1. What is Corrosion?
   a) Destruction or deterioration of a material
   b) Conversion of metal atoms to metallic ions
   c) Conversion of metal ions to metal atoms
2. d) Destruction of materials involving in the conversion of metal atoms into metal ions
   The chemical formula of rust is _____
   a) Fe_1O
   b) Fe_2O_3
   c) Fe_3O_4
   d) $Fe(OH)_2$) Destruction of materials involving in the conversion of metal atoms into metal ions
3. . Which of the following materials will undergo Corrosion?
   a) Metals only
   b) Metals and Non-metals
   c) Metals, Non-metals, Ceramics and Plastics
   d) Metals, Non-metals, Ceramics, Plastics and Rubbers
4. Corrosion maintenance is vital in _____ industries.
   a) paper
   b) petroleum
   c) plastic toy
   d) both petroleum and paper
5. 8. Which of the following subjects are important in understanding and controlling corrosion?
   a) Thermodynamics
   b) Electrochemistry
   c) Both Thermodynamics and Electrochemistry
   d) Material Characterization
6. 10. Which of the following is an incorrect statement?
   a) Corrosion is an irreversible process
   b) Corrosion is a non-spontaneous process
   c) Corrosion is a degradation process
   d) Corrosion is a spontaneous process
7. 12. Corrosion involves _____ reactions.
   a) oxidation
   b) reduction
   c) displacement
   d) both oxidation and reduction
8. 15. What are the advantages of corrosion?
   a) Protection of metals by surficial oxide layer
   b) Zn-carbon electrochemical reactions in the battery
   c) Decrease in the strength of material

d) Protection of metals by the surficial oxide layer and Zn-carbon electrochemical reactions in the battery

9. 1. Which of the following are the destructive effects of corrosion?
   a) Contamination of product
   b) Effect on safety
   c) Reliability
   d) Contamination of product, effect on safety and reliability
10. Which of the following corrosion damage is more emphasized in the construction material of restaurants?
   a) Loss of appearance
   b) Maintenance and operating cost
   c) Effect of safety
   d) Both loss of appearance and effect of safety
11. . Main form of ceramic degradation is _____
   a) dissolution
   b) swelling
   c) weathering
   d) dissolution and swelling
12. Which of the following are included in maintenance and operating costs?
   a) Use of corrosion-resistant material
   b) Loss of product
   c) Regular inspections
   d) Use of corrosion-resistant material and regular inspection
13. The effect of acid rains on Taj Mahal is also a corrosion.
   a) True
   b) False
14. Which of the following tragedies that occurred due to corrosion?
   a) Bhopal tragedy
   b) Crude oil leak in Canada
   c) Both Bhopal tragedy and crude oil leak in Canada
   d) Fukushima
15. Which of the following law is used to derive the corrosion rate expression?
   a) Newton’s law
   b) Henry’s law
   c) Raoult’s law
   d) Faraday’s law
16. Rate of oxidation is equals to the rate of reduction in corrosion.
   a) True
   b) False
17. . _____ will occur, if current pass from an electrode to electrolyte.
   a) Oxidation
   b) Reduction

c) Oxidation and reduction
d) Anion formation

18. What are the uses of corrosion rate estimation of materials in daily life?
    a) To predict the life time of a component
    b) To compare the corrosive-resistant of materials
    c) To increases the corrosion rate
    d) To predict the life time and to compare the corrosive resistant of materials
19. Which of the following will result due to cavitation damage of a metal?
    a) Mechanical action
    b) Chemical dissolution
    c) Both mechanical action and chemical dissolution
    d) Neither mechanical action nor chemical dissolution
20. Which of the following type of corrosion that occurs at contact areas between materials under load subjected to vibration or relative motion?
    a) Fretting corrosion
    b) Crevice corrosion
    c) Cavitation damage
    d) Pitting corrosion
21. Which of the following is/are the other names of fretting corrosion?
    a) Friction oxidation
    b) Wear oxidation
    c) False brinelling
    d) Friction oxidation, wear oxidation and false brinelling
22. Which of the following is/are the preventive measures of fretting corrosion?
    a) Lubricate with low-viscosity, high-tenacity oil
    b) Increasing surface hardness by shot-peening or cold working
    c) Use gaskets to absorb vibrations
    d) Lubricate with low-viscosity, high-tenacity oil, increasing surface hardness by shot-peening and use gaskets to absorb vibrations
23. Which of the following is/are the reasons for the cause of crevice corrosion?
    a) The stagnant solution in the holes and gasket surfaces
    b) The stagnant solution in the lap joints and surface deposits
    c) Dissimilar metal contact
    d) The stagnant solution in the holes, gasket surfaces, lap joints, and surface deposits
24. Which of the following combination results in crevice corrosion?
    a) Metal and absorbent gaskets
    b) Continuous weld metals
    c) Metal and non-absorbent gaskets
    d) Single metal piece
25. What is the incubation period associated with a crevice attack?
    a) 1 month – 10 months

