

16 Multiple choice questions

1. the ability of material to resist the propagation of cracks; it is often identified as the area under a stress-strain graph
 - a. mass
 - b. toughness
 - c. stiffness
 - d. timber

2. any measure that has a magnitude only
 - a. mass
 - b. metals
 - c. scalar
 - d. screw

3. an alloy of iron and up to 2% carbon, often with additions of other alloying elements such as manganese, silicon, chromium, nickel and molybdenum
 - a. screw
 - b. metals
 - c. steel
 - d. lever

4. a polymer that can be softened by heating
 - a. thermoplastic
 - b. thermoset
 - c. pearlite
 - d. metals

5. a type of simple machine consisting of a rigid beam pivoting around fulcrum that is used to transmit force
 - a. lever
 - b. steel
 - c. vector
 - d. timber

6. a material containing no, or minimal iron
 - a. lever
 - b. toughness
 - c. polymer
 - d. non-ferrous

7. solid materials, typically hard, opaque, ductile, malleable and shiny; they feature good electrical and thermal conductivity
 - a. lever
 - b. scalar
 - c. mass
 - d. metals

8. an organic material consisting of thin-walled tubes made of cellulose; the cellulose 'tubes' are bound together with a weak glue called lignin
 - a. lever
 - b. pulley
 - c. steel
 - d. timber

9. a measure of the amount of matter that an object contains; the unit of this within the SI system is the kilogram (kg)
 - a. mass
 - b. timber
 - c. screw
 - d. metals

10. a form of simple machine used to translate rotary motion into linear motion
 - a. lever
 - b. screw
 - c. steel
 - d. scalar

11. a phase of carbon steel and cast iron consisting of ferrite and cementite formed into distinct layers (or lamellae) on slow cooling from austenite
 - a. polymer
 - b. pulley
 - c. pearlite
 - d. metals

12. a giant molecule based on carbon
 - a. polymer
 - b. pulley
 - c. lever
 - d. timber

13. the resistance of an elastic body to deflation by an applied force
 - a. steel
 - b. stiffness
 - c. toughness
 - d. timber

14. any measure that has a magnitude and direction
 - a. vector
 - b. metals
 - c. timber
 - d. lever

15. a polymer that can be set by heating but cannot be softened by reheating
 - a. screw
 - b. thermoset
 - c. thermoplastic
 - d. timber

16. consists of a wheel and an axle arranged by itself or in conjunction with others to operate as a simple machine
 - a. pulley
 - b. scalar
 - c. polymer
 - d. screw