Option D:	98
Q14.	Galvanizing is a method of _____
Option A:	Anodic coating
Option B:	Cathodic protection
Option C:	Anodic protection
Option D:	Cathodic coating

Q15.	Octane number is a characteristic of _____
Option A:	Diesel
Option B:	Gasoline
Option C:	Kerosene
Option D:	Petroleum
Q16.	Which of the following is not a function of matrix phase?
Option A:	To bind the dispersed phase together
Option B:	To act as a medium
Option C:	To protect dispersed phase from chemical action
Option D:	To increase strength of composite
Q17.	Wood's metal is an alloy of _____
Option A:	Lead
Option B:	Silver
Option C:	Zinc
Option D:	copper
Q18.	Calculate the % atom economy of addition reaction of hydrogenation of propene to propane.
Option A:	90 %
Option B:	80 %
Option C:	100 %
Option D:	95 %
Q19.	Aluminium gets less corroded than iron because _____
Option A:	Aluminium does not react with oxygen
Option B:	Aluminium is lighter than iron
Option C:	Aluminium forms stable nonporous oxide film
Option D:	Aluminium has large particle size than iron
Q20.	Which of the following is not considered as characteristic of good fuel?
Option A:	High calorific value
Option B:	High moisture content
Option C:	High carbon content
Option D:	Low volatile matter
Q21.	Chemically alloy is _____
Option A:	A solution
Option B:	A compound
Option C:	A mixture
Option D:	A gel
Q22.	By which of the following ways the rate of corrosion of metal can be decreased?
Option A:	By designing sharp corners
Option B:	By maintaining high temperature
Option C:	By making metal alloys
Option D:	By maintaining low pH

Q23.	What is the effect of decrease in the overvoltage of corroding metal?
Option A:	Rate of corrosion decreases
Option B:	Rate of corrosion increases
Option C:	Rate of corrosion remains constant
Option D:	Rate of corrosion is independent of overvoltage
Q24.	The chemical reaction is considered as green reaction when _____
Option A:	Renewable feedstock is not used
Option B:	% atom economy is high
Option C:	Catalyst is not used
Option D:	Products are not biodegradable
Q25.	LPG comes under category _____
Option A:	Primary liquid fuel
Option B:	Secondary liquid fuel
Option C:	Primary gaseous fuel
Option D:	Secondary gaseous fuel