b) 1 hour – 10 hours
c) 1 day – 10 days
d) 6 months – 1 year

26. Metals or alloys that depend on oxide films for corrosive resistance are highly susceptible to crevice corrosion.
a) True
b) False

27. Which of the following form of corrosion is more destructive and insidious in nature?
a) Uniform corrosion
b) Intergranular corrosion
c) Pitting corrosion
d) Galvanic corrosion

28. Which of the following corrosion form is/are autocatalytic in nature?
a) Pitting and crevice corrosion
b) Crevice corrosion only
c) Pitting corrosion only
d) Pitting and intergranular corrosion

29. Which of the following ions have a high tendency to pitting corrosion?
a) Chlorides
b) Bromides
c) Hypo chlorites
d) Chlorides, bromides, and hypochlorites

30. Which of the following is/are the other names of selective leaching?
a) Dealloying
b) Parting
c) Dealloying and parting
d) Neither dealloying nor parting

31. Which of the following is/are the benefits of selective leaching?
a) Enrichment of silicon on stainless steel for better passivity
b) Preparation of Raney nickel catalyst
c) Extraction of metals using hydrometallurgy
d) Enrichment of silicon on stainless steel for better passivity, preparation of Raney nickel catalyst and extraction of metals using hydrometallurgy

32. What is meant by hydrogen blistering?
a) Entrapment of hydrogen molecules in the metal voids
b) Formation of brittle metal hydrides
c) Entrapment of metal hydrides in the metal voids
d) Entrapment of hydrogen molecules and metal hydrides in the metal voids

33. What is meant by hydrogen embrittlement?
a) Entrapment of hydrogen molecules in the metal voids
b) Formation of brittle metal hydrides

c) Entrapment of metal hydrides in the metal voids
d) Entrapment of hydrogen molecules and metal hydrides in the metal voids

34. Which of the following metal is highly susceptible to hydrogen embrittlement?
a) Titanium
b) Nickel
c) martensitic iron-base alloys
d) Titanium and martensitic iron-base alloys

35. Which of the following is the driving force in galvanic corrosion?
a) Conductivity of electrolyte
b) Crystal structure of metals
c) The potential difference between the two metals
d) Temperature of electrolyte

36. Which of the following is the most corrosion-resistant metal at room temperature?
a) Titanium
b) Platinum
c) Gold
d) Tantalum

37. An inhibitor is a chemical substance that added in small concentrations to an environment, to decrease the corrosion rate.
a) True
b) False

38. Which of the following is/are the limitations of inhibitors?
a) It contaminates the environment
b) Inhibitors are toxic
c) Its efficiency decreases with time and temperature
d) It contaminates the environment, toxic in nature, and its efficiency decreases with time and temperature.

39. Which of the following parameter of electrolyte decreases the corrosion rate?
a) Dissolved oxygen
b) Temperature
c) High electrical resistance
d) Presence of ferric ions

40. Which of the following is/are the factors that influence corrosion fatigue?
a) Type of metal
b) Composition of corrosive solution
c) Temperature
d) Type of metal, corrosive solution composition, and temperature

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

Corrosion fatigue is a combined effect of _____

a. Corrosive environment and mechanical stresses
b. Cyclic loading and corrosion
c. Velocity and mechanical stresses
d. None of the above