

Advt 19

## Test paper for the post of Assistant Engineer (Civil)

Max. Marks: 100

Name: \_\_\_\_\_

Note: 1. Each question is of 2 marks  
2. No negative marking

*Tick the most correct statement(s) for Questions 1 to 35*

1. One 50 Kg. bag of cement will make approx.
  - a. 0.25 cubic meter of 1:3:6 concrete
  - b. 0.50 cubic meter of 1:3:6 concrete
  - c. 0.75 cubic meter of 1:3:6 concrete
  - d. 1.00 cubic meter of 1:3:6 concrete
  
2. The width of 1- brick wall is
  - a. 23 cm
  - b. 12 cm
  - c. 39 cm
  - d. None of the above
  
3. Covering capacity of a paint depends on the following:
  - a. Composition of paint
  - b. Type of surface
  - c. Skill of the painter
  - d. All of the above
  
4. Treads and riser are terms associated with
  - a. Staircase
  - b. Swimming Pool
  - c. Squash court
  - d. None of the above
  
5. The factors that do NOT affect the compressive strength of clay bricks are
  - a. Type of clay
  - b. Firing temperature
  - c. Size of hole
  - d. None of the above

6. Brick laid with the length normal to the wall face is called
- header
  - stretcher
  - cornice
  - corbel
7. DPC is more efficient if provided at
- Just below the ground level
  - The window sill level
  - Anywhere in the wall
  - Below the top most floor level
8. Volume of cylinder of radius  $r$  and height  $h$  is
- $\frac{\pi r^2 h}{3}$
  - $\pi r^2 h$
  - $\frac{4\pi r^2 h}{3}$
  - none of the above
9. Circumference of a circle of radius 5 m is approx.
- 31 m
  - 62 m
  - 3 m
  - 15 m
10. Ultimate strength of steel reinforcing bar is
- Always greater than yield strength
  - Always less than yield strength
  - Maybe greater than yield strength
  - None of the above
11. Maximum deflection of a simply supported beam of span  $L$  under udl of intensity  $w$  is
- $\frac{5wL^4}{384EI}$
  - $\frac{3wL^4}{584EI}$
  - $\frac{wL^4}{48EI}$
  - None of the above

12. Fixed end moment due to a point load  $P$  the center of a beam of span  $L$
- $\frac{PL}{24}$
  - $\frac{PL}{12}$
  - $\frac{PL}{4}$
  - $\frac{PL}{8}$
13. Weight per meter length of 18 mm reinforcing steel bar is
- 1 kg
  - 2 kg
  - 3 kg
  - 4 kg
14. Following tests are NOT performed to ensure the quality of concrete
- Slump test
  - Compaction factor test
  - Setting time
  - Abrasion test
15. Galvanizing is the term used for
- Tin plating
  - Metal spraying
  - Electro-plating
  - Zinc plating
16. Capillary rise for fine sand and silts is typically
- Up to 1.2 m
  - More than dry sands
  - More than pure clays
  - None of above
17. Typical live load for offices is
- 500 kg/sq. m
  - 750 kg/sq. m
  - 300 kg/sq. m
  - 1000 kg/sq. m
18. Bottom chord of roof trusses in building are usually in
- tension
  - compression
  - combination of tension and compression
  - None of the above.

19. Recommended spacing of manholes for a sewer line of 500 mm dia is
- 100 m
  - 75 m
  - 50 m
  - 25 m
20. Clay bricks before laying should have been
- Drenched in water
  - Soaked in water for 24 hr and surface dried
  - Sprayed with water
  - Completely dried
21. As per Indian Standard, the length of one link in 30 m chain should be
- 20 cm
  - 30 cm
  - 40 cm
  - 10 cm
22. If the whole circle bearing of a place is  $170^{\circ} 12'$ , the quadrantal bearing would be
- $N 9^{\circ} 48' E$
  - $S 80^{\circ} 12' E$
  - $S 9^{\circ} 48' E$
  - none of the above
23. Following is true for TMT bars:
- These are thermo-mechanically treated bars
  - TMT bars are more ductile than CTD bars
  - TMT bars are hard on surface and soft inside
  - all of the above
24. Plane Table surveying is more suitable
- For small scale maps
  - For relatively flat area
  - When low level of skill is available
  - All of the above
25. Theodolite is used for
- Prolonging survey lines
  - Finding elevation differences
  - Finding angles between two lines
  - All of the above
26. Relatively large water absorption for a common clay brick indicates
- Low bond strength with mortar
  - Low strength of brick
  - High shrinkage of brick
  - (a) and (b)

27. Seasoning of timber is performed to
- Reduce the chances of shrinkage
  - Reduce the weight of water
  - Increase the strength and durability
  - All of the above
28. Plywood is preferred over thin planks of timber because of its
- Good strength and dimensional stability
  - Dimensional stability only
  - Strength only
  - none of the above
29. Minimum depth of foundation below the surface is
- 50 cm
  - 80 cm
  - 125 cm
  - 150 cm
30. A brick masonry can fail due to
- Crushing of bricks
  - Sliding along bed joint
  - Sliding along bed joint and separation along vertical joints
  - All of the above
31. Curing of concrete is done for
- 3 days
  - 7 days
  - 14 days
  - 28 days
32. Required slump heavily reinforced slab is in the range of
- 10-15 mm
  - 25-75 mm
  - 150-200 mm
  - none of the above
33. How many samples for concrete cube tests shall be taken for 50 cubic meter of concrete work
- 1
  - 2
  - 3
  - 4
34. Weight of steel per cubic meter is
- 7900 kg
  - 1900 kg
  - 2400 kg
  - 1700 kg

35. The minimum thickness of floor slabs for building is usually
- a. 2 cm
  - b. 5 cm
  - c. 9 cm
  - d. 25 cm

*Indicate whether the following statements are TRUE or FALSE.*

36. Clays are less permeable than sands.
37. Void ratio is ratio between the volume of voids in a given soil mass to the total volume of the soil mass.
38. Lowering of water table may cause the settlement of structures.
39. At the optimum moisture content for a specified amount of compaction, the soil mass will produce maximum dry density.
40. Plate load test for the bearing capacity should be carried out under the wettest condition that are likely to occur at a give site.
41. Soft water are more corrosive on a number of metals.
42. Degree of hardness of drinking water is expressed in ppm.
43. Bleaching powder is used to sterilize drinking water.
44. If pH value of drinking water is less than 7, then it is acidic.
45. One way slab are those in which length is more than two times its width.
46. Stirrups in column are NOT as important as they are in beams.
47. Tap water can be used for mixing concrete.
48. Minimum grade of concrete for reinforced concrete members is M20.
49. In English bond stretchers and headers are placed in the same course.
50. Hydrated lime is better than quick lime for use in mortar for brickwork.