

Dr.B.R. Ambedkar Institute of Technology Entrance Exam for B.Tech (Civil Engineering) Lateral Entry

Session 2020-21

* Required

1. Email address *

General Instructions

1. All questions are compulsory
2. Each Question carries 1 marks
3. There is no negative marking

MAX MARKS :100

TIME LIMIT : 1 hr 30 minutes

2. Name *

3. Valid Mobile Number *

Questions

4. 1. For high degree of workability, the slump value should vary between *

Mark only one oval.

- 0 to 25 mm
- 25 to 50mm
- 50 to 80 mm
- 80 to 100 mm

5. 2.Los Angeles machine is used to perform which test *

Mark only one oval.

- impact load test
- crushing strength test
- abrasion test
- fineness modulus

6. 3.The inert mineral material used for the manufacture of mortar and concrete is *

Mark only one oval.

- cement
- water
- aggregate
- admixture

7. 4.The test conducted in the laboratory on the specimen made out of trail concrete mix is *

Mark only one oval.

- preliminary test
- slum test
- work test
- none of the above

8. 5.The ratio of different ingredients in concrete mix is 1:1.5: 3 for *

Mark only one oval.

- M20
- M30
- M15
- M10

9. 6.Initial setting time of Ordinary Portland Cement is *

Mark only one oval.

- 15 Minutes
- 30 Minutes
- 45 Minutes
- 60 Minutes

10. 7.The high strength of rapid hardening cement at early stage, is due to its *

Mark only one oval.

- finer grinding
- burning at high temperature
- increased lime cement
- higher content of tricalcium

11. 8.what is the depth of penetration of a plunger in cement with standard consistency *

Mark only one oval.

- 33-35 mm
- 10-12 mm
- 20-25 mm
- 28-30 mm

12. 9.The fineness modulus of Fine sand lies between *

Mark only one oval.

- 2.2-2.6
- 2.6-2.9
- 2.0-2.2
- 2.9-3.2

13. 10.The Le Chatelier test detects unsoundness due to the presence of *

Mark only one oval.

- iron
- magnesium
- free lime
- calcium

14. 11.The rock which is not calcareous, is *

Mark only one oval.

- lime stone
- macl
- chalk
- laterite

15. 12.Which of the following is not a bouge's component *

Mark only one oval.

- C3S
- C3A
- C4AF
- C4S

16. 13.Which of this is not a grade of OPC *

Mark only one oval.

- 33 grade
- 43 grade
- 53 grade
- 63 grade

17. 14.The aggregate of _____ shape has minimum voids *

Mark only one oval.

- irregular
- angular
- rounded
- flaky

18. 15.If the slump of concrete mix is 70mm, its workability is considered to be *

Mark only one oval.

- Very low
- Low
- Medium
- High

19. 16.As per IS 456 - 1978 the concrete mixes are designated into *

Mark only one oval.

- 4 grades
- 5 Grades
- 6 Grades
- 7 Grades

20. 17.Bulking of sand is *

Mark only one oval.

- compacting of sand
- segregating sand of particular size
- increase in volume of sand due to presence of moisture upto certain extend
- none of the above

21. 18.The resistance of an aggregate to the effect of hydration of cement and weather is called *

Mark only one oval.

- crushing value
 impact value
 abrasion value
 soundness

22. 19.The aggregate crushed by the impact machine should pass through _____ mm size sieve *

Mark only one oval.

- 4.75
 2.36
 1.17
 10

23. 20.The proportion of lime, silica, alumina and iron oxide in a good Portland cement should be *

Mark only one oval.

- 63:22:6:3
 63:22:3:6
 22:63:6:3
 22:63:3:6

24. 21.A 30 m chain is divided into *

Mark only one oval.

- 100 links
- 150 links
- 300 links
- 200 links

25. 22.The accuracy of open traverse is checked by the *

Mark only one oval.

