

Written Examination for the Post : Civil Engineering (SET 3)

- The rocks formed from molten magma, are called
A) sedimentary rocks B) igneous rocks C) metamorphic rocks D) foliated rocks
- The setting time of cement is determined using
A) Le chatelier apparatus B) Briquette testing apparatus
C) Vicat apparatus D) Casagrande's apparatus
- Geologically, marble is known as
A) sedimentary rock B) igneous rock C) metamorphic rock D) stratified rock
- Gneiss is obtained from
A) igneous rocks. B) metamorphic rocks.
C) sedimentary rocks. D) sedimentary-metamorphic rocks.
- The size of mould for bricks, is generally kept
A) a little large to specified size B) a little small to specified size.
C) 30% smaller than specified size. D) 40% larger than specified size.
- The size of modular bricks, is
A) 10 x 10 x 9 cm B) 19 x 9 x 9 cm C) 20 x 10 x 10 cm D) 22.5 x 8.0 x 9 cm
- Refractory bricks resist
A) high temperature B) chemical action C) dampness D) Efflorescence
- For construction of structures under water, the type of lime used, is
A) hydraulic lime B) fat lime C) quick lime D) pure lime
- Plaster of Paris is obtained by calcining
A) bauxite B) gypsum C) kankar D) lime stone
- If P is the percentage of water required for normal consistency, water to be added for determination of initial setting time, is
A) 0.70 P B) 0.75 P C) 0.80 P D) 0.85 P
- The property of the ingredients to separate from each other while placing the concrete is called
A) Segregation B) Compaction C) Shrinkage D) Bulking
- Los angles machine is used to test the aggregate for
A) crushing strength B) Impact value C) abrasion resistance D) water absorption
- If 1500 g of water is required to have a cement paste 1875 g of normal consistency, the percentage of water is,
A) 20% B) 25% C) 30% D) 35%
- If fineness modulus of sand is 2.5, it is graded as
A) very fine sand B) fine sand C) medium sand D) coarse sand
- W_p and W_f are the weights of a cylinder containing partially compacted and fully compacted concrete. If the compaction factor is 0.95, the workability of concrete is
A) extremely low B) very low C) low D) high

30. Contour interval is
 A) Inversely proportional to the scale of the map B) Directly proportional to the flatness of ground
 C) Larger for accurate works D) Larger if the time available is more
31. Sand particles are made of
 A) rock minerals B) kaolinite C) illite D) Montmorillonite
32. Which of the following soil has more plasticity index?
 A) sand B) silt C) clay D) gravel
33. If the plasticity index of soil mass is zero, the soil is
 A) sand B) silt C) clay D) clayey silt
34. Uniformity coefficient of a soil is
 A) always less than 1 B) always equal to 1
 C) equal to or less than 1 D) equal to or greater than 1
35. Minimum size of the particles of silt soil is
 A) 0.002mm B) 0.04mm C) 0.08mm D) 1mm
36. A relative density of compacted dense sand is approximately equal to
 A) 0.4 B) 0.6 C) 0.95 D) 1.20
37. Compressibility of sandy soil is
 A) almost equal to that of clayey soils B) much greater than that of clayey soils
 C) much less than that of clayey soils D) 0.1 times less than that of clayey soil
38. Consolidation in soils
 A) Is a function of the effective stress B) does not depend on the present stress
 C) is a function of the pore water pressure D) Is a function of the total stress
39. According to Darcy's law for flow through porous media, the velocity is proportional to
 A) effective stress B) hydraulic gradient C) Cohesion D) stability number
40. In a compaction test, as the compaction effort is increased, the optimum moisture content
 A) decreases B) remains same C) Increases D) increases first and then decreases
41. Principal planes are subjected to
 A) Normal stresses only B) Tangential stresses only
 C) Normal stresses as well as tangential stresses D) Resultant stresses
42. Stress may be defined as
 A) Force per unit length B) Force per unit volume
 C) Force per unit area D) Pound per square inches
43. A three hinged arch is generally hinged at its supports and
 A) at one quarter span B) at the crown C) anywhere in the rib D) at a distance of $L/2\sqrt{3}$
44. The locus of the moment of inertia about inclined axes to the principal axis, is
 A) straight line B) parabola C) circle D) ellipse

45. A rolled steel joist is simply supported at its ends and carries a uniformly distributed load which causes a maximum deflection of 10 mm and slope at the ends of 0.002 radian. The length of the joist will be,

- A) 10 m B) 12 m C) 14 m D) 16 m

46. The load on a spring per unit deflection is called

- A) stiffness B) proof resilience C) proof stress D) proof load

47. The point of contraflexure is a point where

- A) Shear force changes sign B) Bending moment changes sign
C) Shear force is maximum D) Bending moment is maximum

48. In plastic analysis, the shape factor for triangle section is

- A) 1.5 B) 1.34 C) 2.34 D) 2.5

49. The locus of reaction of two hinged semi-circular arch is

- A) Straight line B) Parabola C) Circle D) Hyperbola

50. In shaft the shear stress is not directly proportional to

- A) Radius of the shaft B) Angle of twist
C) Length of the shaft D) Modulus of rigidity

