

1. Which of the following joint have high corrosion resistance?

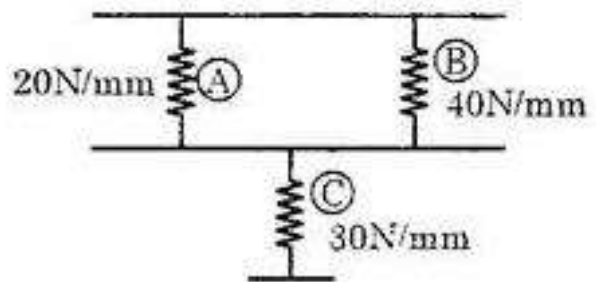
- a. **Welded joint**
- b. Riveted joint
- c. Bolted joint
- d. None of the above

2. The melting point of the filler metal in brazing should be above.....

- a. **420° C**
- b. 820° C
- c. 1020° C
- d. 1200° C

3. Equivalent spring constant is

- a. **20 N/mm**
- b. 30 N/mm
- c. 45 N/mm
- d. 90 N/mm



4. Which of the following types is not fillet weld?

- a. **butt joint**
- b. lap joint
- c. T-joint
- d. Corner joint

5. Why are mechanical springs used?

- a. To apply force
- b. To store energy
- c. To measure force
- d. **All of the above**

6. In which condition the axial distance between two adjacent coils is called as pitch?

- a. Compressed condition
- b. **Uncompressed condition**
- c. Both a. and b.
- d. None of the above

7. Which factor is used to consider the effects of direct shear stress and torsional shear stress when curvature effect stress is not considered?

- a. **Shear stress concentration factor**
- b. Wahl shear stress concentration factor
- c. Both a. and b.
- d. None of the above

8. Which formula is used to calculate shear strength of butt weld?

- a. **$\tau = P / h l$**

- b. $\tau = P / h l^2$
- c. $\tau = P / h^2 l$
- d. None of the above

9. The load required to produce a unit deflection in the spring is called

- a. Modulus of Rigidity
- b. **Spring stiffness**
- c. Flexural rigidity
- d. Tensional rigidity

10. The most important property for the spring material is

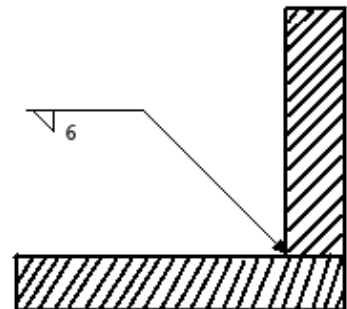
- a. High elastic limit
- b. High deflection value
- c. Resistance to fatigue and shock
- d. **All of the above**

11. _____ is a method of applying a lower melting point metal to join other metal parts.

- a. **Soldering**
- b. Brazing
- c. Adhesives
- d. Welding

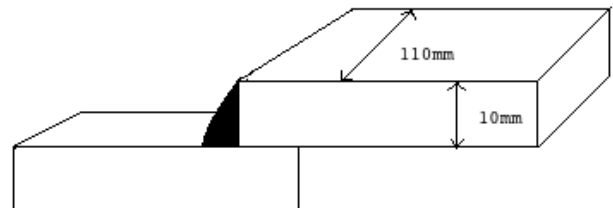
12. Which welding symbol is shown below?

- a. Lap joint
- b. Single V butt joint
- c. Double fillet weld
- d. **Single fillet weld**



13. Calculate strength of the welded joint shown below, when 70 MPa is the allowable shear stress for the weld material.

- a. **$54.44 \times 10^3 \text{ N}$**
- b. $77 \times 10^3 \text{ N}$
- c. $50 \times 10^3 \text{ N}$
- d. None of the above



14. Which of the following types is not fillet weld?

- a. **butt joint**
- b. lap joint
- c. T-joint
- d. Corner joint