- cut-off line
- auxiliary line
- straight line
- random line

26. 23.The diagonal scale is used to read *

Mark only one oval.

- one unit
- two units
- three consecutive unit
- four consecutive unit

27. 24.Surveys which depict the natural features of a country are known as *

Mark only one oval.

- cadastral survey
- topographical survey
- engineering survey
- military survey

28. 25.The position of a point can be fixed more accurately by *

Mark only one oval.

- cross-staff
- optic square
- oblique offset
- perpendicular offset

29. 26.The main principle of surveying is to work from *

Mark only one oval.

- centre to the boundary
- whole to the part
- part to the whole
- boundary lines

30. 27.The object of surveying is to prepare a *

Mark only one oval.

- drawing
- cross section
- map
- diagram

31. 28.The curvature of the earth is taken into account when the extent of area is more than *

Mark only one oval.

- 50 square kilometer
- 100 square kilometer
- 200 square kilometer
- 250 square kilometer

32. 29.The sketch prepared during reconnaissance survey is known as the *

Mark only one oval.

- hand sketch
- index sketch
- rough sketch
- line sketch

33. 30.The chain man who drags the chain is called the *

Mark only one oval.

- captain
- follower
- leader
- helper

34. 31.The specific gravity of sandstone is *

Mark only one oval.

- 1.1 to 1.8
- 1.8 to 2.65
- 2.65 to 2.95
- 2.95 to 3.4

35. 32.The compressive strength of sandstone is *

Mark only one oval.

- 40 MN/m²
- 55 MN/m²
- 65 MN/m²
- 80 MN/m²

36. 33.Granite is an example of *

Mark only one oval.

- aqueous rocks
- sedimentary rocks
- metamorphic rocks
- igneous rocks

37. 34.A fine grained granite *

Mark only one oval.

- offers higher resistance to weathering
- can be easily polished and worked
- is used for exterior facing of buildings
- all of these

38. 35. Solidification of molten mass lying below or above the earth surface *

Mark only one oval.

- solidification of molten mass lying below or above the earth surface
- gradual deposition of materials like sand, clay etc.generally by setting water
- alteration of original structure under heat and excessive pressure
- none of the above

39. 36.The specific gravity of stone should not , in any case, be less than *

Mark only one oval.

- 1
- 1.5
- 2
- 2.5

40. 37.Igneous rocks has *

Mark only one oval.

- crystalline , glossy or fused structure
- foliated structure which hard and durable
- layers of different composition, colour and structure
- none of the above

41. 38.Which of the following is an example of argillaceous rock? *

Mark only one oval.

- Kaoline
- Slate
- Laterite
- all of these

42. 39.Gneiss is chemically classified as *

Mark only one oval.

- calcareous rock
- argillaceous rock
- silicious rock
- metamorphic rock

43. 40.Sandstone consist of *

Mark only one oval.

- quartz and lime
- quartz and silica
- quartz, lime and silica
- silica, lime and alumina

44. 41.The colour of granite is *

Mark only one oval.

- grey
- green
- brown
- all of these

45. 42.Which of the following statement is wrong? *

Mark only one oval.

- A stone with large percentage of quartz is very soft
- Quartz has a greasy lustre
- Felspar is a silicate of aluminium with varying amount of potash, soda or lime
- all of these

46. 43.Argillaceous rocks have their main constituent as *

Mark only one oval.

- carbonate of lime
- clay or alumina
- silica or sand
- all of these

47. 44. A good building stone is one which does not absorb more thanof weight of water after one day's immersion *

Mark only one oval.

- 5%
- 10%
- 15%
- 25%

48. 45.A limestone containing about 30% of alumina and silica is called *

Mark only one oval.

- granular limestone
- compact limestone
- magnesium limestone
- kankar

49. 46.The process of separating suspended solids by gravitational settling is *

Mark only one oval.