51. The maximum area of tension reinforcement in beams shall not exceed

- A) 0.15% B) 1.5% C) 4% D) 1%

52. If the effective length of a 32 cm diameter R.C.C. column is 4.40 m, its slenderness ratio, is

- A) 40 B) 45 C) 50 D) 55

53. Slump test of concrete is measure of

- A) Consistency B) Compressive strength C) Tensile strength D) Impact value

54. The shrinkage strain of concrete is generally taken as

- A) 0.3 B) 0.03 C) 0.003 D) 0.0003

55. The ratio of bond stress for HYSD bars to that of plain bars

- A) 0.714 B) 0.9 C) 1.4 D) 1.8

56. The proof stress in steel is the stress corresponding to the strain of

- A) 0.2 B) 0.02 C) 0.002 D) 0.0002

57. Thickened part of flat slab over a supporting column is technically known as

- A] Drop panel B] Capital C] Column head D] Edge of the column

58. The effective length of a compression member of length L held in position and restrained in direction at one end and effectively restrained in direction but not held in position at the other end, is

- A) L B) $0.67 L$ C) $0.85 L$ D) $1.5 L$

59. The ratio of shearing stress to shearing strain within elastic limit, is known as

- A) modulus of elasticity B) shear modulus of elasticity
C) bulk modulus of elasticity D) tangent modulus of elasticity

60. For determination of allowable stress in axial compression, Indian Standard Institution has adopted

- A) Euler's formula B) Rankine formula C) Engesser formula D) Secant formula

77. High COD to BOD ratio of an organic pollutant represents
 A) High biodegradability of the pollutant B) Low biodegradability of the pollutant
 C) Presence of free oxygen for aerobic decomposition D) presence of toxic material in the pollutant
78. The detention time for a water sedimentation tank may vary between:
 A) 1-2hr. B) 2-4 hr. C) 4-8 hr. D) 16-24hr.
79. Iron and manganese can be removed from waters, by:
 A) Boiling B) Aeration followed by coagulation
 C) Chlorination D) Activated carbon addition
80. The suitable layout for a water supply distribution system, for an irregularly grown town, is:
 A) Dead end system B) Grid iron system C) Ring system D) Radial system
81. If cross slope of a country is 10% to 25%, the terrain is classified as
 A) rolling B) mountainous C) steep D) plain
82. In water bound macadam roads, binding material, is
 A) sand B) stone dust C) cement D) brick dust
83. According to the recommendations of Nagpur Conference, the width formation of an ideal National Highway in hard rock cutting, is
 A) 8.9 m B) 7.9 m C) 6.9 m D) 6.5 m
84. The minimum design speed for hairpin bends in hill roads is taken as
 A) 20 kmph B) 30 kmph C) 40 kmph D) 50 kmph
85. The thickness of bituminous carpet varies from
 A) 20 to 25 mm B) 50 to 75mm C) 75 to 100mm D) 120 mm
86. Minimum depth of ballast prescribed of B.G. trunk lines of Indian
 A) 20 cm B) 15 cm C) 25 cm D) 30 cm
87. The recommended grade of tar for grouting purpose is
 A) RT-1 B) RT-2 C) RT-3 D) RT-5
88. The length of the side of warning sign boards of roads is
 A) 30 cm B) 40 cm C) 45 cm D) 50 cm
89. A single lane carriage way whenever changes to two-lane carriage way, is affected through a taper of
 A) 1 in 10 B) 1 in 15 C) 1 in 20 D) 1 in 15 to 1 in 20
90. The wall constructed for the stability of an excavated portion of a road on the hill side, is known as
 A) retaining wall B) breast wall C) parapet wall D) wing wall
91. The ferry designs are dependent on:
 A) Aesthetics B) Length of route C) Country where it is used D) Weather conditions
92. The alignment of breakwater should be:
 A) Horizontal B) Straight C) Perpendicular D) Diagonal

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Civil Engineering - Ans Key- SET- 3

1	B	21	C	41	A	61	C	81	A
2	C	22	D	42	C	62	B	82	B
3	C	23	B	43	B/C	63	C	83	B
4	B	24	A	44	D	64	B	84	A
5	A	25	D	45	D	65	A	85	A
6	B	26	B	46	A	66	C	86	C
7	A	27	B	47	B	67	D	87	D
8	A	28	C	48	C	68	C	88	C
9	B	29	D	49	A	69	A	89	D
10	D	30	A	50	C	70	D	90	B
11	A	31	A	51	C	71	A	91	B
12	C	32	C	52	D	72	B	92	B
13	B	33	A	53	A	73	D	93	C
14	B	34	D	54	D	74	B	94	C
15	D	35	A	55	C	75	B	95	C
16	A	36	C	56	C	76	B	96	D
17	D	37	C	57	A	77	B	97	C
18	D	38	A	58	C	78	C	98	B
19	B	39	B	59	B	79	B	99	D
20	D	40	A	60	A	80	A	100	D