

# Quiz

1. Classify materials. Classify metals.
2. What are the typical grades of steel? What is the effect of different alloying elements in steel?
3. Why are tool steels hard? What is HSLA steel?
4. What are the major alloying elements in stainless steels? Why are stainless steels resistant to corrosion?
5. What is 17-7PH steel? What is the source of high strength in these steels?
6. What should be minimum carbon content in a cast iron?
7. Why is grey cast iron so brittle? Why is it resistant to wear?
8. How can the ductility of cast irons be increased?
9. What is the shape of graphite in malleable cast iron?
10. What are the useful properties of cast iron?
11. Why is copper used extensively in electrical and thermal applications?
12. What is Brass? What are typical alloying elements in bronze?
13. Which is the heat treatable alloy of copper?
14. How are Aluminium alloys classified and designated?
15. What are the different temper designation of aluminum alloys?
16. Why is titanium resistant to corrosion?
17. What are the typical phases in Ti alloys? What is  $\alpha$  and  $\beta$  stabilizer?
18. Why Ti alloys are preferred for high temperature applications?
19. What are the different categories of ceramic materials?
20. What are the main constituents in refractory ceramics? What are the main constituents of glass?
21. What are the key properties of glass-ceramics?
22. What are thermosets and thermoplasts?
23. Why do plastics find widespread applications?
24. What is elastomer? What are their typical characteristics and applications?
25. What is glass transition temperature?
26. What is UHMWPE polymer?
27. What is LCP?
28. Why are LCPs used in LCD displays?
29. What is twisted nematics?
30. Name some natural plastics.