

## Sleepers

- Q.1** A CST-9 sleeper consists of  
 (a) two inverted triangular pots on either side of rail seat  
 (b) a central plate with a projected key and box on the top of plate  
 (c) a tie bar and its cotter to connect two cast iron plates  
 (d) All of the above
- Q.2** The main disadvantage(s) of steel sleeper is(are)  
 (a) it gets rusted quickly  
 (b) its legs sometimes get broken  
 (c) its legs sometimes get split  
 (d) All of the above
- Q.3** The spacing of sleepers  
 (a) throughout the length of rail is kept uniform  
 (b) rear rail joints, is kept closer  
 (c) at the middle of rails is kept closer  
 (d) None of these
- Q.4** For metal sleepers with round edges, maximum size of ballast is  
 (a) 50 mm (b) 40 mm  
 (c) 30 mm (d) 25 mm
- Q.5** The effective bearing area of all type of sleepers is  
 (a)  $0.40 \text{ m}^2$  (b)  $0.42 \text{ m}^2$   
 (c)  $0.44 \text{ m}^2$  (d)  $0.46 \text{ m}^2$
- Q.6** Rail joint supported on a single sleeper, is known as  
 (a) suspended rail joint  
 (b) bridge rail joint  
 (c) supported rail joint  
 (d) square rail joint
- Q.7** Consider the following statements  
 1. Heel blocks are inserted between the heel of the tongue rail and stock rail
2. Stretcher bars are used to connect tongue rails  
 3. Switch tie plate is provided below the slide chairs at the toe
- The correct statement(s) is (are)  
 (a) only 1 (b) both 1 and 3  
 (c) both 1 and 2 (d) 1, 2 and 3
- Q.8** Choose the incorrect statement from the following.  
 (a) Sleepers transfer the load of moving locomotive to the girders of the bridges  
 (b) Sleepers act as a non-elastic medium between the rails and ballast  
 (c) Sleepers hold the rails at 1 in 20 tilt inward  
 (d) Sleepers hold the rails loose on curve
- Q.9** If  $n$  is length of a rail in metres, the number of sleepers per rail length generally varies from  
 (a)  $n$  to  $(n+2)$  (b)  $(n+2)$  to  $(n+4)$   
 (c)  $(n+2)$  to  $(n+7)$  (d)  $(n+4)$  to  $(n+5)$
- Q.10** If  $S$  and  $H$  are strength and hardness index of a timber at 12% moisture content, the composite sleeper index is  
 (a)  $\frac{H+10S}{20}$  (b)  $\frac{S+10H}{20}$   
 (c)  $\frac{20S+H}{10}$  (d)  $\frac{S+20H}{10}$
- Q.11** Composite sleeper index determines  
 (a) number of sleepers per rail length  
 (b) suitability of wooden sleepers  
 (c) permissible stresses in steel sleepers  
 (d) none of these
- Q.12** Pandrol clips cannot be used with  
 (a) wooden sleepers (b) concrete sleepers  
 (c) CST-9 sleepers (d) steel trough sleepers

■■■■

**Answers Sleepers**

1. (d) 2. (d) 3. (c) 4. (b) 5. (d) 6. (c) 7. (d) 8. (b) 9. (c) 10. (b)  
 11. (b) 12. (c)