Unit VI Corrosion Science

1. Dry corrosion is also called as_____
a) Chemical corrosion
b) Electrochemical corrosion
c) Wet corrosion
d) Oxidation
corrosion
Answer: a

Explanation: Dry corrosion is also called as the chemical corrosion. The corrosion is divided into two types. They are dry corrosion and wet corrosion.
2. Anhydrous inorganic liquid metal surface in absence of moisture undergoes
a) Wet corrosion
b) Dry corrosion
c) Galvanic corrosion
d) Pitting
corrosion
Answer: b
Explanation: Anhydrous inorganic liquid metal surface in absence of moisture undergoes the dry corrosion. Atmospheric gases also undergo the dry corrosion.

3. The rusting iron is the
a) Oxidation corrosion
b) Liquid metal corrosion
c) Wet corrosion
d) Corrosion by other gases

Answer: a
Explanation: The rusting of iron comes under the oxidation corrosion. Direct action oxygen at high or low temperatures will be on metals.
4. Chemical action of flowing liquid metal at high temperatures is
a) Liquid metal corrosion
b) Corrosion by other gases
c) Oxidation corrosion
d) Wet
corrosio
n
Answer:
a

Explanation: Chemical action of flowing liquid metal at high temperatures is called liquid metal corrosion.

5. Corrosion between the dissimilar metals is called as_____
a) Galvanic corrosion
b) Dry corrosion
c) Oxidation corrosion
d) Concentration cell

corrosion Answer: a

Explanation: Corrosion between the dissimilar metals is called as the galvanic corrosion. Dry corrosion also called as the chemical corrosion.

6. Wet corrosion is also called as_____

a) Chemical cell

b) Electro chemical cell

c) Oxidation reaction

d) Liquid metal

corrosion

Answer: b

Explanation: Wet corrosion is also called as the electro chemical corrosion. Corrosion due to the conducting liquid in contact with cathodic and anodic areas is called as wet corrosion.

7. Corrosion due to the corrosiveness of the soil is called as_____

a) Soil corrosion

b) Oxidation corrosion

c) Galvanic corrosion

d) Concentration cell

corrosion Answer: a

Explanation: Corrosion due to the corrosiveness of the soil is called as the soil corrosion. Direct action of the oxygen on metal causes the oxidation corrosion.

8. Corrosion due to the formation of cavities around the metal is called as the

a) Pitting corrosion

b) Soil corrosion

c) Water line corrosion

d) Galvanic

corrosion

Answer: a

Explanation: Corrosion due to the formation of cavities around the metal is called as the pitting corrosion. Corrosion between the dissimilar metals is called galvanic corrosion.

9. Corrosion due to the flow of the between the cathodic and anodic areas is called as the electro chemical corrosion by evolution of hydrogen ad absorption of oxygen.

a) Electron current

b) Proton current

c) Ion current

d) Neutro

n current

Answer: a

Explanation: Corrosion due to the flow of the electron current between the cathodic and anodic areas is called as the electro chemical corrosion by evolution of hydrogen ad absorption of oxygen.

10. Corrosion due to difference in water level is

a) Soil corrosion

b) Oxidation corrosion

c) Pitting corrosion

d) Water line

corrosion

Answer: d

Explanation: Corrosion due to the difference in water level is water line corrosion. Corrosion due to formation of varying concentrations of the aeration.

11. Which of the following comes under the wet corrosion?

a) Concentration cell corrosion

b) Oxidation corrosion

c) Liquid metal corrosion

d) Corrosion by other gases

Explanation: Oxidation corrosion, liquid metal corrosion and corrosion by other gases comes under the dry corrosion and concentration cell corrosion comes under the wet corrosion.

12. Corrosion is uniform in_____

a) Dry corrosion

b) Wet corrosion

c) Pitting corrosion

d) Water line corrosion

Answer: a

Explanation: In dry corrosion, the corrosion is uniform and in the wet corrosion, the corrosion is not uniform. Pitting and water line corrosion comes under the wet corrosion.

13. Corrosion along the grain boundaries is called as_____

a) Stress corrosion

b) Inter granular corrosion

c) Water line corrosion

d) Pitting corrosion

Answer: b

Explanation: Corrosion along the grain boundaries is called as the inter granular corrosion and stress corrosion is due to the static tensile strength.

