

IIITDM Kancheepuram - Recruitment of Non-Teaching Posts

(Advt.No.IIITDMK/R/3/2019 Dated: 19th June, 2019)

List of Shortlisted Candidates for screening test and Schedule of exams for the post of Junior Engineer (Civil)

Qualification and experience	B.E / B.Tech. in Civil Engineering with 2 years relevant experience. Or Diploma in Civil Engineering with 5 years experience.
Desirable	<ul style="list-style-type: none">• Knowledge in Structural Engineering.• Experience in civil work maintenance of Industrial / Commercial / Educational Institutions.• Proficiency in Computer.• Good Supervisory skills with ample technical knowledge.

Application Numbers of Shortlisted Candidates

1903JEC0004	1903JEC0036	1903JEC0066	1903JEC0089	1903JEC0134
1903JEC0005	1903JEC0037	1903JEC0068	1903JEC0094	1903JEC0138
1903JEC0006	1903JEC0038	1903JEC0069	1903JEC0096	1903JEC0140
1903JEC0008	1903JEC0039	1903JEC0071	1903JEC0097	1903JEC0141
1903JEC0009	1903JEC0040	1903JEC0072	1903JEC0100	1903JEC0142
1903JEC0011	1903JEC0042	1903JEC0073	1903JEC0102	1903JEC0146
1903JEC0015	1903JEC0044	1903JEC0074	1903JEC0104	1903JEC0147
1903JEC0018	1903JEC0046	1903JEC0075	1903JEC0106	1903JEC0149
1903JEC0024	1903JEC0047	1903JEC0076	1903JEC0110	1903JEC0150
1903JEC0025	1903JEC0049	1903JEC0077	1903JEC0112	1903JEC0152
1903JEC0026	1903JEC0052	1903JEC0079	1903JEC0113	1903JEC0153
1903JEC0027	1903JEC0053	1903JEC0080	1903JEC0115	1903JEC0155
1903JEC0030	1903JEC0058	1903JEC0084	1903JEC0116	1903JEC0161
1903JEC0031	1903JEC0059	1903JEC0085	1903JEC0120	1903JEC0162
1903JEC0032	1903JEC0060	1903JEC0086	1903JEC0121	1903JEC0163
1903JEC0033	1903JEC0061	1903JEC0087	1903JEC0128	1903JEC0165
1903JEC0034	1903JEC0062	1903JEC0088	1903JEC0130	1903JEC0167
			1903JEC0131	1903JEC0172

Schedule:

Level 1 exam :	15.12.19 (Sunday) - 10:00 AM (Reporting Time: 08: 30 AM)	
Level 2 exam :	16.12.19 (Monday) - 10:00 AM	<i>Only for candidates qualified in Level 1 exam</i>
Level 3 exam :	16.12.19 (Monday) - 02:00 PM	

Note:

- All the shortlisted candidates are required to bring original mark sheets (SSLC onwards), degree certificates, experience certificates and valid community certificate (SC/ST/OBC/EWS) at the time of reporting. Employees serving in Govt. Organizations /autonomous bodies are to submit No Objection Certificate from the present employer. Only the Candidates satisfying the requirement will be permitted to attend the written Test.

Scheme of Examination

I. Levels of Exams:

Level 1:

All the shortlisted candidates shall write screening test carrying maximum of 100 Marks (Objective type).
Maximum duration of exam: 2 hours

Level 2:

It is the subject knowledge test designed to test the candidate's knowledge in the concerned subject of specialization. The questions will be objective/descriptive type carrying maximum of 100 marks.
Maximum duration of exam: 2 hours to 2 hours 30 minutes

Level 3:

It is the trade test to assess the practical knowledge of the candidate in the concerned subject carrying maximum of 100 marks.
Maximum duration of exam: 1 hour 30 minutes

** The standard of questions for the tests will generally be in conformity with education standard prescribed for the post.*

II. Weightage of exams:

Level 1:

Candidates securing the minimum qualifying marks shall be shortlisted for further evaluation process scheduled on the next day. In case of SC/ST candidates, the minimum qualifying marks is relaxable at the discretion of the competent authority. The marks secured in the screening test shall not be taken into account for preparation of final selection list.

Level 2 & Level 3:

Level 2 and Level 3 are of qualifying nature and merit list will be prepared based on the following allocation of weightage.

