NIFT Srinagar

Answer Key
Post: JE Civil (Short-term Contract)
Date of Written test: 16th June, 2025

Q.No	Answer	Q.No	Answer	Q.No	Answer	Q.No	Answer
1.	B	16.	C	31.	B	46.	A
2.	C	17.	D	32.	A	47.	C
3.	C	18.	C	33.	D	48.	C
4.	A	19.	B	34.	D	49.	A
5.	A	20.	D	35.	B	50.	C
6.	A	21.	A	36.	B	51.	A
7.	A	22.	C	37.	D	52.	D
8.	D	23.	D	38.	B	53.	A
9.	A	24.	D	39.	A	54.	B
10.	D	25.	A	40.	A	55.	D
11.	A	26.	D	41.	A	56.	D
12.	B	27.	B	42.	C	57.	C
13.	C	28.	D	43.	B	58.	B
14.	A	29.	A	44.	A	59.	A
15.	D	30.	B	45.	C	60.	D

Objections/representations regarding questions/answr key along-with supporting documents may be sent on email careers.srinagar@nift.ac.in by or before **18th June, 2025 upto 03:00pm.** Thereafter, no representations/grievance shall be admitted in this regard.

Uploaded on Website on 16th June, 2025

QUESTION BOOKLET

(Post: JE Civil)

No of MCQs: 60 (01 Marks Each)   Time Allotted: 70 Minutes

INSTRUCTIONS:

i.   Please check the Question Paper for any discrepancies, printing errors etc. In case of any issue, report to Invigilator immediately.

ii.   Candidate is required to answer all 60 Questions on OMR Sheet. Each question has only one most appropriate answer.

iii. There is no negative marking.

iv.   Please read the instructions on OMR sheet and follow them.

v.   Calculator, Tablets, Mobile or any other calculating/electronic device is not allowed in the test.

vi.   No candidate will be allowed to leave the examination/test before the completion of the test.

vii. Rough work should be done on the last pages of this booklet.

viii. After the test, the candidate shall hand over the completed OMR to Invigilator. In case, a candidate does not return the OMR, her/his test shall be treated as cancelled.

ix.   The candidate is allowed take away the question paper.

x.   Answer Key of the paper shall be uploaded on the NIFT Srinagar website by evening today. Candidates have any objection regarding questions/answer options may submit their representations through email with attached proof. NIFT Srinagar shall take appropriate decisions on the representation/s.

1. The algebraic sum of the resolved parts of a number of forces in a given direction is equal to the resolved part of their resultant in the same direction. This is known as:

    (a) principle of independence of forces   (b) principle of resolution of forces

    (c) principle of transmissibility of forces   (d) none of the above

2. The forces, whose lines of action are parallel to each other and act in the same directions, are known as

    (a) coplanar concurrent forces   (b) coplanar non-concurrent forces

    (c) like parallel forces   (d) unlike parallel forces

3. The centre of gravity of a right circular solid cone is at a distance of   from its base, measured along the vertical axis

    (a) h/2   (b) h/3

    (c) h/4   (d) h/6

4. The friction experienced by a body, when at rest, is known as

    (a) static friction   (b) dynamic friction

    (c) limiting friction   (d) Coefficient of friction

5. The bending moment in the centre of a simply supported beam carrying a uniformly distributed load of w per unit length is

    (a) zero   (b) $wl^2/2$

    (c)) $wl^2/4$ (d)) $wl^2/8$

6. The maximum deflection of a cantilever beam of length l with a point load W at the free end is

    (a) $Wl^3/3EI$ (b) $Wl^3/8EI$

    (c) $Wl^3/16EI$ (d) $Wl^3/48EI$

7. The maximum permissible shear stress given in IS: 456- 2000 is based on

    (a) diagonal tension failure   (b) diagonal compression failure

    (c) flexural tension failure   (d) uniaxial compression

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8. For M 15 grade concrete, the section is to be redesigned if shear stress is more than