14. Dry corrosion takes place in

a) Homogeneous process

b) Heterogeneous process

c) Neither homogeneous nor heterogeneous

d) Both homogeneous and heterogeneous Answer: d

Explanation: Dry corrosion takes place in the both homogeneous and heterogeneous processes. The wet corrosion takes place in only heterogeneous process.

15. In wet corrosion_____are formed at the cathodic areas.

a) Organic compounds

b) Metallic ions

c) Non-metallic ions

d) Inorganic compounds

Answer: c

Explanation: In wet corrosion, non-metallic ions are formed at the cathodic areas. Cathodes are negatively charged electrodes and attract positive charges or non-metallic ions.

16. Which type of reaction occurs in anodic areas?
a) Oxidation
b) Reduction
c) Displacement
d) A
ddi
tio
n
Ans
we
r: a
Explanation: Oxidation occurs in anodic areas. Oxidation means the addition of oxygen or removal of hydrogen or loss of electrons.

17. Rusting of iron in neutral aqueous solution of electrolyte occurs in the presence of oxygen with the evolution of _____
a) Nitrogen
b) Chloride
c) Sulfide
d) Hydrogen
Answer: d
Explanation: Rusting of iron in neutral aqueous solution of electrolyte occurs in the presence of oxygen with the evolution of hydrogen. Only hydrogen gas is evolved in this process.

18. Where does corrosion occurs in the rusting of iron?
a) At cathode
b) At anode
c) In electrolytic solution
d) Outside the
solution
Answer: b
Explanation: Corrosion occurs at anode, but rust is deposited near cathode.

19. 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) Electr
oplating
Answer:
c
Explanation: Oxygen absorption, hydrogen evolution and electroplating occur due to the release of electrons at the anode.

20. Select the incorrect statement about the wet corrosion from the following option.
a) It involves the setting up of large number of galvanic cells.
b) It is explained by absorption mechanism.
c) It occurs only on heterogeneous metal surface.
d) It is a fast
process

Answer: b.

Explanation: Wet corrosion is explained by the mechanism of electrochemical reaction. All the other options are correct.

21. Which of the following factor does not contribute to the rusting of iron?

a) Presence of acids and electrolytes

b) Contact with less reactive metal

c) Presence of water and oxygen

d) Contact with more reactive metal Answer: d

Explanation: Contact with the more reactive metal does not contribute to the rusting of iron whereas all the other given factors contribute to the rusting of iron.

22. _____ corrosion occurs when a metallic surface is partially immersed in an electrolyte and partially exposed to air.

a) Concentration cell

b) Dry corrosion

c) both a) and b)

d) None of above

Answer:

a

Explanation: Concentration cell corrosion occurs when a metallic surface is partially immersed in an electrolyte and partially exposed to air. This is due to formation of differential aeration cell

23. Which of the following does not promote the differential aeration corrosion?

a) Accumulation of dirt

b) Partially covering metals

c) Wire fence kind of structures

d) Accumulation of oxygen

Answer: d

Explanation: Accumulation of dirt, partially covering metals and wire fence kind of structures are the factors which promote the differential aeration corrosion.

24. Poorly oxygenated part becomes cathode whereas well oxygenated part becomes anode in the _____corrosion.

a) Galvanic corrosion

b) Differential aeration

c) Dry corrosion

d) None of above

Answer:

b

Explanation: Poorly oxygenated part becomes anode and undergoes oxidation whereas well oxygenated part becomes cathode in the differential aeration corrosion.

25. Which code is followed by the corrosion of metals?

a) Burger's vector

b) Pilling–Bedworth

c) Frank-Read mechanism

d) Miller's
theorem
Answer: b
Explanation: The Pilling-Bedworth ratio is the ratio of the volume of the basic cell of a metal oxide to the volume of the basic cell of an equivalent or standard metal. It is used to find out the likeliness of the metal to corrode or resist it.

26. Which type of reaction occurs in cathodic areas?
a) Oxidation
b) Reduction
c) Displacement
d) A
ddi
tio
n
Ans
we
r: b
Explanation: Reduction occurs in cathodic areas. Reduction means the addition of hydrogen or removal of oxygen or gain of electron.

