

77. Minimum reinforcement required in either direction in slabs reinforced with high strength deformed bars is :
- (A) 0.11 (B) 0.12
(C) 0.15 (D) 0.17
78. Structural steel of grade Fe410 A has ultimate tensile strength of :
- (A) 410 MPa (B) 328 MPa
(C) 300 MPa (D) 520 MPa
79. The diameter of bolt hole for a bolt of nominal size 12 mm is :
- (A) 12.0 mm (B) 12.5 mm
(C) 13.0 mm (D) 14.0 mm
80. Common hot rolled steel axial compression members fail by :
- (A) Gross section yielding (B) Critical section rupture
(C) Block shear (D) Flexural buckling
81. As per Indian Standards, the maximum bearing pressure at the column base should not exceed the bearing strength equal to :
- (A) $0.40 f_{ck}$ (B) $0.45 f_{ck}$
(C) $0.50 f_{ck}$ (D) $0.60 f_{ck}$
82. A flat compression element of a cold formed steel section, stiffened at both edges parallel to the direction of stress is called :
- (A) Stiffened compression element (B) Unstiffened compression element
(C) Multiple stiffened element (D) Flat element
83. Failure by block shear at an end connection of a plate involves :
- (A) Shear along two planes, tension along two planes
(B) Shear along one planes, tension along two planes
(C) Shear along two planes, tension along one plane
(D) Shear along one plane, tension along one plane
84. Which of the following decides the width of taxiway?
- (A) Tail width (B) Fuselage length
(C) Wheel base (D) Wing span of aircraft

85. Elevator :
- | | |
|-----------------------------------|----------------------------------|
| (A) Controls pitching of aircraft | (B) Controls yawing of aircraft |
| (C) Is fixed on the wing | (D) Controls rolling of aircraft |
86. What is the super elevation required on a horizontal circular curve of radius 100m for a design speed of 50 km/h and coefficient of lateral friction 0.15?
- | | |
|-----------|-----------|
| (A) 0.017 | (B) 0.027 |
| (C) 0.047 | (D) 0.157 |
87. Ruling gradient for mountainous terrain is :
- | | |
|--------|--------|
| (A) 4% | (B) 5% |
| (C) 6% | (D) 7% |
88. The psychological widening required on a horizontal curve of radius 235 m for a design speed of 65 km/h is :
- | | |
|-------------|-------------|
| (A) 0.446 m | (B) 0.456 m |
| (C) 0.646 m | (D) 0.656 m |
89. If the cross slope of a terrain is 20 %, according to IRC classification, it is a :
- | | |
|-------------------------|---------------------|
| (A) Plain terrain | (B) Rolling terrain |
| (C) Mountainous terrain | (D) Steep terrain |
90. The number of vehicles occupying a unit length of a lane of roadway at a given instant is :
- | | |
|---------------------|----------------------|
| (A) Traffic volume | (B) Traffic capacity |
| (C) Traffic density | (D) Basic capacity |
91. Which of the following is a warning sign?
- | | |
|--------------------|-----------------|
| (A) One – way | (B) Speed limit |
| (C) Cycle crossing | (D) Parking |
92. The gauge of a railway track is defined as :
- | |
|--|
| (A) The clear distance between inner faces of two rails |
| (B) The clear distance between outer faces of two rails |
| (C) The centre to centre distance between two rails |
| (D) The distance between inner faces of a pair of wheels |

93. Equilibrium cant for a 3° curve on a Broad Gauge track, if the permitted speed is 70 kmph, is :
(A) 18.85 cm (B) 16.20 cm
(C) 15.85 cm (D) 11.25 cm
94. The gradient which determines the maximum load that the engine can haul on a section :
(A) Ruling gradient (B) Momentum gradient
(C) Pusher gradient (D) Super elevation
95. The difference between the latest allowable time and the earliest expected time is :
(A) Maximum float (B) Total float
(C) Slack time (D) Free float
96. Military organisation is :
(A) Line organisation (B) Line and staff organisation
(C) Functional organisation (D) None of these
97. 'The Garden City' principle for town planning was introduced by :
(A) Sir Ebenezer Howard (B) Sir Patrick Geddes
(C) Clarence Stein (D) Henry Wright
98. Which of the following is a natural growth of a town?
(A) Ribbon development (B) Satellite growth
(C) Scattered growth (D) All the above
99. Honey comb brick wall is measured in :
(A) Metres (B) Square metres
(C) Cubic metres (D) Number
100. The value of dismantled materials :
(A) Scrap value (B) Rateable value
(C) Salvage value (D) Market value
-