

Solid materials Answers

1. **B:** $\rho = m/V$;
2. **C:** N/m^2
3. **D:** elastic
4. **A:** the spring constant;
5. **D:** the area between the loading line and the unloading line.
6. **B:** 0.075 J.
7. **B:** Rubber does not obey Hooke's Law;
8. **D**
9. **A**
10. **B**
11. **C**
12. **C:** the elastic limit
13. **C:** No units
14. **D**
15. **A:** N/m^2
16. **C:** the strain energy per unit volume;
17. **C:** 10 mm;
18. **B:** measuring the thickness with a micrometer;
19. **B:** the strain energy in the wire can cause it to whiplash, to cause eye injuries.
20. **B:** Its units are J m^{-3} .

Total = 20 marks