Question Bank

1. Define corrosion.
2. Explain the electrochemical theory of corrosion with relevant reactions by taking iron metal as an example.
3. What are the reactions taking place at anodic area and cathodic area in the corrosion of iron? Write the overall reaction.
4. Explain differential metal corrosion with suitable example.
5. What is differential aeration corrosion? Explain with an example.
6. Name the type of corrosion that may occur in the following cases and explain the corrosion process.
   (a) Ruptured tin coating on iron article (b) A bimetallic strip of iron and magnesium.
7. Write a brief note on pitting corrosion.
8. Explain waterline corrosion with an example.
9. Write a note on stress corrosion.
10. Discuss caustic embritllement with relevant reactions.
11. Describe the effect of following factors on the rate of corrosion:
    (i) Nature of metal (ii) Nature of corrosion product
    (iii) Difference in potential between anodic and cathodic regions
12. Explain the effect of following factors on the rate of corrosion:
    (a) Anodic and cathodic areas (b) Anodic and cathodic polarizations
13. What is anodic metal coating? Describe galvanization process.
14. What is tinning? Explain the process of tinning.
15. Why galvanized articles cannot be used to store food items?
16. Why pin holes in tin-coated iron are more prone to corrosion than pin holes in zinc coated iron?
17. Explain the different steps involved in phosphating.
18. What is anodizing? Describe the anodizing process of aluminium.
19. Write a note on anodic and cathodic inhibitors.
20. What are corrosion inhibitors?
21. What is cathodic protection? Explain sacrificial anode method.
22. Explain impressed current method.
23. Mention any two advantages and disadvantages of sacrificial anodic method and impressed current method.
24. What is anodic protection?
25. Illustrate anodic protection with a suitable example.
26. Mention the advantages and disadvantages of anodic protection.
27. Account for the following, when an iron article is exposed to acid medium in the absence Of oxygen,
    (i) Iron becomes brittle
    (ii) Corrosion control can be achieved by the addition of antimony oxide as aninhibitor.
28. What type of corrosion taking place in the following cases?
    (i) Gaps on the surface of a tinned iron sheet
    (ii) Brass article exposed to ammonical vapors.
29. Mention the significance of Tafel plot.