



श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, त्रिवेंद्रम, तिरुवनन्तपुरम - 695 011, केरल, भारत
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(एक राष्ट्रीय महत्व का संस्थान, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार)

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ROLL NUMBER

**WRITTEN TEST FOR THE POST OF
JUNIOR ENGINEER (CIVIL) - A to B**

DATE: 24/09/2026

TIME: 10:00 AM to 11:00 AM

DURATION: 60 MINUTES

Total Marks: 50

INSTRUCTIONS TO THE CANDIDATES

1. Write your Roll Number on the top of the Question Booklet and in the answer sheet.
2. Each question carries 1 mark.
3. There will not be any Negative Marking.
4. Write legibly the alphabet of the most appropriate answer (A, B, C or D) in the separate answer sheet provided.
5. Over-writing is not permitted.
6. Candidate should sign in the question paper and answer sheet.
7. No clarifications will be given.
8. Candidate should hand over the answer sheet to the invigilator before leaving the examination hall.

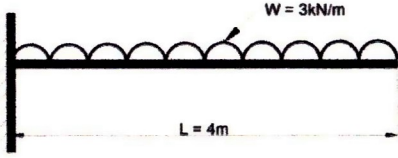
Signature of the Candidate

WRITTEN TEST FOR THE MFCP OF JE(Civil)-A to B

This question paper consists of 50 Multiple Choice Questions carrying equal marks.

Candidate has to mark the best alternative from the options given in the OMR/Answersheet provided. There are no negative marks for incorrect answers.

Date: 24.09.2026 Duration: 60 mins

1.	1cm= 10m. This type of scale is known as A. Representative Scale B. Numerical Scale C. Engineer's Scale D. Fixed-Ratio Scale
2.	Cohesion less soil is____ A. Sand B. Silt C. Clay D. A & C
3.	The maximum bending moment for the beam given in diagram below at support is  A. - 12 KN.m B. - 24 KN.m C. + 12 KN.m D. +24 KN.m
4.	A real fluid in which the shear stress is directly proportional to the rate of shear strain is known as A. Ideal Plastic Fluid B. Ideal Fluid C. Non-Newtonian Fluid D. Newtonian Fluid
5.	Calculate the axial load of compression member for M20 grade of concrete and Fe415 steel having an area of concrete=500mm ² and area of longitudinal reinforcement= 1200mm ² A. 1002.95 kN B. 706.24 kN C. 337.66 kN D. 201.73 kN



14.	The unit of Moment of Inertia in SI Unit is A. M C. M^4 B. M^2 D. M^8
15.	The unit weight of rolled structural mild steel in gm/cm^3 is A. 2.45 C. 7.85 B. 6.40 D. 9
16.	The bulk density of cement in kg/cu.m is A. 1440 C. 1600 B. 1520 D. 1680
17.	The permissible pH limit of industrial effluent discharges into inland surface water as per IS 2490. A. 0-4.5 C. 9.5-11 B. 5.5-9.0 D. 11-14
18.	Workability of concrete is inversely proportional to A. Time of transit C. Water cement ratio B. The air in the mix D. Size of aggregate
19.	A type of mortar in which cement and lime are mixed together is called A. Cement Mortar C. Gauged Mortar B. Lime Mortar D. Light Weight Mortar
20.	The ratio of carry over moment to applied moment is called as A. Reduction Factor C. Carry Over Factor B. Distribution Factor D. Multiplication Factor
21.	A single load of 100kN rolls along a girder of 20m span which is simply supported. What will be the absolute maximum bending moment? A. 210kN-m C. 500kN-m B. 300kN-m D. 1500kN-m
22.	The stress at which extension of a material takes place more quickly as compared to the increase in load is called _____ A. Elastic Point C. Breaking Point B. Plastic Point D. Yielding Point
23.	According to IS 456:2000, what are the partial safety factors recommended for concrete and steel respectively in the limit state of collapse? A. 1.15, 1.5 C. 1.5, 1.15 B. 1.5, 1.5 D. 1, 1
24.	Limiting value depth of neutral axis for Fe 415 is _____ A. 0.48d C. 0.46d B. 0.42d D. 0.53d
25.	Methods of test of 'Burnt Clay Building Bricks' is based on IS Code _____ A. 3101 C. 3495 B. 3102 D. 3496