- filtration
- Plain sedimentation
- screening
- sedimentation

50. 47.The sullage does not consist of waste water from *

Mark only one oval.

- bath rooms
- wash basin
- kitchen sink
- toilets

51. 48.Filters are classified as slow sand filter and rapid sand filter on the basis of *

Mark only one oval.

- Shape
- depth
- Surface area
- Filtration rate

52. 49. _____ is placed on the water mains at suitable interval for taking out water for fire fighting. *

Mark only one oval.

- Hydrant
- Inspection chamber
- Water meter
- Intake structures

53. 50.The main objectives of any public water supply system are *

Mark only one oval.

- Supply safe water
- Supply wholesome water
- Supply adequate water
- All the above

54. 51.Drains should be laid *

Mark only one oval.

- in straight lines
- so that self cleansing velocity is developed
- both a & b
- in single stack system

55. 52.A man hole is generally provided at *

Mark only one oval.

- bends
- change of gradient
- change of sewage diameter
- all the above

56. 53.Disinfection of water with ozone is not good because *

Mark only one oval.

- it vanishes before the water reaches the consumers
- it removes the colour, taste and odour from water
- it adds taste to the water
- it is more efficient than chlorine in killing the bacteria

57. 54.The sedimentation of discrete particles in a suspension of low solids concentration is called *

Mark only one oval.

- Discrete settling
- Hindered settling
- Zone settling
- Compression settling

58. 55.A device which puts a barrier in the sewer line in the form of water seal and does not allow municipal sewer gases to enter *

Mark only one oval.

- Intercepting trap
- Ventilating pipe
- Cowl
- All the above

59. 56.Submerged intake is used to draw water from *

Mark only one oval.

- Rivers carry lot of silt
- lakes
- Irrigation cannals
- All the above

60. 57.The term used to indicate the pipe which carries discharge from urinals and water closets only *

Mark only one oval.

- Waste pipe
- vent pipe
- soil pipe
- none of the above

61. 58. In India ____ was the first city to have a modern water supply system installed in the year 1870 *

Mark only one oval.

- Delhi
- Madras
- Calcutta
- Pondicherry

62. 59. House sewers or drains should be laid *

Mark only one oval.

- by the side of the building
- below the building
- at such a level that the lowest level of the building may drain in it
- both a & c

63. 60. Water supply for residences should be assumed as *

Mark only one oval.

- 45 litres per head per day
- 135 litres per head per day
- 41 litres per head per day
- None of the above

64. 61.The impurities which effects the colour, odour ,taste and turbidity are *

Mark only one oval.

- Physical impurities
- Chemical impurities
- Biological impurities
- temperature

65. 62.For small towns the IS :1172-1993 recommends a value____ litres per head per day for domestic water demand *

Mark only one oval.

- 200
- 135
- 45
- None of the above

66. 63.Water supply mains may be classified into following categories *

Mark only one oval.

- Mains and communication pipe
- Mains, communication pipe & consumer pipe
- Mains and consumer pipe
- None of the above

67. 64. _____ in water causes hardness, gives bad taste and imparts reddish brown colour and causes discolouration of clothes *

Mark only one oval.

- calcium
- magnesium
- iron
- nitrogen

68. 65.The lowest point on the inside surface of a sewer is known as *

Mark only one oval.

- discharge point
- invert
- silting point
- sewer point

69. 66.Slenderness ratio is the ratio of effective length of column and _____ *

Mark only one oval.

- lateral dimension of a column
- least radius of gyration of a column
- maximum radius of gyration of a column
- none of the above

70. 67.A rectangle has dimension of 10cm x 20cm. where will be its center of gravity? *

Mark only one oval.

- 10,10
- 20,5
- 10,5
- 5,10

71. 68.The Shear modulus of most of the materials with respect to the modulus of elastically is always *

Mark only one oval.

- Equal to half
- less than half
- more than half
- none of these

72. 69.The deformation per unit length of a material is called *

Mark only one oval.