27. Rusting of iron in neutral aqueous solution of electrolyte occurs in the presence of oxygen with the evolution of _____
a) Nitrogen
b) Chloride
c) Sulfide
d) H
ydro
gen
Ans
wer:
d
Explanation: Rusting of iron in neutral aqueous solution of electrolyte occurs in the presence of oxygen with the evolution of hydrogen. Only hydrogen gas is evolved in this process.

28. Where does corrosion occurs in the rusting of iron?
a) At cathode
b) At anode
c) In electrolytic solution
d) Outside the solution
Answer: b
Explanation: Corrosion occurs at anode, but rust is deposited near cathode.

29. 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) Electr
oplating
Answer:

c
Explanation: Oxygen absorption, hydrogen evolution and electroplating occur due to the release of electrons at the anode.

30. Select the incorrect statement about the wet corrosion from the following option.
a) It involves the setting up of large number of galvanic cells.
b) It is explained by absorption mechanism.
c) It occurs only on heterogeneous metal surface.
d) It is a fast
process
Answer: b
Explanation: Wet corrosion is explained by the mechanism of electrochemical reaction. All the other options are correct.

31. Which of the following factor does not contribute to the rusting of iron?
a) Presence of acids and electrolytes
b) Contact with less reactive metal
c) Presence of water and oxygen
d) Contact with more
reactive metal Answer: d
Explanation: Contact with the more reactive metal does not contribute to the rusting of iron whereas all the other given factors contribute to the rusting of iron

32. In wet corrosion_____are formed at the cathodic areas.
a) Organic compounds
b) Metallic ions
c) Non-metallic ions
d) Inorganic
compounds
Answer: c
Explanation: In wet corrosion, non-metallic ions are formed at the cathodic areas. Cathodes are negatively charged electrodes and attract positive charges or non-metallic ions.

33. Which of the following does not promote the differential aeration corrosion?
a) Accumulation of dirt
b) Partially covering metals
c) Wire fence kind of structures
d) Accumulation
of oxygen
Answer: d
Explanation: Accumulation of dirt, partially covering metals and wire fence kind of structures are the factors which promote the differential aeration corrosion.

34. Poorly oxygenated part becomes_____whereas well oxygenated part becomes_____in the differential aeration corrosion.
a) anode, cathode
b) cathode, anode
c) anode, anode
d) cathode,
cathode
Answer: a

Explanation: Poorly oxygenated part becomes anode and undergoes oxidation whereas well oxygenated part becomes cathode in the differential aeration corrosion.

35. 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
Answer: c
Explanation: Both nature of metal and environment influence the rate and extent of corrosion as corrosion is a natural process, which converts a refined metal to a more stable form, such as its oxide, hydroxide, or sulfide.

36. Which of the following is not associated with the nature of metal?
a) Nature of oxide film
b) Nature of electrolyte
c) Purity
d) Physical state
Answer: b
Explanation: Nature of metal includes its purity, physical state, nature of oxide film, position in galvanic series, etc and hence it is not associated with the nature of electrolyte.

37. Which of the following oxide film is protective?
a) Porous
b) Nonporous
c) Volatile
d) None of above
Answer: b
Explanation: Nonporous oxide film does not contains pores or holes and hence forms protective layer

38. 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
Answer: d
Explanation: Nature of the environment includes temperature, humidity, effect of pH, nature of electrolyte, etc. and hence volatility of corrosion product is not associated with it.

39. Lesser is the purity of the percentage of metal,_____is the rate of corrosion.
a) faster
b) slower
c) moderate
d) s

lo
we
st
An
sw
er:
a
Explanation: Lesser is the purity of the percentage of metal, faster is the rate of corrosion. Pure metals does not corrode easily whereas impure metals corrode easily.

40. Rate of corrosion of anodic region is directly 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 Answer: a
Explanation: Rate of corrosion of the anodic region is directly proportional to the cathodic area. Greater will be the cathodic area, faster will be the corrosion at an anode. (Reduction occurs at cathode…Reduction means gain of electron so greater cathodic area will demand more electrons and rate of corrosion is fast.)

41. Corrosion of zinc can be minimized by increasing the pH to
a) 9
b) 10
c) 11
d) 1
2
A
ns
w
er
: c
Explanation: Corrosion of zinc can be minimized by increasing the pH to 11. pH 11 means it will be basic in nature and hence will be less prone to corrosion.

