Q1. Which one of the following statements correct?

A• Maximum longitudinal reinforcement in an axially loaded short column is 6% of gross sectional area

B• Columns with circular section are provided transverse reinforcement of helical type only

C• Spacing of lateral ties cannot be more than 16 times the diameter of tie bar

D• Longitudinal reinforcement bar need not be in contact with lateral ties.

Q2. The limits of percentage p of the longitudinal reinforcement in a column is

(a) 0.15% to 2%

(b) 0.8% to 4%

(c) 0.8% to 6%

(d) 0.8% to 8%

Q3. The load carrying capacity of column designed by working stress method is 500 kN. The collapse load of the column is

(a) 500.0 kN

(b) 662.5 kN

(c) 750.0 kN

(d) 1100.0 kN

Q4. The reduction coefficient of a reinforced concrete column with an effective length of 4.8 m and size 250 x 300 mm is

(a) 0.80

(b) 0.85

(c) 0.90

(d) 0.95

Q5. The maximum spacing of vertical reinforcement in RCC wall should NOT exceed.

(a) The thickness of wall

(b) 1.5 times the thickness of wall

(c) 2 times the thickness of wall

(d) 3 times the thickness of wall

Q6. The ratio of the lateral pressure of the bulk storage material at the time of emptying to that at the time of filling is

(a) less than one

(b) equal to or less than one

(c) equal to one

(d) greater than one

Q7. Lateral ties in RC columns are provided to resist

(a) Bending moment

(b) Shear

(c) Buckling of longitudinal steel bars

(d) Both bending moment and shear

Q8. In an axially loaded spirally reinforced short column, the concrete inside the core is subjected to

(a) Bending and compression

(b) Biaxial compression

(c) Triaxial compression

(d) Uniaxial compression

Q9. In a Pedestal, the factor by which the effective length should not exceed the least lateral dimension is

(a) 2

(b) 3

(c) 4

(d) 5

Q10. Which of the following are the additional moments considered for design of slender compression member in lieu of deflection in x and y directions?

(a) $\dfrac{P_u l_{ex}^2}{2000D}$ and $\dfrac{P_u l_{ey}^2}{2000D}$ (b) $\dfrac{P_u l_{ex}}{2000}$ and $\dfrac{P_u l_{ey}}{2000}$

(c) $\dfrac{P_u l_{ex}^2}{2000D}$ and $\dfrac{P_u l_{ey}^2}{2000b}$ (d) $\dfrac{P_u l_{ex}^2}{200D}$ and $\dfrac{P_u l_{ey}^2}{200b}$

(where PU is axial load; Lex and ley are effective lengths in
respective directions; D depth of section perpendicular to
major axis; b width of the member)

Q11. What is the minimum number of longitudinal bars provided in a reinforced concrete column of circular cross section?

(a) 4

(b) 5

(c) 6

(d) 8

Q12. A square column section of size 350 mm x 350 mm is reinforced with four bars of 25 mm diameter and four bars of 16 mm diameter. Then the transverse steel should be

(a) 5 mm dia @ 240 mm c / c

(b) 6 mm dia @ 250 mm c / c

(c) 8 mm dia @ 250 mm c / c

(d) 8 mm dia @ 350 mm c / c

Q13. The TV of a rectangular shaped room will show

(a) length and height

(b) length and width

(c) width and height

(d) nene of the above

Q.14 Which of the following relationships is true for the first- angle method of projection?

(a) Object – POP - Observer

(b) Object – observer - POP

(c) POP - observer - object

(d) Observer - Object – POP

Q. 15 The drawings in which the receding lines are drawn to half the scale are called

(a) isometric

(b) cavalier

(c) cabinet

(d) perspective

Q. 16 For orthohraphic projections, BIS recommends which of the following projection?

(a) First – angle projetion

(b) Third – angle projection

(c) Second- angle projection

(d) Fourth-angle projection

Q.17 The front view of an object is projected on the

(a) horizontal plane

(b) vertical plane

(c) profile plane

(d) auxiliary plane

Q. 18 The top view of an object is projected on the

(a) horizontal plane

(b) vertical plane

(c) profile plane

(d) auxiliary plane

Q. 19 The form of drawing similar to the view of objects as perceived by human eye is

(a) perspective

(b) oblique

(c) axonometric

(d) isometric

Q20. Perspective projections are drawn by

(a) single vanishing point method

(b) double vanishing point method

(c) triple vanishing point method

(d) all of these

Q21. Two point perspective is also known as

(a) parallel perspective

(b) angular perspective

(c) oblique perspective

(d) atmospheric perspective