Level 2 : 60% and Level 3: 40%

*** In case of tie, suitable criteria decided by duly constituted committee will be followed.*

Note:

Success in the examination confers no right of appointment unless the candidate fulfills all requirements of the institute.

Syllabus of Examination

Level 1:

Verbal Reasoning & Aptitude, General English, General Knowledge, Current affairs

Level 2:

Building Materials : Physical and Chemical properties, classification, standard tests, uses and manufacture/quarrying of materials e.g. building stones, silicate based materials, cement (Portland), asbestos products, timber and wood based products, laminates, bituminous materials, paints, varnishes.

Estimating, Costing and Valuation: estimate, glossary of technical terms, analysis of rates, methods and unit of measurement, Items of work – earthwork, Brick work (Modular & Traditional bricks), RCC work, Shuttering, Timber work, Painting, Flooring, Plastering. Boundary wall, Brick building, Water Tank, Septic tank, Bar bending schedule, Centre line method, Mid-section formula, Trapezoidal formula, Simpson's rule. Cost estimate of Septic tank, flexible pavements, Tube well, isolates and combined footings, Steel Truss, Piles and pile-caps. Valuation – Value and cost, scrap value, salvage value, assessed value, sinking fund, depreciation and obsolescence, methods of valuation.

Surveying : Principles of surveying, measurement of distance, chain surveying, working of prismatic compass, compass traversing, bearings, local attraction, plane table surveying, theodolite traversing, adjustment of theodolite, Levelling, Definition of terms used in levelling, contouring, curvature and refraction corrections, temporary and permanent adjustments of dumpy level, methods of contouring, uses of contour map, tachometric survey, curve setting, earth work calculation, advanced surveying equipment.

Soil Mechanics : Origin of soil, phase diagram, Definitions-void ratio, porosity, degree of saturation, water content, specific gravity of soil grains, unit weights, density index and interrelationship of different parameters, Grain size distribution curves and their uses. Index properties of soils, Atterberg's limits, ISI soil classification and plasticity chart. Permeability of soil, coefficient of permeability, determination of coefficient of permeability, Unconfined and confined aquifers, effective stress, quick sand, consolidation of soils, Principles of consolidation, degree of consolidation, pre-consolidation pressure, normally consolidated soil, e-log p curve, computation of ultimate settlement. Shear strength of soils, direct shear test, Vane shear test, Triaxial test. Soil compaction, Laboratory compaction test, Maximum dry density and optimum moisture content, earth pressure theories, active and passive earth pressures, Bearing capacity of soils, plate load test, standard penetration test.

Hydraulics : Fluid properties, hydrostatics, measurements of flow, Bernoulli's theorem and its application, flow through pipes, flow in open channels, weirs, flumes, spillways, pumps and turbines.

Environmental Engineering: Quality of water, source of water supply, purification of water, distribution of water, need of sanitation, sewerage systems, circular sewer, oval sewer, sewer appurtenances, sewage treatments. Surface water drainage. Solid waste management – types, effects, engineered management system. Air pollution – pollutants, causes, effects, control. Noise pollution – cause, health effects, control.

Structural Engineering

Theory of structures: Elasticity constants, types of beams – determinate and indeterminate, bending moment and shear force diagrams of simply supported, cantilever and over hanging beams. Moment of area and moment of inertia for rectangular & circular sections, bending moment and shear stress for tee, channel and compound sections, chimneys, dams and retaining walls, eccentric loads, slope deflection of simply supported and cantilever beams, critical load and columns, Torsion of circular section.

Concrete Technology: Properties, Advantages and uses of concrete, cement aggregates, importance of water quality, water cement ratio, workability, mix design, storage, batching, mixing, placement, compaction, finishing and curing of concrete, quality control of concrete, hot weather and cold weather concreting, repair and maintenance of concrete structures.

RCC Design: RCC beams-flexural strength, shear strength, bond strength, design of singly reinforced and double reinforced beams, cantilever beams. T-beams, lintels. One way and two way slabs, isolated footings. Reinforced brick works, columns, staircases, retaining wall, water tanks (RCC design questions may be based on both Limit State and Working Stress methods).

Steel Design: Steel design and construction of steel columns, beams roof trusses plate girders.

Level 3:

Practical test based on the above (Level-2) topics.