42. Which of the following medium is most corrosive?
a) Acidic
b) Alkaline
c) Neutral
d) Both acidic and basic
Answer: a
Explanation: Acidic medium is more corrosive than alkaline and neutral media. In acidic medium, metals are more reactive and more prone to corrosion.

43. Non Protective oxide film is
a) Porous
b) Non porous
c) Volatile
d) U
nsta

ble
Ans
wer:
d
Explanation: Porous oxide film contains pores or holes and hence oxygen can penetrate through this film.

44. 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 Answer: a
Explanation: Excessive corrosion of metal takes place if corrosion product is volatile. When the corrosion product is volatile it easily escapes with gases and hence allowing more metal to corrode.

45. The specific volume ratios of W, Cr and Ni are 3.6, 2.0 and 1.6 respectively. Which of them will have the least rate of corrosion?
a) Ni
b) Cr
c) W
d) All will have the same rate of
corrosion Answer: c
Explanation: W will have the least rate of corrosion, even at higher temperatures because the specific volume ratio is inversely proportional to the rate of corrosion.

46. Which of the following statement is incorrect about the anodic coating?
a) Protects the metal from corrosion sacrificially
b) Base metal is not corroded
c) Example- coating of tin on iron
d) No negative
consequence
Answer: c
Explanation: Example- coating of zinc on iron. All the other options are correct.

47. Electrochemical protection is
a) Anodic protection
b) Sacrificial Anodic protection
c) Impressed current cathodic protection
d) Cathodic
protection
Answer: d
Explanation: Electrochemical protection is cathodic protection(CP). It is a technique used to control the corrosion of a metal surface by making it the cathode of an electrochemical cell.

48. Which of the following metal is not used as a sacrificial anode?
a) Zinc
b) Copper
c) Magnesium

d) Alu
minu
m
Answ
er: b
Explanation: Zinc, aluminum, magnesium are used as a sacrificial anode. Copper is not used as a sacrificial anode.

49. The protective coatings are used to
a) Corrode the metal
b) Prevent from corrosion
c) Increase the corrosion
d) Slightly increase the
corrosion Answer: b
Explanation: The protective coatings are used to prevent the corrosion of the metal. The protective layers are thin layer on the surface of the metal.

50. The_____resistance is given by the protective coatings.
a) oxidation
b) Reductn
c) both a) and b)
d) None
of above
Answer:
a
Explanation: The protective layer is used to provide the oxidation resistance to the metal and to give thermal insulating properties of the metal.

51. The cleaning methods before applying the protective coating are of_____types.
a) 3
b) 45
c) 6
An
sw
er:
d
Explanation: The cleaning methods before applying the protective coating are of 6 types. They are: solvent cleaning, alkali cleaning, mechanical cleaning, flame cleaning, sand blasting and pickling and etching.

52. In anodic coatings, the coatingmetals possess_____reduction potential than base metal.
a) Higher
b) Lower
c) 0
d) Canno
t be said
Answer:
b
Explanation: In anodic coating, the coating metals possess the lower reduction potential than

base metal. The coating metals possess the higher reduction potential than base metal.

53. Tinning is the example of
a) Anodic coatings
b) Cathodic coatings
c) Neither anode nor cathode
d) Both anode and cathode Answer: b

Explanation: Tinning is an example of the cathodic coatings. The galvanization comes under the anodic coatings.

54. The process of coating iron or steel sheet with a thin coat of zinc to prevent iron from rusting is called
a) Tinning
b) Galvanization
c) Metal cladding
d) Electroplating
Answer: b

Explanation: The process of coating iron or steel sheet with a thin coat of zinc to prevent iron from rusting is called galvanization. The process of depositing the coating metal on the surface of base metal by electrolysis is called electroplating.

55. Which of the following coatings has a glass composition?
a) Paint
b) Galvanized
c) Enamel
d) Anodized
Answer: c

Explanation: Enamel (vitreous) is a protective coating composed of glass containing a metal substrate. Paint is composed of organic material, whereas galvanized coating has anodic metal, both of which contain metal substrate. The anodized coating has an Al composition with an aluminum substrate.

56. Which of the following is not a type of protective coating?
a) Metallic
b) Non-metallic
c) Organic
d) Inorganic
Answer: b

Explanation: A protective coating is generally defined as a layer of an inert substance which is applied to a material to prevent the chemical and electrochemical attack. These are classified into metallic, organic, and inorganic coatings.

