RCC Structures Design Quiz Questions and Answers Pdf

1. In a R.C. beam main reinforcement consists of 16 mm bars and coarse aggregate size used in 20 mm. The horizontal distance between two parallel reinforcing bars should not be less than

a. 16 mm
b. 20 mm
c. 21 mm
d. 25 mm

Ans; D

2. A simply supported beam of size 400 x 600 mm is supported on walls of 300 mm width the clear span is 4 m. The effective span of the beam is

a. 4.6 m
b. 4.4 m
c. 4.3 m
d. None of the above

Ans: C

3. A cantilever beam of size 230 x 400 mm has a clear span of 2.5 m and is supported on a 400 x 400 mm column. The effective span of the cantilever is

a. 2.615 mm
b. 2.7 m
c. 2.9 m
d. 3.3 m

Ans: B

4. If Fe 415 steel bars are used as tensile reinforcement, minimum percentage of steel to be used is

a. 0.2
b. 0.205
c. 0.25
d. 0.30

Ans: B

5. The maximum area of tensile reinforcement to be used in a beam is to be restricted to

a. 0.04 x gross area of the section
b. 0.004 x effective area of the section
c. 0.0057 x gross area of the section
d. 0.057 x effective area of the section

Ans: A

6. The bars larger than _____ diameter should not be bundled.

a. 24 mm
b. 28 mm
c. 32 mm
d. 36 mm

Ans; C

7. The maximum spacing of vertical shear reinforcement for a beam of size 250 x 360 mm is

a. 250 mm
b. 270 mm
c. 300 mm
d. 360 mm

Ans; B

8. When the depth of a beam exceeds _____ side face reinforcement be provided.

a. 500 mm
b. 600 mm
c. 750 mm
d. 800 mm

Ans: C

9. Which one of the following statement is not correct about curtailment of positive reinforcement in a continuous member?

a. Minimum two bards should extend throughout.
b. At least one third bards should extend into the support for a ¾ rd development of length.
c. Cut-off bars shall extend for a distance not less than effective depth of the member beyond theoretical cut-off point.
d. Cut-off bars shall extend for a distance not less than 12 times the bar diameter beyond theoretical cut-off point.

Ans; B

10. Pick up the correct statement about the design of a slab of dimension 7 m x 3 m.

a. Main reinforcement will be in the direction 7 m and distribution reinforcement in 3 m.
b. Main reinforcement will be in 3 m direction and distribution in 7 m direction.
c. Provide main reinforcement in 7 m direction and there is no need of distribution steel.
d. Provide main reinforcement in 3 m direction and there is no need of distribution steel.

Ans: B