Choose the correct answer.

1. The strength and quality of concrete depends on-
   (a) Grade of the concrete  (c) Water cement ratio
   (b) Grade of the cement  (d) All of these

2. The entrained air in concrete-
   (a) Increases workability  (c) Decreases strength
   (b) Decreases workability (d) None of these

3. After casting, an ordinary cement concrete on drying-
   (a) Expands  (c) Remains unchanged
   (b) Shrinks (d) Swells

4. For slabs and beams, the grade of the concrete mixed, generally should not be less than-
   (a) 1:1:4  (b) 1:3:6  (c) 1:2:4  (d) None of these

5. When R.C.C beam is subjected to bending, and the topmost layer elongates and the bottom
   on shortens, then that beam is called-
   (a) Fixed beam  (c) Cantilever beam
   (b) Simply supported beam (d) Doubly reinforced beam

6. A reinforced concrete beam will crack if tensile stress set up in the concrete below the neutral
   axis is-
   (a) Less than permissible stress  (c) Equal to the permissible stress
   (b) More than permissible stress (d) None of these

7. For a simply supported slab of span (L) the overall minimum thickness of the slab should be-
   (a) L/35  (b) L/30  (c) L/20  (d) L/12

8. The minimum thickness of the floor for buildings is usually-
   (a) 2 cm  (b) 5 cm  (c) 9cm  (d) 45cm

9. In a two way slab, the torsion steel is provided at-
   (a) Top  (b) Bottom  (c) Top and bottom  (d) None of these

10. The minimum percentage of reinforcement in RCC short column is-
    (a) 0.8%  (b) 2.5%  (c) 6%  (d) 8%
11. Horizontal loads on domestic stairs, internal balustrade or parapets are generally taken as-
   (a) 305 kg/m  
   (b) 75 kg/m  
   (c) 200 kg/m  
   (d) 35 kg/m

12. As per IS 456 recommendations the thickness of footing edge on soils should not be less than-
   (a) 10 cm  
   (b) 12 cm  
   (c) 15 cm  
   (d) 20 cm

13. The maximum number of steps in flight of a stair case should be restricted up to-
   (a) 8  
   (b) 10  
   (c) 12  
   (d) 20

14. The minimum size of reinforcement bars in RCC column is-
   (a) 12 mm  
   (b) 8 mm  
   (c) 10 mm  
   (d) 18 mm

15. For RCC column, a column is considered to be short if the effective length to the least side ratio is less than-
   (a) 30  
   (b) 24  
   (c) 12  
   (d) 16

16. A strut is a-
   (a) Flexible member  
   (b) Compression member  
   (c) Torsion member  
   (d) Tension member

17. A tie is a-
   (a) Flexible member  
   (b) Compression member  
   (c) Torsion member  
   (d) Tension member

18. The rivets which are driven at atmospheric temperature are known as-
   (a) Power driven shop rivets  
   (b) Hand driven rivets  
   (c) Cold driven rivets  
   (d) None of these

19. When one member is placed above the other and they are connected by means of rivets, the joint is known as-
   (a) Lap joint  
   (b) Butt joint  
   (c) Double cover butt joint  
   (d) Single cover butt joint

20. Rolled steel angle sections are classified
   (a) Equal angles  
   (b) Unequal angles  
   (c) Bulb angles  
   (d) All of these

21. Slenderness ratio of a compression member is the ratio of effective length of member to the-
   (a) Critical load  
   (b) Radius of gyration  
   (c) Area of cross-section  
   (d) Weight of the section

22. As compared to riveting, welding is preferred these days because-
   (a) It is a silent process  
   (b) It is more economical  
   (c) It has more efficiency  
   (d) All of these

Contd...3/-
23. The liquid waste conveyed by a sewer is known as-
   (a) Sewer  (b) Sewerage  (c) Sewage  (d) None of these

24. The solid content of sewage is usually-
   (a) 99%  (b) 9%  (c) 0.9%  (d) 0.1%

25. The manhole covers are usually made of-
   (a) Cement  (b) Wood  (c) Cast iron  (d) Steel

26. The velocity of flow in sewers should be-
   (a) At least 30cm/s  (b) Not more than 50cm/s  (c) Less than cleansing velocity  (d) More than cleansing velocity