57. An example of an anodic coating is _____
a) Zinc
b) Copper
c) Nickel
d) Ch
romi
um
Ans
wer:
a
Explanation: The anodic coating is a classification of a metallic coating of metals which are anodic to the base metal. Zinc, aluminum, and cadmium are examples of anodic coatings. Cathodic coatings include Cu, Ni, Ag, etc.

58. The method of immersing a material into a molten bath for coating is known as
a) Electroplating
b) Hot dipping
c) Cladding
d) Ceme
ntation
Answer
: b
Explanation: Hot dipping is a method of metallic coating in which the product to be coated is dipped into a molten bath of the coating metal. Water pipe fittings coated with by the method of hot dipping.
59. Which of these methods uses a filler wire at a high-temperature flame?
a) Hot dipping
b) Metal spraying
c) Vapor plating
d) Ceme
ntation
Answer
: b

Explanation: In metal spraying, the surface to be coated is sprayed with the coating metal from a filler wire or powder at a high-temperature flame using a spray gun. A few materials like Al, Cu, Pb, Sn, and Zn can be coated by a spraying method.
60. The veneering of metals for coating is known as
a) Electroplating
b) Vapor plating
c) Cladding
d) Ceme
ntation
Answer
: c

Explanation: Veneering of two or metals under a pressure is described as the cladding method

of metallic coatings. The metal which needs to be applied the protective coating on is kept between two layers of the coating metal. This is then rolled into the required thickness, producing a protective coating.

Alclad is the cladding method where____is coated with pure aluminum.

a) Duralumin

b) Molybdenum

c) Tin

d) Silver

Answer: a

Explanation: When two materials are veneered by pressure, it is defined as the cladding process. The cladding of duralumin with pure aluminum is called Alclad.

Which method uses the powdered form of a coating to form the protective layer?

a) Electroplating

b) Hot dipping

c) Vapor plating

d) Ceme

ntation

Answer

: d

Explanation: Cementation is the process of alloying powdered coating metal with the base metal below melting point temperatures. Carburizing and sherardizing are types of cementation processes. Al, Zn, Cr, and W are only a few metals used for cementation.

61. Phosphate coating and Chromate coating are classifications of_____coatings.

a) anodic

b) cathodic

c) chemical

d) v

itre

ou

s

An

sw

er:

c

Explanation: Chemical or electrochemical conversion is a form of an inorganic coating. They are used to improve corrosion resistance and for decoration. Phosphate, chromate, anodized, and chemical oxide coating are the various classifications of inorganic coatings.

62. The mixture of oil and a pigment is known as

a) Varnish

b) Paint

c) Lacquer

d) En

amel

Ans

wer:

b

Explanation: Paint is a form of an organic coating which is applied to protect against corrosion and to beautify surfaces. Oil is the wet component, whereas pigment is the dry material which adds color. The oil oxidizes to form a protective layer of the dry pigment.

63. A varnish is a mixture of_____and oil.
a) Resin
b) Pigment
c) Turpentine
d) S
oyb
en
Ans
we
r: a
Explanation: A mixture of natural or thermosetting resin and drying oil is used to form varnishes. These coatings do not contain pigments. However, reduced viscosity is obtained by adding turpentine to the mixture.

A mixture of oil and pigment in water is known as _____
a) Enamel
b) Emulsion
c) Shellac
d) L
ac
qu
er
An
sw
er:
b
Explanation: An emulsion is a suspension of particles of drying oil and pigment in water. It is an organic type of protective coating. Here, the water evaporates and the mixture of oil and pigment forms the required film. The emulsions are applied for decoration in household appliances.

64. Which organic coating is made from Lac dissolved in alcohol?
a) Lacquer
b) Shellac
c) Emulsion
d) E
na
m
el
An
sw
er:
b
Explanation: Shellac is an organic protective coating which is made from the dissolved Lac in alcohol. It usually dries by evaporation of the solvent and leaves an organic finish. Lacquers contain nitrocellulose dissolved in the solvent.

