1. Which of the following is NOT a type of wear mechanism?

a) Adhesive wear
b) Corrosive wear
c) Abrasive wear
d) Impact wear

Answer: b) Corrosive wear

Explanation: Corrosive wear is not a type of wear mechanism; it refers to the combined action of corrosion and mechanical wear.

2. Two-body wear occurs when:

a) A third particle intervenes between the surfaces
b) Surfaces slide against each other with no intermediate particles
c) Surface fatigue leads to wear
d) Lubricants prevent direct contact between surfaces

Answer: b) Surfaces slide against each other with no intermediate particles

Explanation: Two-body wear involves direct contact and sliding between two surfaces with no intervening third body.

3. Fretting wear is characterized by:

a) Intense impact forces
b) Abrasive particles between surfaces

c) Small amplitude oscillatory motion
d) Corrosive environments

Answer: c) Small amplitude oscillatory motion

Explanation: Fretting wear occurs due to repeated small-scale oscillatory motion between two surfaces in contact.

4. The wear rate in abrasive wear is primarily influenced by:

a) Relative velocity between surfaces
b) Hardness of the softer material
c) Presence of lubricants
d) Surface roughness

Answer: b) Hardness of the softer material

Explanation: In abrasive wear, the hardness of the softer material determines the wear rate as it dictates the resistance to abrasion.

5. What is the primary cause of adhesive wear?

a) Surface fatigue
b) Chemical reactions between surfaces
c) Bonding and tearing of material from one surface to another
d) Impact of foreign particles

Answer: c) Bonding and tearing of material from one surface to another

Explanation: Adhesive wear occurs due to the bonding and subsequent tearing of material from one surface to another during relative motion.

6. Which wear mechanism is associated with high-velocity impacts?

a) Abrasive wear
b) Impact wear
c) Adhesive wear
d) Fretting wear

Answer: b) Impact wear

Explanation: Impact wear results from high-velocity impacts between two surfaces, causing material removal.

7. Cavitation wear is caused by:

a) Corrosive substances
b) Oscillatory motion
c) Formation and collapse of vapor bubbles
d) High-temperature environments

Answer: c) Formation and collapse of vapor bubbles

Explanation: Cavitation wear occurs due to the formation and collapse of vapor bubbles in a fluid medium, leading to surface damage.

8. Which type of wear is predominant in metal cutting tools?

a) Abrasive wear
b) Adhesive wear
c) Impact wear
d) Fretting wear

Answer: a) Abrasive wear

Explanation: Metal cutting tools experience abrasive wear due to the presence of hard particles in the workpiece material.

9. Surface fatigue is caused by:

a) Continuous sliding motion
b) High-temperature exposure
c) Repeated cyclic loading
d) Chemical reactions with the environment

Answer: c) Repeated cyclic loading

Explanation: Surface fatigue results from repeated cyclic loading, leading to crack initiation and propagation on the surface.

10. Which factor is critical in preventing corrosion wear?

a) Surface roughness
b) Lubricant viscosity
c) Chemical composition of materials
d) Mechanical properties of materials

Answer: c) Chemical composition of materials

Explanation: The chemical composition of materials plays a critical role in preventing corrosion wear by providing resistance to chemical attack.

Related posts:

1. Steam generators and boilers MCQs
2. Vapour Cycles MCQs
3. Gas Dynamics MCQs
4. Air Compressors MCQs
5. Nozzles and Condensers MCQs
6. Introduction to stress in machine component MCQs
7. Shafts MCQS
8. Springs MCQs
9. Brakes & Clutches MCQs
10. Journal Bearing MCQs
11. Energy transfer in turbo machines MCQs
12. Steam turbines MCQs
13. Water turbines MCQs
14. Rotary Fans, Blowers and Compressors MCQs
15. Power transmitting turbo machines MCQs
16. Energy transfer in turbo machines MCQs
17. Steam turbines MCQs
18. Water turbines MCQS
19. Rotary Fans, Blowers and Compressors MCQs
20. Power transmitting turbo machines MCQs
21. Introduction to Computer Engineering MCQs

22. Types of Analysis MCQS
23. Heat Transfer and Conduction MCQs
24. Extended Surfaces (fins) MCQs
25. Convection MCQs
26. Thermal and Mass Transfer MCQs
27. Thermal Radiation & Boiling/Condensation MCQs
28. Mechanical processes MCQs
29. Electrochemical and chemical metal removal processes MCQs
30. Thermal metal removal processes MCQs
31. Rapid prototyping fabrication methods MCQs
32. Technologies of micro fabrication MCQs
33. Power Plant Engineering MCQs
34. Fossil fuel steam stations MCQs
35. Nuclear Power Station MCQs
36. Hydro-Power Station MCQs
37. Power Station Economics MCQs
38. Design of Belt, Rope and Chain Drives MCQS
39. Spur and Helical Gears MCQs
40. Bevel Gears MCQs
41. Design of I.C. Engine Components MCQs
42. Linear system and distribution models MCQs
43. Supply chain (SCM) MCQs
44. Inventory models MCQs
45. Queueing Theory & Game Theory MCQs
46. Project Management & Meta-heuristics MCQs
47. Overview of Systems Engineering MCQS
48. Structure of Complex Systems MCQs

49. Concept Development and Exploration MCQs
50. Engineering Development MCQs
51. Basic Concepts & Laws of Thermodynamics MCQs
52. Properties of Steam MCQs
53. Air standard cycles MCQS
54. Fuels & combustion MCQs
55. Materials Science MCQs
56. Alloys and Materials MCQs
57. Metal Heat Treatment MCQs
58. Material Testing and Properties MCQs
59. Chemical Analysis of Metal Alloys MCQs
60. Stress and strain MCQs
61. Bending MCQs
62. Torsion in shafts MCQs
63. Theories of failures MCQs
64. Columns & struts MCQs
65. Manufacturing Process MCQs