

OBJECTIVE TYPE QUESTIONS

1. The rusting of iron is *catalysed* by which one of the following:

(A) Fe

(B) O_2

(C) Zn

(D) H^+

2. Rusting of iron is:

(A) enhanced by wet air

(B) prevented on coating with zinc

(C) retarded in the presence of dissolved salts

(D) prevented, if the article is connected with a wire of Mg

3. Corrosion is an example of:
 - (A) oxidation
 - (B) reduction
 - (C) electrolysis
 - (D) erosion
4. For corrosion of iron to take place:
 - (A) Presence of moisture is sufficient
 - (B) presence of both moisture and oxygen is essential
 - (C) hydrogen is required
 - (D) a strong acid is necessary
5. When a metal pipeline is protected from corrosion by connecting to Mg block, it is called:
 - (A) impressed current protection
 - (B) sacrificial cathodic protection
 - (C) sacrificial anodic protection
 - (D) any of these
6. Corrosion in essence is a process of:
 - (A) reduction
 - (B) oxidation
 - (C) electrolysis
 - (D) extraction of metals
7. During wet corrosion:
 - (A) the anodic part undergoes oxidation
 - (B) the cathodic part undergoes oxidation
 - (C) the anodic part undergoes reduction
 - (D) neither anodic nor cathodic parts undergo any changes
8. Electrochemical corrosion can occur only if:
 - (A) oxygen is present in contact with metal
 - (B) air is present in contact with metal
 - (C) liquid medium is in contact with metal
 - (D) none of the above are present
9. Electrode potential of standard hydrogen electrode is:
 - (A) 2.00
 - (B) -1.00
 - (C) 0.00
 - (D) highest
10. Metal at the top of electromotive series is:
 - (A) most stable
 - (B) least active
 - (C) most noble
 - (D) most active
11. During electrochemical corrosion in acidic environment:
 - (A) oxygen evolution occurs
 - (B) oxygen absorption occurs
 - (C) hydrogen evolution takes place
 - (D) hydrogen absorption takes place
12. During galvanic corrosion, the more noble metal acts as:
 - (A) anode
 - (B) cathode
 - (C) anode as well as cathode
 - (D) corroding metal
13. During corrosion of iron in aqueous solution:
 - (A) corrosion occurs at cathode
 - (B) rust/corrosion product is deposited at anode
 - (C) corrosion occurs at anode and rust is also deposited at anode
 - (D) corrosion occurs at anode and rust is deposited at cathode
14. During oxygen concentration type corrosion, the corrosion:
 - (A) occurs at more-oxygenated part
 - (B) occurs at less-oxygenated part
 - (C) is uniform throughout
 - (D) occurs at the cathodic part

15. In acidic environment, the electrochemical corrosion occurs with the replacement of H^+ ion by the metal:
 - (A) Fe
 - (B) Cu
 - (C) Fe and Cu
 - (D) none of the above
16. The process cementation with zinc powder is known as:
 - (A) galvanizing
 - (B) zincing
 - (C) sherardizing
 - (D) tinning
17. The deciding factor in atmospheric corrosion is:
 - (A) presence of oxygen in air
 - (B) humidity of the air
 - (C) presence of gases like SO_2
 - (D) frequency of rain fall
18. The rate of corrosion of iron in atmosphere depends upon:
 - (A) the humidity of the atmosphere
 - (B) the degree of pollution of the atmosphere
 - (C) the frequency of rain fall
 - (D) all of these factors
19. In electrochemical corrosion:
 - (A) anode undergoes oxidation
 - (B) cathode undergoes oxidation
 - (C) both undergoes oxidation
 - (D) none of the above
20. In waterline corrosion, the maximum amount of corrosion takes place:
 - (A) along a line just above the level of the water meniscus
 - (B) along a line at the level of the water meniscus
 - (C) along a line just below the level of the water meniscus
 - (D) at the bottom of the vessel
21. Addition of hydrazine hydrate to corrosive environment:
 - (A) retards anodic reaction
 - (B) prevents diffusion of protons to cathode
 - (C) retards cathodic reaction by consuming dissolved oxygen
 - (D) increases hydrogen overvoltage

Answers

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|---------|---------|---------|---------|---------|---------|
| 1. (D) | 2. (D) | 3. (A) | 4. (B) | 5. (C) | 6. (B) |
| 7. (A) | 8. (C) | 9. (C) | 10. (D) | 11. (C) | 12. (B) |
| 13. (D) | 14. (B) | 15. (A) | 16. (C) | 17. (B) | 18. (D) |
| 19. (A) | 20. (C) | 21. (C) | | | |