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26.	How does pre-stressing contribute to the durability of concrete structures A. Reduces Concrete Density C. Increases water content B. Prevents tensile stresses D. Uses lower grade material
27.	Which of the following is 2 way slab A. 3m x 5m C. 4m x 8m B. 3m x 6m D. 3m x 8m
28.	What is buckling stress for steel column, if $E=2 \times 10^5 \text{ N/mm}^2$ and $\lambda=180$? A. 60.92 N/mm^2 B. 32 N/mm^2 C. 95 N/mm^2 D. 103 N/mm^2
29.	A curve that consists of two circular arcs of same/different radii with their centre of curvature on the opposite side of common tangent is called A. Reverse Curve C. Combined Curve B. Simple Circular Curve D. Simple Curve
30.	If the depth of actual neutral axis in a beam is more than the depth of critical neutral axis, then the beam is called A. balanced beam C. under-reinforced beam B. Over reinforced beam D. None of the above
31.	What happens if mineral oil is present in mixing of concrete? A. Gives more slump B. Increase setting time C. Gives good finish D. Increase Strength
32.	Which of the following is used to test the standard consistency of cement? A. Duff Abrams Apparatus C. Vicat Apparatus B. Soundness Meter D. Le Chatlier's Apparatus
33.	Which method is used to estimate the bearing capacity of shallow foundations? A. Terzaghi's Theory C. Vane Shear Test B. Direct Shear Test D. Darcy's Law
34.	According to IS 456 the maximum area of compression reinforcement shall not exceed A. $0.01bD$ C. $0.04bD$ B. $0.12bD$ D. $0.52bD$
35.	A type of estimate which is prepared when additional works or when further developments are required during the progress of work is: A. Supplementary Estimate C. Detailed Estimate B. Annual Repair Estimate D. Abstract Estimate
36.	A surveyor measured the distance between 2 points on the plan drawn to a scale $1\text{cm}=20\text{m}$ and the result was 936m . Later he found out that he used a scale of $1\text{cm}=40\text{m}$. Find the actual distance between the 2 points. A. 468 m B. 234 m C. 1872 m D. 93.6 m

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37.	The weight of crushed aggregate sample is 30gm and the weight of test sample is 300gm. Find the aggregate crushing value. A. 50% C. 20%	B.10% D. 70%
38.	For making contracts more suitable to work certain amendments or addition are done in general conditions of contracts which is called as A. CPWD Contract Changes C. Special Conditions of Contract	B.FIDIC Contractual Changes D.None of the above
39.	Under Standard CPWD/GFR guidelines, if the original cost of a work exceeds the sanctioned AA&ES by over more than what percentage due to price escalation/deviation, does it require a Revised AA&ES A. 25% C. 10%	B.20% D.5%
40.	In rate analysis of cement concrete, what is the standard factor used to convert the finished (wet) volume of concrete to its dry volume? A. 1.33 C. 1.25	B.1.52 D. 1.00
41.	As per the CPWD Works Manual 2026 "Green Building Certification" is mandatory for works costing above rupees A. 25Cr. C. 100 Cr.	B.50 Cr. D. 150 Cr.
42.	The latest version of CPWD Plinth Area Rates(PAR) is A. 2014 C. 2025	B. 2024 D. 2026
43.	The bottom most layer of pavement is known as A. Subgrade C. Wearing Course	B. Sub- Base Course D. Base Course
44.	The interface treatment provided to plug in the voids of porous surfaces and to bond loose particles in the bituminous pavements is called: A. Tack Coat C. Prime Coat	B. Seal Coat D. Surface Dressing
45.	The minimum thickness of the base of a flexible pavement is A. 5 cm C. 15 cm	B. 10 cm D. 20 cm
46.	What is the standard bend deduction allowed for a 90-degree bend in reinforcement bars? A. 4d B. 3d C. 2d D. 1d	

47.	Which of the following command settings facilitates the cursor movement to select midpoint, endpoint etc. objects while drawing in AutoCAD? A. Polar Tracking B. SNAP C. ORTHO D. OSNAP
48.	The command used to make corner in a circular shape is A. Fillet B. Chamfer C. Trim D. Break
49.	The estimated value of a property as a whole without dismantling at the end of its useful life is called as A. Book Value B. Salvage Value C. Distress Value D. Scrap Value
50.	When the reduced level of the water source is higher than the reduced level of the consumer's place, water is generally supplied A. By pumping System B. By gravitational system C. Both A & B D. All of the above

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Answer Keys (MFCP JE-Civil A to B)			
Q. No.	Correct Option	Q. No.	Correct Option
1	C	41	B
2	A	42	C
3	B	43	A
4	D	44	C
5	C	45	B
6	C	46	C
7	A	47	D
8	C	48	A
9	C	49	B
10	C	50	B
11	C		
12	D		
13	C		
14	C		
15	C		
16	A		
17	B		
18	A		
19	C		
20	C		
21	C		
22	D		
23	C		
24	A		
25	C		
26	B		
27	A		
28	A		
29	A		
30	B		
31	D		
32	C		
33	A		
34	C		
35	A		
36	A		
37	B		
38	C		
39	C		
40	B		