

24 Multiple choice questions

1. a non-magnetic solid solution of carbon in iron
 - a. ferrite
 - b. austenite
 - c. eutectoid
 - d. cementite

2. a hard, brittle iron carbide compound with the formula Fe₃C, found in carbon steel
 - a. austenite
 - b. inertia
 - c. ferrite
 - d. cementite

3. the resistance to the relative motion (sliding or moving) between surfaces in contact
 - a. inertia
 - b. friction
 - c. inductor
 - d. fibre

4. an area of a vehicle that is designed to compress during an accident to absorb the energy from the impact
 - a. duralumin
 - b. crumple zone
 - c. cementite
 - d. impedance

5. a slender thread of a natural or synthetic material, such as optical or carbon fibres
 - a. ferrous
 - b. fibre
 - c. ferrite
 - d. diode

6. direct current
 - a. DC
 - b. fibre
 - c. AC
 - d. diode

7. the tendency of a body to persist in its state of rest or uniform (unaccelerated) motion in a straight line unless acted upon by a net (unbalanced) external force
 - a. ferrous
 - b. inertia
 - c. inductor
 - d. ferrite

8. iron based
 - a. alloy
 - b. ferrous
 - c. ferrite
 - d. fibre

9. a series of tests undertaken while machinery is operating to assess conformance within specified operating criteria
 - a. cementite
 - b. condition monitoring
 - c. conductor
 - d. capacitor

10. the dimensionless ratio of the friction resistive force and the normal force pressing two bodies together
 - a. friction
 - b. condition monitoring
 - c. coefficient of friction
 - d. cementite

11. a piece of equipment providing inductance (electromagnetic induction) in a circuit or other system
 - a. capacitor
 - b. inertia
 - c. conductor
 - d. inductor

12. a device consisting of two conducting surfaces separated by an insulator for accumulating and holding an electric charge when voltage is applied
 - a. alloy
 - b. conductor
 - c. capacitor
 - d. inductor

13. a mixture of two or more elements, at least one of which is a metal usually formed by melting
 - a. fibre
 - b. AC
 - c. alloy
 - d. anneal

14. the trade name of an aluminium alloy containing varying degrees of copper, manganese and magnesium
 - a. friction
 - b. duralumin
 - c. ferrous
 - d. alloy

15. glass produced by slow cooling to remove internal stress; it can be cut to size
 - a. alloy
 - b. annealed glass
 - c. crumple zone
 - d. anneal

16. the lowest point on an equilibrium phase diagram at which complete transformation from one solid phase to another occurs
 - a. conductor
 - b. inertia
 - c. inductor
 - d. eutectoid

17. a semiconductor device that can act as a conductor if current is moving in one direction or as an insulator when moving in the reverse direction
 - a. fibre
 - b. AC
 - c. diode
 - d. DC

18. a measure in an AC circuit that is equivalent to resistance in a DC circuit
 - a. AC
 - b. diode
 - c. impedance
 - d. inertia

19. a substance, body or device capable of transmitting electricity, heat or sound
 - a. inductor
 - b. conductor
 - c. capacitor
 - d. inertia

20. to heat to a critical temperature and slowly furnace cool to remove internal stress
 - a. fibre
 - b. anneal
 - c. AC
 - d. alloy

21. body centred cubic (BCC) phase in the iron-carbon phase diagram which may exist in either a low temperature or high temperature form
 - a. cementite
 - b. fibre
 - c. ferrite
 - d. ferrous

22. a term applying to any of several processes involving heating metals to controlled temperatures for specific periods of time before cooling them at controlled rates
 - a. ferrite
 - b. cementite
 - c. heat treatment
 - d. eutectoid

23. a vehicle manufactured in such a way that it is capable of withstanding the effects of a crash
 - a. cementite
 - b. crashworthiness
 - c. crumple zone
 - d. ferrite

24. alternating current
 - a. DC
 - b. anneal
 - c. alloy
 - d. AC