July 2017

17/B/C/S-3/4/E

B

31/217

PAPER – I
DRAUGHTSMAN (CIVIL)
(THEORY)
SEMESTER – III

TIME: 3 Hrs. **MARKS : 150**

Note: Attempt all the question.
All questions carry equal marks.
This paper carries negative marking. 25% marks will be deducted for each wrong answer.

Choose the correct answer:

1. In simply supported RCC beams reinforced is placed -
   a) Below in neutral axis b) Above the neutral
   c) At the neutral axis d) Any one of these

2. The horizontal portion of a steps is called as
   a) Riser b) Tread c) Waste slap d) Landing

3. Load can be transfer in only one direction it is known as
   a) Continuous slap b) Simply supported slap
   c) One way slap d) Two way slap

4. Cracking (or) bending of slab ----------% of its length.
   a) 10 b) 20 c) 30 d) 40

5. $\frac{l_y}{l_x} > 2$ it is known as -
   a) Continuous slab b) Simply supported slab
   c) One way slab d) Two way slab

6. Situation for providing retaining wall -
   a) Hilly areas b) Road c) Bridges d) All of these

7. The bond between steel and concrete structure is provided by
   a) Pure adhesive resistance b) Frictional resistance
   c) Mechanical resistance d) All of these

8. The section in which the concrete is not fully stressed to its permissible value when stress in steel reaches its maximum value, is known as -
   a) Balanced section b) Under reinforced section
   c) Over reinforced section d) None of these

Contd...2/-

9. The dead loads -
a) Self weight of the structure
b) All superimposed loads
c) Weight of stationary equipments
d) Weight of furniture

10. The axial load which is sufficient to keep the column in a slight deflected shape is called-
a) Bukling load b) Crippling load c) Critical load d) Any one of these

11. How many methods are available for sanitation of town?
a) 1 b) 2 c) 3 d) 4

12. Which of the following method is using for removing fine granular material?
a) Filtration b) Screening c) Coagulation d) Sedimentation

13. Water all the sewerage treatment method is classified into ---------- categories.
a) 2 b) 3 c) 4 d) 6

14. Which one of the following type used for carries storm water?
a) Soil type b) Waste pipe c) Weld pipe d) Rain water pipe

15. Which of the following formula is used for computing the quantity of water for fire demand?
a) Freeman's formula
b) Kuchiling's formula
c) Buston's formula
d) All of these

16. The water of a river has an important property called -
a) Self purification
b) Infiltration capacity
c) Turbidity
d) Permeability

17. A septic tank is a -
a) Digestion tank
b) Sedimentation tank
c) Aeration tank
d) Combination of sedimentation and digestion tank

18. The equipment used for removing paper and rags from sewers is called
a) Gauge b) Scraper c) Scoop d) Claw

19. The portion of a road surface, which is used by vehicular traffic, is known as -
a) Carriage-way b) Shoulder c) Express way d) All of these

20. The road connecting capital cities of states is called -
a) National highway
b) Express way
c) State highway
d) Capital highway

21. The top of the ground on which the foundation of road rests, is called -
a) Sub-grade b) Soling c) Base d) Wearing layer

Contd...3/-

22. The highest point on road surface is called -
a) Crown b) Camber c) Gradient d) Berm

23. The gradient of a road depends upon the -
a) Nature of traffic b) Nature of ground
c) Rainfall of the locality d) All of these

24. The value of ruling gradient in plan, as recommended by Indian roads congress, is -
a) 1 in 10 b) 1 in 20 c) 1 in 30 d) 1 in 40

25. The stop sight distance is always overtaking sight distance -
a) Equal to b) Less than c) Greater than d) None of these

26. For main cities and routes of maximum intensities, the type of gauge adopted is
a) Broad gauge b) Metre gauge c) Narrow gauge d) All of these

27. The speed of a locomotive, in India, on broad gauge is restricted up to -
a) 60 km/h b) 80 km/h c) 100 km/h d) 120 km/h

28. The rail sections is designated by its -
a) Total length b) Total weight
c) Cross – sectional area d) Weight per metre length

29. The largest dimension of rail section is -
a) Head width b) Foot width c) Height d) All of these

30. In coning of wheels, the wheels are given a slope of -
a) 1 in 20 b) 1 in 25 c) 1 in 30 d) 1 in 40

31. The rails are laid without bending, at flat curves, where the degree of curve is -
a) Less than 3° b) Equal to 3° c) More than 3° d) None of these

32. Creep causes -
a) Opening of rail joints b) Distortion of points and crossings
c) Buckling of track d) All of these

33. Which of the following sleeper provide best elasticity of track?
a) Wooden sleepers b) Steel sleepers
c) Cast iron sleepers d) R.C.C. sleepers

34. Minimum packing space provided between two sleepers is -
a) 250 to 300 mm b) 300 to 350 mm
c) 350 to 400 mm d) 400 to 450 mm

35. The rail chairs are generally made of -
a) Cast iron b) Low carbon steel
c) High carbon steel d) Stainless steel

Contd...4/-

36. The size of ballast used on Indian railways for wooden sleepers is -
a) 25mm b) 38mm c) 43mm d) 50mm

37. A _____ is a bridge that consists of one or more columns with cables supporting the bridge deck.
a) Cable stay bridge b) Suspension bridge
c) Arch bridge d) Cantilever bridge

38. A _____ is a bridge composed of connected elements which may be subjected to tension, compression.
a) Arch bridge b) Cantilever bridge
c) Truss bridge d) Deck truss bridge

39. _____ is frequently used in pedestrian bridges and for highway overpasses.
a) Column bridge b) Beam bridge
c) Both (a) and (b) d) None of these

40. The cantilever sheet pile _____ are suitable for small heights.
a) Coffer b) Caissons c) Pier d) Foundation

41. The lowest part of a structure which transmits the load to the soil is known as -
a) Super structure b) Basement c) Foundation d) Plinth

42. a) A watertight structure constructed in connection with excavation for foundation of bridges, piers, etc is known as
a) Coffer dam b) Caisson c) Well foundation d) Raft foundation

43. _____ is that part of superstructure structure which is under bending along the span.
a) Beam b) Column c) Slab d) Pier

44. _____is that part of a part of the substructure which supports the superstructure at the end of the span and which transfers loads on the superstructure to the foundations.
a) Pier b) Sub structure c) Super structure d) All of these

45. A pipe through which liquid waste carrying human excreta flows is known as -
a) Vent pipe b) Soil pipe c) Rain water pipe d) Waste pipe

46. Which of the following is not a compression member?
a) Rafter b) Boom c) Tie d) Struct

47. The longitudinal movement of the rail in a permanent track due to speedy rolling stock is known as -
a) Buckling of rail b) Tilting of rail
c) Coning of wheel d) Creep of rail

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48. The maximum gradient, to which a railway track may be laid in a particular section, is known as -
a) Ruling gradient
b) Pusher gradient
c) Momentum gradient
d) Station yard gradient

49. The shape of the camber provided for cement concrete pavement is -
A) Parabolic b) Elliptical c) Straight line d) None of these

50. The angle between the gauge faces of the stock rail and tongue rail, is called -
a) Switch angle
b) Angle of crossing
c) Angle of turnout
d) None of these

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