65. Which common application do anodizing and galvanizing serve?
a) Corrosion resistance
b) Improved surface
c) Zinc coating
d) Increased
strength
Answer: a
Explanation: Both anodizing and galvanizing processes are carried out to improve the corrosion resistance of materials. Additionally, anodizing improves the surface which helps in painting, whereas a layer of zinc is coating in the galvanizing process.

66. What is the main principle of electroplating?
a) Hydrolysis
b) Neutralization
c) Esterification
d) Sat
urati
on
Ans
wer:
a
Explanation: Electroplating is the process by which a metal gets deposited over the other in the presence of metal salt (in aqueous solution). In this process, the water molecule is given out as the end product. Hence the principle behind electroplating is hydrolysis.

67. The process of modifying a metal's properties is called _____
a) Electrolysis
b) Electro deposition
c) Electro less plating
d) Electr
oplating
Answer:
b
Explanation: Electroplating coats a thin layer of metal over the other metals but does not modify its properties. But electro deposition is the process by which the coating is permanent and the property of
the coated metal changes.

71 Corrosion of metal is ----------
a) Oxidation of metal
b) Destruction of metal
c) Both a & b
d) None
of these
Ans: c

72 Dry corrosion is also called as ----------
a. Electrochemical Corrosion
b. Atmospheric Corrosion
c. Wet Corrosion
d. Galvanic Corrosion
Ans : b

73 Rate of Corrosion depends on----------
   a. Temperature
   b. Chemical affinity
   c. Moisture
   d. All
   of these
   Ans: d

74 Corrosion occurs due to the attack of atmospheric gases is ----------
   a. Wet Corrosion
   b. Electrochemical corrosion
   c. Dry Corrosion
   d. Concentration cell corrosion
   Ans: c

75 The rusting of iron is the ----------
   a. Reduction
   b. Oxidation
   c. Electrodeposition
   d. Electrolysis
   Ans: b

76 Corrosion between the dissimilar metal is called as--------
   a. Galvanic Corrosion
   b. Concentration cell corrosion
   c. Immersed corrosion
   d. Wet corrosion
   Ans: a

77 The oxide film formed by the metal Na is ----------
   a. Porous film
   b. Nonporous film
   c. Unstable oxide film
   d. Volatile
   oxide film
   Ans: a

78 The oxide film formed by the metals like Au, Ag is ----------
   a. Porous film
   b. Nonporous film
   c. Unstable oxide film
   d. Volatile
   oxide film
   Ans: c

79 Wet corrosion is also called as ----------
   a. Direct Corrosion
   b. Electrochemical corrosion
   c. Atmospheric corrosion
   d. None
   of these
   Ans: b

80 The oxide film formed by the metal Mo is ---------

a. Porous film
b. Nonporous film
c. Unstable oxide film
d. Volatile oxide film

Ans: d

81 Breaking of metal by the H2 accumulation is----------

a. Reduction
b. Oxidation
c. H2 embrittlement
d. Decarburisation

Ans – c

82 In stressed and unstressed parts of the same metal, stressed part acts as --------

a. Anodic
b. Cathodic
c. Passive
d. Inactive

Ans – a

83 Corrosion due to the formation of cavities around the metal is called as the ----------

a. Pitting corrosion
b. Water line corrosion
c. Galvanic corrosion
d. Immersed corrosion

Ans- a

84 Corrosion due to the varying O2 concentration is called as------

a. Pitting corrosion
b. Differential aeration cell corrosion
c. Concentration Cell corrosion
d. Both b & c

Ans- d

85 Reaction at anode is known as --------

a. Reduction
b. Oxidation
c. Displacement
d. Oxygen absorption

Ans- b

86 Reaction at Cathode is known as ----------

a. Reduction
b. Oxidation
c. Displacement
d. Oxygen absorption

Ans-a

87 H2 liberation/evolution takes place in --------- medium.

a. Alkaline
b. Neutral
c. Basic
d. A ci d ic A n s - d

88 The higher placed metals in galvanic/electrochemical series are ---------.

a. Cathodic
b. Anodic
c. Active
d. Bo th b & c

Ans- d

89 The lower placed metals in galvanic/electrochemical series are --------.

a. Inactive
b. Cathodic
c. Passive
d. All of these

Ans-d

90 If the metal or alloy is of smaller (grain size), then the rate of corrosion is ---------

a. Increases
b. Decreases
c. Remains constant
d. None of these

Ans-a

91 Which of the following is the protective oxide film?

a. Porous
b. Nonporous
c. Unstable
d. All of these

Ans- b

92 Which of the following is/are destructive oxide film/s?

a. Porous
b. Unstable
c. Nonporous
d. Bot
he a &
b Ans
– d

93 Which of the following ions are more corrosive?

a. Cl^-, NO_3^-
b. PO_4^{--}
c. SiO_4
d. O
xala
tes
Ans
– a

94 Rate of corrosion increases by increase in ----------

a. Temperature
b. Moisture
c. Conductivity of corroding medium
d. All
of
these
Ans- d