27. Traps are used in house in household drainage systems to-
   (a) Prevent entry of foul gases in the houses  (b) Restrict the flow of water  (c) Provide partial vacuum  (d) Trap the solid waste

28. The portion of road surface which is used by the vehicular traffic is known as-
   (a) Carriage way  (b) Shoulder  (c) Express way  (d) None of these

29. As per I.R.C., the camber on cement concrete road should be-
   (a) 1 in 6 to 5  (b) 1 in 45 to 60  (c) 1 in 60 to 50  (d) 1 in 12 to 16

30. The maximum design gradient for vertical profile of a road is-
   (a) Ruling gradient  (b) Limiting gradient  (c) Exceptional gradient  (d) Minimum gradient

31. Cause ways are type of-
   (a) Side drains  (b) Cross drainage structures  (c) Jelly drains  (d) Sub surface drainage structures

32. As per I.R.C., the minimum width of median in rural areas is-
   (a) 10m  (b) 8m  (c) 5m  (d) 2m

33. Bituminous pavements are-
   (a) Rigid pavements  (b) Semi-rigid pavements  (c) Semi-flexible pavements  (d) Flexible pavements

34. CBR Test is widely used in the design of-
   (a) Flexible pavements  (b) Rigid pavements  (c) Semi-rigid pavements  (d) All of these
35. As per IRC the maximum width be of a vehicle should-
   (a) 2m  
   (b) 2.44m  
   (c) 3.8m  
   (d) 1.58m

36. The sub structure of the bridge supports super structure consists -
   (a) Doors, windows, lintels etc.
   (b) Abutments, wing walls, foundations for the piers and abutments etc.
   (c) Masonry walls of English bond, Flemish bond, garden bond
   (d) None of the above

37. Determinate and indeterminate bridges are classified under-
   (a) Classification based on Degree of redundancy
   (b) Classification based on span length
   (c) Classification based on loadings
   (d) Classification based on material used for construction

38. Highway bridges and Railway bridges are classified under-
   (a) Classification based on Degree of redundancy
   (b) Classification based on span length
   (c) Classification based on loadings
   (d) Classification based on purposes

39. In case of deck bridge, the platform of the bridge is supported -
   (a) At the top of the bridge
   (b) At the side of the bridge
   (c) At the bottom of the bridge
   (d) None of these

40. In open spandrel arch bridge floor is supported by -
   (a) More than one arches
   (b) Beams and columns
   (c) Suspenders
   (d) None of these

41. The framework of horizontal and cross beam laid in alternate layers is called-
   (a) Grip
   (b) Crip
   (c) Drip
   (d) None of these

42. Railways transport requires least amount of power as compared to its-
   (a) Length
   (b) Width
   (c) Weight
   (d) None of these

43. Proper amount _______ must be provided to outer rail above the inner rail.
   (a) Tangent
   (b) Super elevation
   (c) Gauge
   (d) All of these

44. The standard length of rails for B.G is as per Indian railways-
   (a) 12.8m
   (b) 13.8
   (c) 14.8
   (d) 11.8

45. Creep of rails is prevented by using-
   (a) Anti-corrosive system
   (b) Anti-buckling system
   (c) Anti-creepers
   (d) All of these

Contd....5/-
46. The fittings which are permanently fastened in the track for making connections of rail to rail and rail to sleepers are referred as-
   (a) Fixtures
   (b) Rattle
   (c) Fastenings
   (d) None of these

47. Fish plates are usually made of-
   (a) Wrought iron
   (b) High carbon steel
   (c) Mild steel
   (d) All of these

48. The standard length of metal sleepers is-
   (a) 1.23m
   (b) 2.13
   (c) 3.98
   (d) 2.68

49. The members laid transversely under the rail for supporting and fixing them to the gauge distance apart are referred as-
   (a) Sleepers
   (b) Rail bolts
   (c) Track bolts
   (d) All of these

50. The railway track from which the train is diverted is called-
   (a) Diversion track
   (b) Through track
   (c) Gap track
   (d) Null track

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