JEEDEC

Question Paper - 2022

CIVIL ENGINEERING



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This question paper has been compiled on the basis of question paper shared by students after the exam. We have provided a typed version of the paper because the quality of the scanned paper was not very good. However, answers are unofficial.

1. Developed torsional shear stress on a circular shaft subjected to a constant torsional moment

a) mains constant throughout the cross section
b) Is maximum at the periphery an and zero at the centre
c) Is maximum at centre and zero at the periphery
d) Depends of the diameter of the shaft and shear modulus of the material

Correct answer: B

2. A floating body will be in stable equilibrium if

a) The centre of gravity lies below the centre of buoyancy
b) The centre of gravity lies above the centre of buoyancy
c) The centre of gravity and the centre of buoyancy coincide.
d) The centre of gravity and the centre of buoyancy are in the same horizontal level

Correct answer: A

3.Limiting value of Poisson's ratio are

a) 0 and 0.5
b) -1 and 0.5
c)-1 and -0.5
d) 1 and -0.5

Correct answer: A

4. Slenderness ratio is the ratio of

a) Effective length of the column to extreme fibre distance from the centroid of the section.
b) Effective length of the column to its radius of gyration

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c) Effective length of the column to its cross-sectional area
d) Effective length of the column to its moment of inertia

Correct answer: B

5.The number of independent equations to be satisfied for static equilibrium in a plane frame is

a) 1
b) 3
c) 5
d) 6

Correct answer : B

6. A compound bar consisting of material A and B is tightly secured at the ends. The coefficient of thermal expansion of A is greater than that of B. If the temperature is increased, the stress induced will be

a) Tensile in both the material
b) Tensile in material A & compressive in material B
c) c)Tensile in material B. & compressive in material A
d) Compressive in both the material

Correct answer: C

7.Trace the correct statement

a) Ideal fluids are inviscid and incompressible
b) Ideal fluids are viscous and compressible
c) Real fluids are inviscid and incompressible
d) Real fluids are viscous and incompressible

Correct answer: A

8. Which of the following is true for the Principle plane?

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a) On Principle Plane, Shear stress is always Maximum
b) On Principle Plane, Shear stress is always zero
c) Difference between two principle plane are always 360°
d) On Principle plane, Resultant stress is always minimum.

Correct answer: B

9. For a material, if the Young's Modulus is E, Shear Modulus is G and Poisson's ratio (μ) then the relationship of Young's Modulus(E) and Shear Modulus (G) can be written as:

a) $E= 2G(1+\mu)$
b) $E = 3G(1+ \mu)$
c) $E = 3g(1- 2\mu)$
d) $E = 2G(1 - 2\mu)$

Correct answer: A

10. For a cantilever beam of length L if concentrated vertical load P is acting at free end, what will be the amount of Bending Moment at mid point is:

a) 6P
b)PL/2
c) PLI4
d) Zero

Correct answer: B

11. The type of foundation provided for construction of flyovers in sandy soil is

a) Strip footing
b) Combined footing
c) Raft footing
d) Pier footing

Correct answer: D

12. When a brick is cut across the width, the cut out brick is called

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a) Queen closer
b) Bat
c) King closer
d) Bevelled closer

Correct answer: B

13. The minimum compressive strength of first class brick is

a) 7.5MPa
b) 9MPa
c) 10 MPa
d) 12 MPa

Correct answer : C

14. To obtain strong timber pieces from logs the best method is

a) Machine sawing
b) Tangential sawing
c) Quarter sawing
d) Radial sawing

Correct answer : D

15. Ring shakes in timber are

a) Longitudinal sport lions of timber between m annular rings
b) Longitudinal cracks normal to annular rings
c) Longitudinal cracks propagating from bark towards the sapwood
d) Longitudinal cracks propagating from pith towards the sapwood along the medullary rays

Correct answer: A

16. Before testing setting time of cement one should test for:

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a) Soundness
b) Strength
c) Fineness
d) Consistency

Correct answer: D

17. Minimum thickness of wall where single Flemish bond can be used is:

a) Half brick thick
b) One brick thick
c) One and half brick thick
d) Two brick thick

Correct answer : C

18. In masonry buildings the foundation is made of

a) Brick
b) RCC
c) Bamboo
d) None of these

Correct answer: A

19. For DPC at plinth level, which grade of concrete is used?

a) M10
b) M20
c) M25
d) M15

Correct answer: D

20. The type of material suitable for flexible DPC. is:

a) Blue slate
b) Bituminous felt

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c) Engineering bricks
d) Mastic asphalt

Correct answer : B

21. For a sandy soil, D10 = 0.1mm, D30 = 0.4mm, D60 = 0.9mm, the values of Uniformity coefficient and coefficient of curvature will be respectively —

a) 9 and 1.3
b) 8 Sand 1.1
c) 5 and 2.1
d) 9 and 1.8

Correct answer : D

22.As per IRC a culvert is a cross-drainage structure having a total length of x meters or less between the inner faces of the dirt walls or extreme vent way boundaries, measured at right angles thereto, where,

a) x=5
b) x=6
c) x=7
d) x=8

Correct answer : B

23. Hydrometer analysis for the grain size distribution of soil is designed/developed based ..... on Law/Principle.

a) Bernoulli's
bY Stokes'
c) Darey's
d) Pascal's

Correct answer : B

24.In Casagrande's Plasticity Chart, parameters plotted along x-axis and y axis are respectively