- tensile stress
- compressive stress
- shear stress
- strain

73. 70. A body is subjected to tensile stresses of 1200MPa on one plane and another tensile stress of 600MPa on a plane at right angles to the former. It is also subjected to a shear stress of 400MPa on the same planes. The maximum normal stress will be *

Mark only one oval.

- 400MPa
 500MPa
 900MPa
 1400MPa

74. 71. Modulus of resilience is the ratio of _____ *

Mark only one oval.

- minimum strain energy and unit volume
 maximum stress energy and unit volume
 proof resilience and unit volume
 resilience and unit area

75. 72. What will be the radius of gyration of a circular plate of diameter 10cm? *

Mark only one oval.

- 1.5cm
 2.0cm
 2.5cm
 3cm

76. 73.A steel bar of 5 mm is heated from 15 degree Celsius to 40 degree Celsius and it is free to expand. The bar will induce *

Mark only one oval.

- no stress
- shear stress
- tensile stress
- compressive stress

77. 74.The total strain energy stored in a body is termed as *

Mark only one oval.

- resilience
- proof resilience
- impact energy
- modulus of resilience

78. 75.The stress induced in a body when suddenly loaded is ,_____the stress induced when the same load is applied gradually *

Mark only one oval.

- equal to
- one half
- twice
- four times

79. 76.Moment of inertia of a Rectangular section having width 'b' and depth 'd' about an axis passing through C.G and parallel to its depth 'd' is *

Mark only one oval.

- $bd^3/12$
 $db^3/12$
 $bd^3/36$
 $db^3/36$

80. 77.Moment of inertia is the *

Mark only one oval.

- second moment of force
 second moment of area
 second moment of mass
 all of these

81. 78.A point of contraflexure is a point where *

Mark only one oval.

- Shear force changes sign
 bending moment changes sign
 shear force is maximum
 bending moment is maximum

82. 79.While determining crippling load, the effective length of solid circular bar is $1/\sqrt{2}$ of actual length if, _____ *

Mark only one oval.

- both ends of solid circular bar are fixed
- both ends of solid circular bar are hinged
- one end is fixed and one is free
- one end is fixed and other end is hinged

83. 80.The ratio of bulk modulus to young's modulus for a poisson's ratio of 0.25 will be *

Mark only one oval.

- 1/3
- 3/2
- 1
- 2/3

84. 81.The relation between modulus of elasticity (E), modulus of rigidity (G) and bulk modulus (K) is given as _____ *

Mark only one oval.

- $K+G / (3K+ G)$
- $3 KG / (3K+ G)$
- $3 KG / (9K+ G)$
- $9 KG / (3K+ G)$

85. 82.When load on the free end of a cantilever beam is increased , failure will occur at *

Mark only one oval.

- free end
- fixed end
- centre of the beam
- at a distance $2l/3$ from the free end

86. 83.Polar moment of inertia is *

Mark only one oval.

- Same as moment of inertia
- Applicable to masses whereas moment of inertia is applicable to area only
- The moment of inertia for an area relative to a linear or axis perpendicular to the plane of the area
- The moment of inertia for an area relative to a line or axis parallel to the centroidal axis

87. 84.The bending moment at a point on a beam is maximum where the shear for is *

Mark only one oval.

- minimum
- maximum
- zero
- none of the above

88. 85.A body is subjected to a direct tensile stress in one plane, then the maximum normal stress occurs at a section inclined at ___ to the normal of the section *

Mark only one oval.

- 0
- 30
- 45
- 90

89. 86.The deformation of the bar per unit length in the direction of the force is known as *

Mark only one oval.

- linear strain
- lateral strain
- volumetric strain
- shear strain

90. 87.A circular pipe is subjected to maximum shear force of 60 kN. What is the diameter of the pipe if maximum allowable shear stress is 5 Mpa? *

Mark only one oval.

