1. Maximum allowable shrinkage strain in RCC per IS 456 (2000) is: 1
2. 0.0030
3. 0.0035
4. 0.0020
5. None of these
6. Moment factor, Rlim, for a combination of Fe 415 HYSD steel and M20 concrete according to Limit State design of RCC per IS 456 (2000) is: 1
7. 2.96 N/mm2
8. 2.76 N/cm2
9. 2.86 N/cm2
10. 2.76 N/mm2
11. Minimum residual shear stress in RCC for provision of stirrups, as per IS 456 (2000) is: 1
12. 1.6 N/mm2
13. 2.2 N/mm2
14. 0.4 N/mm2
15. None of these
16. What are the minimum and maximum areas of steel in tension in a singly reinforced concrete beam section as per IS 456 (2000)? 1+1 =2
17. A simply supported RC beam has **width** = 300mm. It is subjected to externally **applied load** of (10+0.1×last digit of your ID number) kN/m. Assume **effective cover** = 40mm. Using **M25** concrete and **Fe415** HYSD steel, find **Ast,provided** for *either* singly (change the necessary dimensions accordingly)- *or* doubly- reinforced section with *overall depth limited to 700 mm*, **as per relevant data from IS 456 (2000) and IS SP-16**. Find the corresponding value of shear capacity, τc. Step marks are allocated for units, proper mentions of clause/table/page numbers, relevant sketches, and checks for the necessary allowable limits. Assume any data not provided, with reasonable justifications. 25+5 = 30