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1. An R.C.C. beam of 6 m span is 30 cm wide and has a lever arm of 55 cm. If it carries a U.D.L. of 12 t per m and allowable shear stress is 5 kg/cm2, the beam

A. Is safe in shearB. Is safe with stirrupsC. Is safe with stirrups and inclined barsD. Needs revision of section

ANS: D

2. According to I.S. : 456, slabs which span in two directions with corners held down, are assumed to be divided in each direction into middle strips and edge strips such that the width of the middle strip, is

A. Half of the width of the slab

B. Two -third of the width of the slab

C. Three-fourth of the width of the slab

D. Four-fifth of the width of the slab

ANS: C

3. The load stress of a section can be reduced by

A. Decreasing the lever arm

B. Increasing the total perimeter of bars

C. Replacing larger bars by greater number of small bars

D. Replacing smaller bars by greater number of greater bars

ANS: C

4. the column head support a flat slab, is generally kept The diameter of

A. 0.25 times the span length

B. 0.25 times the diameter of the column

C. 4.0 cm larger than the diameter of the column

D. 5.0 cm larger than the diameter of the column

ANS: A

5. fixed at its ends, the If is the uniformly distributed load on a circular slab of radius maximum positive radial moment at its centre, is

A. 3WR²/16

B. 2WR²/16 C. WR²/16

D. None of these

ANS: C

6. The maximum ratio of span to depth of a slab simply supported and spanning in one direction, is

A. 35 B. 25 C. 30 D. 20

ANS: C

7. If the width of the foundation for two equal columns is restricted, the shape of the footing generally adopted, is

A. Square B. Rectangular C. Trapezoidal D. Triangular

ANS: B

8. The floor slab of a building is supported on reinforced cement floor beams. The ratio of the end and intermediate spans is kept

A. 0.7 B. 0.8 C. 0.9 D. 0.6

ANS: C

9. Pick up the correct statement from the following:

A. Lateral reinforcement in R.C.C. columns is provided to prevent the longitudinal reinforcement from buckling

B. Lateral reinforcement prevents the shearing of concrete on diagonal plane

C. Lateral reinforcement stops breaking away of concrete cover, due to buckling

D. All the above

ANS: D

10. In case the factor of safety against sliding is less than 1.5, a portion of slab is constructed downwards at the end of the heel slab, which is known as

A. A key B. A cut-off wall C. A rib D. All the above

ANS: D