95 In cathodic protection method, the metal to be protected is forced to behave as -------

a. Cathode
b. Anode
c. Sacrificial anode
d. O
xid
nt
An
s- a

96 The metals which have wide range of passivity voltage range can be protected by----------

a. Cathodic protection
b. Anodic protection
c. Sacrificial anodic method
d. Metallic
coating
Ans- b

97 If the coating metal is higher placed in galvanic series than the base metal, then the coating is -----

a. Cathodic coating
b. Anodic coating
c. Hot dipping
d. Electroles
s coating

Ans- b

98 The process of galvanizing is ----------
a. Coating of Zn on iron
b. Coating of Sn on iron
c. Hot dipping
d. Bo
th a
& c
Ans-
d

99 Which of the following process is applicable to store the edible material?
a. Galvanizing
b. Tinning
c. Electroplating
d. Metallic
coating
Ans- b

100 The formation of strong layer of alloy of coating metal and base metal, on the surface of the metal is called as----------
a. Hot dipping
b. Metal cladding
c. Electroplating
d. Ceme
ntation
Ans – d

101 Metal cladding is the process in which----------
a. Thin sheet of the coating metal is bonded to the base metal.
b. Strong alloy layer of coating metal and base metal is formed.
c. Metallic coating is formed.
d. Metal is dipped in hot molten liquid of
other metal. Ans-a

102 Addition of corrosion inhibitors to the aqueous corrosive environment, ----------
a. Increases the rate of reaction.
b. Decreases the rate of reaction.
c. Does not affect the rate of reaction.
d. First increases and then decreases the rate
of reaction. Ans- b

103 The metals like Cu, Al forms ----------oxide film.
a. Porous
b. Nonporous
c. Unstable
d. V
ola
tile
An
s-
b

104 The metals like Fe, Mg, Na & K forms ---------- oxide film.

a. Porous
b. Nonporous
c. Unstable
d. V
ola
tile
An
s-
a

105 Which of the following comes under the wet corrosion?
a. Concentration cell corrosion
b. Galvanic corrosion
c. Corrosion by the atmospheric gasses
d. Bo
th a
& b
Ans-
d

106 Poorly oxygenated part becomes cathode whereas well oxygenated part becomes anode in----
------Corrosion.
a. Galvanic
b. Differential aeration
c. Dry
d. P
itt
in
g
A
n
s-
b

107 Which ratio is followed by the corrosion of metal?
a. Burger's vector
b. Frank-Read mechanism
c. Pilling- Bedworth
d. Miller's
theorem
Ans – c

108 Which of the following is not associated with the nature of metal?
a. Nature of oxide film
b. Nature of electrolyte
c. Purity
d. Physi
cal state
Ans-b

109 Rate of corrosion is directly proportional to the ----------
a. Cathodic area
b. Anodic area
c. Product of anodic and cathodic area
d. Sum of anodic and

cathodic area Ans-a

110 Which of the following medium is most corrosive?

a. Acidic
b. Basic
c. Neutral
d. Both acidic and basic Ans- a

111 Which of the following metal is not used as a sacrificial anode?

a. Zinc
b. Copper
c. Magnesium
d. Aluminu m Ans- b

112 The process of coating iron or steel sheet with a thin coat of tin to prevent iron from rusting is called as ----------

a. Tinning
b. Galvanizing
c. Metal cladding
d. Electroplati ng Ans- a

113 The method of immersing a material into a molten bath for coating is known as --------

a. Electroplating
b. Hot dipping
c. Cladding
d. Cementatio n Ans- b

114 Which method uses the powdered form of a coating to form the protective layer?

a. Electroplating
b. Hot dipping
c. Metal cladding
d. Cementatio n Ans- d

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