- 27.311 mm
- 75.56 mm
- 142.72 mm
- 692.10 mm

91. 88.The shear force diagram of a cantilever beam of length l and carrying a gradually varying load from zero at free end and w per unit length at the fixed end is a *

Mark only one oval.

- horizontal curve
 vertical straight line
 inclined line
 parabolic curve

92. 89.When a body is subjected to a direct tensile stress in one plane , the maximum shear stress is ___the maximum normal stress *

Mark only one oval.

- equal to
 one half
 two third
 twice

93. 90.Compute the shear stress acting on the outer surface of a hollow shaft subjected to a torque of 100 Nm?(The inner and outer diameter of the shaft is 15 mm and 30 mm respectively.) *

Mark only one oval.

- 50.26 N/mm²
 40.24 N/mm²
 20.120 N/mm²
 8.74 N/mm²

94. 91.Which of the following principle guides design of hydraulic jack, hydraulic press and crane? *

Mark only one oval.

- Newton's law
- Pascal's law
- Canter's law
- Archimedes Principle

95. 92.Convert pressure head of 50m of oil of specific gravity 0.8 into corresponding head of water. *

Mark only one oval.

- 70 m water
- 30 m water
- 40 m water
- 10 m water

96. 93.The pressure on a vertical surface acts at a height of *

Mark only one oval.

- H/3 from top
- H/3 from base
- H/4 from top
- H/4 from base

97. 94.The pressure on the top of pressure diagram of a water tank is *

Mark only one oval.

- Maximum
- Minimum
- Zero
- Medium

98. 95.Which of these manometer gives more accurate results? *

Mark only one oval.

- Simple manometer
- Inverted manometer
- U-tube manometer
- Differential manometer

99. 96.Hydrodynamics deals with study of fluids *

Mark only one oval.

- At rest
- Stored in dams
- In motion
- Collected in tanks

100. 97.Mercury is the commonly used manometric liquid because of its *

Mark only one oval.

- Lighter than water
- Heavier than water
- Easily available
- No other liquid can be used in manometer

101. 98.Pressure increases as the *

Mark only one oval.

- Width of liquid surface increases
- Width of liquid surface decreases
- Depth of liquid decreases
- Depth of liquid increases

102. 99.The flow of water through a tapering pipe at constant rate is *

Mark only one oval.

- Unsteady non-uniform flow
- Steady non-uniform flow
- Steady uniform flow
- Unsteady uniform flow

103. 100.Vacuum pressure and high pressure can be measured by *

Mark only one oval.

- Gaugemeter
- Piezometer
- Simple Manometers
- All pressure measuring devices

This content is neither created nor endorsed by Google.

Google Forms

Answer Key

Lateral Entry Examination for B.Tech Civil Session 2020-21

Q.No	Answer	Q.No	Answer	Q.No	Answer
1	D	41	D	81	D
2	C	42	A	82	B
3	C	43	B	83	C
4	A	44	A	84	C
5	A	45	D	85	A
6	B	46	B	86	A
7	C	47	D	87	C
8	A	48	D	88	D
9	A	49	A	89	B
10	C	50	D	90	C
11	D	51	C	91	B
12	D	52	D	92	C
13	D	53	A	93	B
14	C	54	A	94	C
15	C	55	A	95	B
16	C	56	B	96	C
17	C	57	C	97	B
18	D	58	C	98	D
19	B	59	D	99	B
20	A	60	B	100	C
21	B	61	A		
22	A	62	B		
23	C	63	B		
24	B	64	C		
25	D	65	B		
26	B	66	B		
27	C	67	C		
28	D	68	B		
29	B	69	D		
30	C	70	D		
31	C	71	C		
32	C	72	C		
33	D	73	A		
34	D	74	A		
35	B	75	C		
36	D	76	A		
37	A	77	B		
38	D	78	B		
39	C	79	D		
40	C	80	B		