

University of Mumbai

Chemical Engineering

BE Sem VII (R 2016)

Subject Name: Corrosion Engineering [Elective ]

Subject code : CHDE7031

Duration: 1 hr

Maximum Marks: 50

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

1	Which of the following corrosions are caused due to velocity of fluid flow in pipes?	
	(A)	Bimetal corrosion
	(B)	Cavitation corrosion
	(C)	Galvanic corrosion
	(D)	Intergranular corrosion
2	Which element precipitates at the grain boundaries, when austenitic stainless steel is heated at 900 °C?	
	(A)	Aluminium carbide
	(B)	Chromium carbide
	(C)	Magnesium carbide
	(D)	Molybdenum carbide
3	The erosion corrosion can be controlled by _____	
	(A)	increasing the flow velocity through pipes
	(B)	increasing temperature of fluid
	(C)	minimizing turbulence
	(D)	increasing pressure of fluid
4	Which of the following is an example of corrosion?	
	(A)	Rusting of iron
	(B)	Tarnishing of silver
	(C)	Liquefaction of ammonia
	(D)	Rusting of iron and tarnishing of silver
5	Which type of reaction occurs in anodic areas?	
	(A)	Oxidation
	(B)	Reduction
	(C)	Displacement
	(D)	Addition
6	Which of the following cathodic reaction does not occur due to release of electrons at the anode?	
	(A)	Oxygen absorption

	(B)	Hydrogen evolution
	(C)	Electrodialysis
	(D)	Electroplating
7	Rate of corrosion of anodic region is inversely proportional to the _____	
	(A)	Cathodic area
	(B)	Anodic area
	(C)	Product of anodic area and cathodic area
	(D)	Sum of anodic area and cathodic area
8	Excessive corrosion of metal takes place if corrosion product is _____	
	(A)	Volatile
	(B)	Non-volatile
	(C)	Both volatile as well as non-volatile
	(D)	Initially volatile and then non-volatile
9	Electrochemical protection is _____	
	(A)	Anodic protection
	(B)	Sacrificial Anodic protection
	(C)	Impressed current cathodic protection
	(D)	Cathodic protection
10	Which of the following metal is not used as a sacrificial anode?	
	(A)	Zinc
	(B)	Copper
	(C)	Magnesium
	(D)	Aluminium
11	Chemical action of flowing liquid metal at high temperatures is _____	
	(A)	Liquid metal corrosion
	(B)	Corrosion by other gases
	(C)	Oxidation corrosion
	(D)	Wet corrosion
12	Corrosion due to the corrosiveness of the soil is called as _____	
	(A)	Soil corrosion
	(B)	Oxidation corrosion
	(C)	Galvanic corrosion
	(D)	Concentration cell corrosion
13	Corrosion due to the flow of the _____ between the cathodic and anodic areas is called as the electro chemical corrosion by evolution of hydrogen and absorption of oxygen.	
	(A)	Electron current
	(B)	Proton current
	(C)	Ion current
	(D)	Neutron current

14	Corrosion due to difference in water level is _____	
	(A)	Soil corrosion
	(B)	Oxidation corrosion
	(C)	Pitting corrosion
	(D)	Water line corrosion
15	Chemical formula of Rust is	
	(A)	$\text{Fe}_2\text{O}_3$
	(B)	$\text{FeO}$
	(C)	$\text{FeO}$
	(D)	$\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$
16	Lower is pH, corrosion is	
	(A)	Greater
	(B)	Lower
	(C)	Constant
	(D)	Zero
17	Standard electrode potential of hydrogen is	
	(A)	1.00 V
	(B)	0.00 V
	(C)	0.01 V
	(D)	0.001 V
18	Metals does not exist in nature in the form of _____	
	(A)	Nitrates
	(B)	Sulphates
	(C)	Carbonates
	(D)	Oxides
19	Which of the following factor influences the rate and extent of corrosion?	
	(A)	Nature of metal only
	(B)	Nature of the environment only
	(C)	Both nature of metal and environment
	(D)	Nature of reaction
20	Which of the following is not associated with the nature of the environment?	
	(A)	Humidity
	(B)	Temperature
	(C)	Effect of pH
	(D)	Volatility of corrosion products
21	Corrosion of zinc can be minimized by increasing the pH to _____	
	(A)	9
	(B)	10
	(C)	11
	(D)	12

22	Excessive corrosion of metal takes place if corrosion product is _____	
	(A)	Volatile
	(B)	Non-volatile
	(C)	Alkaline
	(D)	Neutral
23	Which of the following method is adopted for preventing corrosion by acids?	
	(A)	Deaeration
	(B)	Removal by using ion-exchange resin
	(C)	Neutralisation with lime
	(D)	Dehumidification
24	Magnesium is used in high resistivity electrolytes due to its _____	
	(A)	Neutral potential
	(B)	Most positive potential
	(C)	Most negative potential
	(D)	Zero potential
25	Which of the following method is adopted for preventing corrosion by moisture?	
	(A)	Deaeration
	(B)	Removal by using ion-exchange resin
	(C)	Neutralisation with lime
	(D)	Dehumidification

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<b>Question</b>	<b>Correct Option (Enter either 'A' or 'B' or 'C' or 'D')</b>
Q1.	B
Q2.	B
Q3.	C
Q4.	D
Q5.	A
Q6.	C
Q7.	B
Q8.	A
Q9.	D
Q10.	B
Q11.	A
Q12.	A
Q13.	A
Q14.	D
Q15.	D
Q16.	A
Q17.	B
Q18.	A
Q19.	C
Q20.	D
Q21.	C
Q22.	A
Q23.	C
Q24.	C
Q25.	D

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