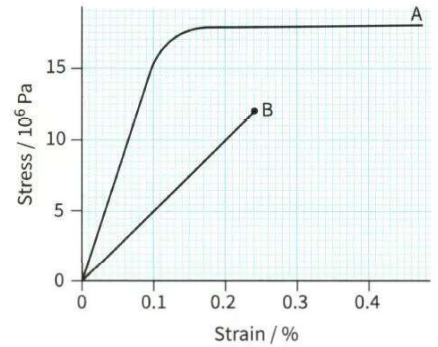


Exam Style Questions:

1. a. Define elasticity. What are the factors on which modulus of elasticity depends?
- b. Figure shows stress- strain graphs for two materials, A and B. Use the graphs to determine the,
 - i. Young modulus of each material.
 - ii. Which of the two is the stronger material?



2. Figure shows the force–extension graphs for four springs, A, B, C and D.
 - a. State which spring has the greatest value of force constant.
 - b. State which is the least stiff.
 - c. State which of the four springs does not obey Hooke’s law

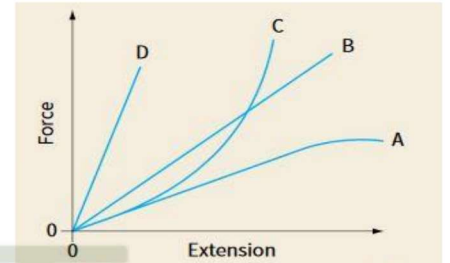


Figure 7.8 Force–extension graphs for four different springs.

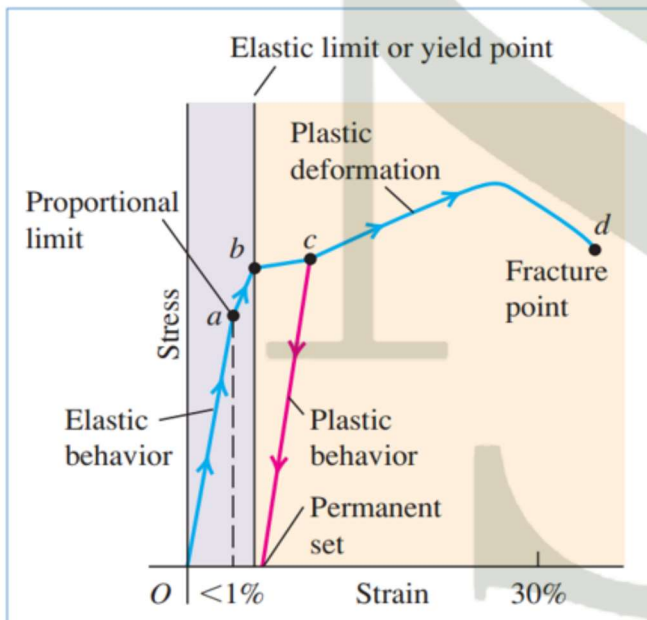


Fig: (a) Typical stress-strain diagram for a ductile metal under tension.

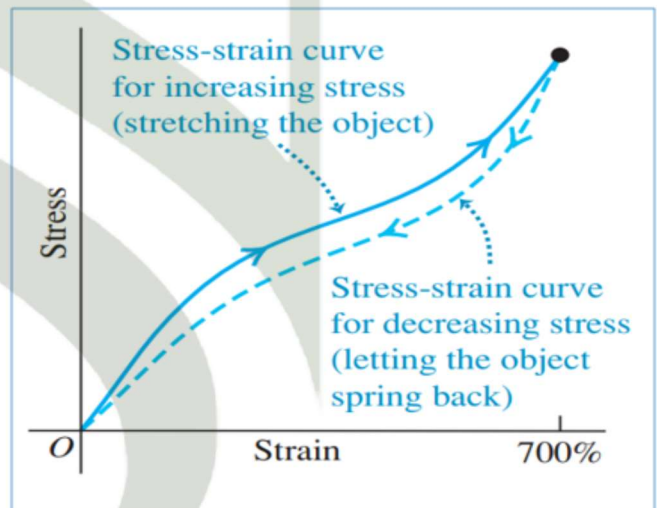


Fig: (b) Typical stress-strain diagram for vulcanized rubber. The curves are different for increasing and decreasing stress, a phenomenon called elastic hysteresis.