(a) 0.5 N/mm^2

(b) 1 N/mm^2

(c) 1 .5 N/mm^2

(d) 2 N/mm^2

9. Water cement ratio maybe defined as the ratio of

(a) volume of water to that of cement in a concrete mix

(b) weight of water to that of cement in a concrete mix

(c) volume of water to that of concrete in a concrete mix

(d) weight of water to that of concrete in a concrete mix

10. The higher workability of a concrete is required if a structure is

(a) made with cement

(b) thick and reinforced

(c) thin and heavily reinforced

(d) thick and heavily reinforced

11. According to IS: 456- 2000, the spacing of stirrups shall not exceed a distance .... the lever arm of the resisting moment

(a) equal to

(b) double

(c) three times

(d) four times

12. If the sides of a slab simply supported on its edges and spanning in two ways are equal, then the maximum bending moment is multiplied by

(a) 0.25

(b) 0.50

(c) 0.75

(d) 0.85

13. Junction between the flange and web of a beam is known as

(a) lap joint

(b) butt joint

(c) fillet

(d) shear joint

14. The dead load includes

(a) self-weight of the structure

(b) all superimposed loads

(c) weight of stationary equipments

(d) weight of furniture

15. The value of factor of safety is decided keeping in view

(a) Average strength of a material

(b) value of design loads

(c) value of internal forces

(d) all of the above

16. For a rivet of 36 mm diameter, the diameter of hole shall be taken as

    (a) 36 mm   (b) 37.5 mm

    (c) 38 mm   (d) 38.5 mm

17. In a plate girder the vertical stiffeners are provided when the ratio of clear depth to the thickness of web exceeds

    (a) 50   (b) 65

    (c) 75   (d) 85

18. A welded steel plate girder consisting of two flange plates of 350 mm x 16 mm and a web plate of   1000 mm x 6 mm requires

    (a) no stiffeners   (b) vertical stiffeners

    (c) intermediate vertical stiffeners   (d) vertical and horizontal stiffeners

19. Lacustrine soils are those soils which are

    (a) deposited in sea water   (b) deposited at the bottom of the lakes

    (c) transported by running water   (d) transported by wind

20. The submerged weight of soil solid per unit volume is called

    (a) Saturated unit weight   (b) Dry unit weight

    (c) Wet unit weight   (d) Buoyant unit weight

21. The maximum size of grains of silts is about

    (a) 0.06 mm   (b) 0.2 mm

    (c) 0.5 mm   (d) 1 mm

22. The ratio of the unit weight of soil solids to that of water is called

    (a) void ratio   (b) porosity

    (c) specific gravity   (d) degree of saturation

23. The coefficient of consolidation is used for evaluating

    (a) stress in the soil   (b) total settlement

    (c) over consolidation ratio   (d) time rate of settlements

24. If void ratio is 0.67, water content is 0.188 and specific gravity is 2.68, then the degree of saturation of the soil is

(a) 25%

(b) 40%

(c) 60%

(d) 75%

25. The force per unit length is the unit of

(a) surface tension

(b) compressibility

(c) capillarity

(d) viscosity

26. In a differential manometer, the flowing fluid is water and the gauge fluid is mercury. If the manometer reading is 100 mm, the differential head in m of water is

(a) 13.6

(b) 1.36

(c) 1.47

(d) 1.26

27. A flow through an expanding tube at constant rate is called

(a) steady uniform flow

(b) steady non-uniform flow

(c) unsteady uniform flow

(d) unsteady non-uniform flow

28. Bernoulli equation is applied to

(a) venture meter

(b) orifice meter

(c) pitot tube

(d) all of the above

29. If the velocity potential exist for the flow, then it is

(a) irrotational

(b) rotational

(c) laminar

(d) none of these

30. The flow in a pipe is neither laminar nor turbulent when Reynolds number is

(a) less than 2000

(b) between 2000 and 2800

(c) more than 2800

(d) none of the above

31. A useful soil moisture for plant growth is

(a) capillary water

(b) gravitational water

(c) hygroscopic water

(d) all of these

32. The saturation capacity, field capacity and the permanent wilting point of a soil are 47%, 27% and 14% respectively. The available moisture for the crops grown in the soil is

(a) 13%   (b) 20%

(c) 27%   (d) 33%

33. The saturation gradient in an ordinary loam soil is

(a) 1:1   (b) 2:1

(c) 3:1   (d) 4:1

34. Water logging is caused due to

(a) Inadequate drainage facilities   (b) over irrigation

(c) presence of impermeable strata   (d) all of the above

35. The weed growth in a canal leads to

(a) decrease in silting   (b) decrease in discharge

(c) increase in discharge   (d) increase in velocity of flow

36. The loss of head per unit length of creep is called

(a) coefficient of creep   (b) percolation coefficient

(c) lane's coefficient   (d) none of the above

37. What is Waste Water Engineering?

(a) use of engineering approaches to enhance the cleanliness of human populations