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a) LL and PL
by LL and PI
c) PI and LL
d) PL and LL

Correct answer: B

25. A soil with a coefficient of curvature between 1 and 3 is considered to be well graded as long as the coefficient of uniformity is greater than.....for gravels and ..... for sands.

a) 4 and 6
b) 3 and 6
c) 6 and 3
d) 3 and 4

Correct answer : A

26. Which kind of structure is formed if the net electrical forces between adjacent soil particles at the time of deposition are repulsive?

a) Dispersed
b) Flocculent
c) Circular
d) Rectangular

Correct answer : A

27. The fixture used to join rails is

a) Bearing plates
b) Keys
c) Fish plates
d) Spikes

Correct answer : C

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28. Speed limit signs are

a) Circular in shape, red background with a white border
b) Circular in shape, white background with a red border
c) Triangular in shape, Red background with a white border
d) Triangular in shape, white background with a red border

Correct answer : B

29. Metalling of road usually consists of_____ layers of coats.

a) 5
b) 3
c) 2
d) 6

Correct answer : B

30. Standard specifications and code of practice for water bound macadam roads are covered by

a) IRC:12-2009
b) IRC: 14-2004
c) IRC: 19-2005
d) IRC:20-1966

Correct answer : C

31. A 4m long staff is held on a Bench Mark (B.M.) whose Reduced Level (R.L) is100m. From a station when the staff reading was taken using a dumpy level, the reading was recorded as 1.455m. The height of the instrument would be:

a) 98.645m
b) 98.545m
c) 101.455m
d) 100m

Correct answer : C

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32. For a closed traverse having 6 sides, the sum of internal angles should be:

a) 270°
b) 360°
c) 540°
d) 720°

Correct answer : D

33. If fore bearing of line AB is 40° and back bearing of line BC is 280°, then the value of angle ABC is

a) 120°
b) 60
c) 160°
d) 80°

Correct answer : A

34. The interior angles of three triangles are given below:

Triangle	Interior Angles
P	85°, 50°, 45°
Q	100°, 55°, 25°
R	130°, 30°, 20°

Which of the above triangles are ill-conditioned?

a) Only triangle P
b) Only triangle R
c) Only triangle Q
d) Both triangles Q and R

Correct answer : D

35.A well conditioned triangle does not have any angle less than

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a)20°
b) 30°
c) 45°
d) 85°

Correct answer : B

36. The line of collimation method of reduction of levels does not provide a check on

a) Back sights
b) Fore sights
c) Intermediate sight
d) Reduced levels

Correct answer : C

37. What is the direction of line relative to a given meridian?

a) Bearing of a line
b) Length of a line
c) Slope of a line
d) Reciprocal of slope of a line

Correct answer : A

38. The length of a survey line was measured with a 20 m chain and was found to be equal to 1200 m. If the length is again measured with a 25 m chain it is 1212 m. On comparing the 20 m chain with the test gauge, it was found to be 1 decimeter too long. Find the actual length of 25 m chain used.

a) 22.25 m
b) 21.64 m
c) 24.25 m
d) 24. 88 m

Correct answer : D

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39. he principle of plane table surveying is

a) Triangulation
b) Similarity
c) Traversing
d) Parallelism

Correct answer : D

40. Orientation of table involves which among the following?

a) Traversing
b) Fore sighting
c) Back sighting
d) Measuring bearings

Correct answer : C

41. For standing crops in undulating sandy fields, the best method of irrigation, is

a) Furrow meth
b) Free flooding
c) Check method
d) Sprinkler irrigation

Correct answer : D

42. Concept of initial and final regime was given by

a) Kennedy
b) Chazy
c) Lacey
d) Strickler

Correct answer : C

43. The time between the first watering of a crop at the time of its sowing to its last watering before harvesting is called —

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a) Crop period
b) Base period
c) Grown period
d) Irrigation period

Correct answer : B

44. Among the following, which crop has the highest value to delta

a) Wheat
b) Vegetables
c) Rice
d) Cotton

Correct answer : C

45. Hydraulic conductivity (K) for isotropic aquifer

a) depends on the flow
b) is different in vertical and horizontal flow
c) is equal for flow in all directions
d) is not related to its flow

Correct answer : C

46. Fluoride in drinking water cause

a) Pitted gums‘
b) Gastritis
c) Bone crippling
d) Both(A and B)

Correct answer : D

47. The minimum diameter in mm of house connecting sewer to street sewer would not be less than

a) 150

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b) 125
c) 100
d) 120

Correct answer : A

48. A clariflocculator is a

a) Plain sedimentation unit
b) Aeration unit
c) Coagulation-sedimentation unit
d) Disinfection unit

Correct answer : C

49. BODs of a wastewater sample is measured at a temperature of

a) 27°C
b) 20°C
c) 30°C
d) 35°C

Correct answer : B

50. High COD to BOD ratio in a wastewater sample indicates

a) Presence of hardness causing chemicals
b) Low biodegradability of the pollutant
c) High biodegradability of the pollutant
d) Presence of toxic chemicals in the sample

Correct answer : B

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