(b) removing and disposing of human waste

(c) providing safe drinking water

(d) all of the above

38. Which of the following type of treatment methods are used for municipal and industrial waste waters?

(a) Main stream   (b) Slow rate

(c) Overflow   (d) Rapid infiltration

39. What percentage of solids does waste water contain?

(a) 0.1%   (b) 1%

(c) 0.5%   (d) 5%

40. Advanced waste water sludge constitutes which of the following?

   (a) Chemical and biological solid   (b) Biological solids

   (c) Settlable solids   (d) Chemical sludge

41. Which of the following waste water treatment plant may or may not need the screens?

   (a) Industrial   (b) Sewage

   (c) Chemical   (d) Domestic

42. What is the minimum percentage of solids in waste water?

   (a) 60%   (b) 50%

   (c) 40%   (d) 30%

43. The Grand Trunk (G.T.) road was constructed during

   (a) 1440 to 1445 A.D.   (b) 1540 to 1545 A.D.

   (c) 2000 to 2500 B.C.   (d) 2500 to 3000 B.C.

44. The Central Road Organization (C.R.O.) was set up in

   (a) 1930   (b) 1934

   (c) 1948   (d) 1956

45. In which of the road construction, the finished surface layer of the pavement is given a cross slope 1 in 45?

   (a) Macadam construction   (b) Telford construction

   (c) Tresaguet construction   (d) Metcalf construction

46. According to IRC, the recommended width of shoulder is

   (a) 2.5 m   (b) 3 m

   (c) 3.5 m   (d) 4 m

47. The value of maximum gradient for hill roads is

   (a) 1 in 5   (b) 1 in 10

   (c) 1 in 15   (d) 1 in 20

48. In CBR test, the value of CBR is calculated at

(a) 2.5 mm penetration only

(b) 5 mm penetration only

(c) both 2.5 mm and 5 mm penetration

(d) none of the above

49. A bar chart is drawn for

(a) time versus activity

(b) activity versus resources

(c) resources versus progress

(d) progress versus time

50. The path which moves along the activities having total float zero, in the network diagram is called

(a) free float

(b) critical path

(c) total float

(d) independent float

51. A PERT network has 9 activities on its critical path. The standard deviation of each activity on the critical path is 3. The standard deviation of critical path is

(a) 3

(b) 9

(c) 81

(d) 27

52. Which of the following contract type is usually followed by railway department foe construction purpose?

(a) lump-sum

(b) percentage rate

(c) item rate

(d) piece work

53. A newly build house is let out for rent of Rs. 1000 per month inclusive of all taxes. If outgoings are at 20% of the gross rent and the expected rate of return is 10%, what is the capital value by the rental method of valuation?

(a) 99,600

(b) 87,600

(c) 96,000

(d) 1,12,300

54. While submitting a tender, the contractor is required to deposit sum amount with the department as a guarantee of the tender known as

(a) earnest money

(b) bank guarantee

(c) security deposit

(d) caution money

55. The strength at which steel fails under repeated applications of load, is known as

(a) impact strength

(b) tensile strength

(c) yield strength

(d) fatigue strength

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56. The rivets which are driven at atmospheric temperature, are known as

(a) power driven shop rivets

(b) hand driven rivets

(c) power driven field rivets

(d) cold driven rivets

57. The distance between two consecutive rivets of adjacent chains and measured at right angles to the direction of the force in structural members, is known as

(a) pitch of rivet

(b) staggered pitch of rivet

(c) gauge distance of rivet

(d) any of the above

58. The strength of field rivet as compared to the shop rivet is

(a) same

(b) 75%

(c) 89%

(d) 90%

59. Which of the following is a best compression member section?

(a) single angle section

(b) double angle section

(c) I-section

(d) tubular section

60. Slenderness ratio of the lacing bar for compression member should exceed

(a) 125

(b) 135

(c) 155

(d) 145

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ROUGH WORK

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