The following candidates are shortlisted for further tests scheduled on 24th August 2019. All are required to report to the office at 09:00 AM along with original certificates for verification without fail.

Junior Technicians (ECE and Mechanical):

S.No.	Appl. No.	Name
1	18JTE0235	M RAVI
2	18JTE1003	RAPAKA PAVANA SAI
3	18JTE1757	PATRA ANJANEYULU
4	18JTE1960	PERLA ROSAIAH
5	18JTE2210	GUJARATHI RAKESH KUMAR
6	18JTE2700	BOYA VIJAYA BHASKAR
7	18JTE2796	MADRI VINAYA KUMAR
8	18JTM2008	MERAPALA MAHESH
9	18JTM2207	BASTIN PREMKUMAR S

Junior Assistants:

S.No.	Appl. No.	Name
1	18JA0300	REPALLE LEELA SIVA HANUMAN
2	18JA2952	M SAI VEERENDRA
3	18JA2216	KUMMARI KESALU
4	18JA2407	VENKATESH S
5	18JA2098	KORUKONDA SANDEEP
6	18JA2929	RAJA RAVI CHANDRA DONTHULA
7	18JA2549	KANDOLU MAHESH KUMAR
8	18JA2793	G SAI NIKHIL
9	18JA2522	MATAM BHARANI KUMAR
10	18JA2708	NIMMAKAYALA SHANTHI
11	18JA1189	YASODHANA RAGHAVENDRA SINGH
12	18JA1402	GONE VENKATESH
13	18JA0471	UPPARA PARTHUDU
14	18JA2118	KANCHI SURENDRA

15	18JA0779	NOWELE HARISH
16	18JA1655	PATNAM VIDYA SAGAR
17	18JA2128	VATTIPALLI RAMAKISHOR
18	18JA2038	VEDUKA HAREESH
19	18JA1048	BOYA KRANTHI KUMAR
20	18JA0120	JINKALA YEGNESWAR
21	18JA1584	KETHAVATHU MANTHRU NAIK
22	18JA1914	POLEBOINA RAMESH
23	18JA0367	PRODDUTUR HASEEMUN
24	18JA0999	RANGAIAHGARI MADHU BABU
25	18JA2565	ATCHA JALAJA KOMALI
26	18JA1173	ATAGARA MAHESH KUMAR
27	18JA0182	MELUGAMMA RAVIKUMAR

The following are the details of syllabus and schedule for the Non-Faculty positions (Junior Technicians and Junior Assistants) advertised vide advt. No IIITDMKL/R/2/2018 dated 19th September 2018.

- Performance of Test 2 and Test 3 will be considered for preparing the merit list by the committee**.**

Date and Venue for Junior Technician and Junior Assistant Post(s):

Venue	**Date**	**Reporting Time**	**Examination Time(s)**
Seminar Hall IIITDM, Kurnool	24th August 2019	Reporting Time: 9.00am	Test 2: 24th August 2019 (10.00 – 12.00)
			Test 3: 24th August 2019 (2.00 – 3.30pm)

Note to all Candidates:

Test 2: Test 2 consists of 100 objective type questions. Each wrong answer carry negative mark.

Test 3 : Test 3 is a Practical skill test based on the syllabus listed for each post.

a) SYLLABUS FOR JUNIOR TECHNICIANS (Electronics and Communication Engineering) for both Test 2 and Test 3:

Basics of Circuits and Measurement Systems: Kirchoff's laws, mesh and nodal Analysis. Circuit theorems. One port and two-port Network Functions. Static and dynamic characteristics of Measurement Systems. Error and uncertainty analysis. Statistical analysis of data and curve fitting.

Analog Electronics: Basic working of transistors, diode, MOSFETS etc., energy bands in intrinsic and extrinsic silicon; Carrier transport: diffusion current, drift current, mobility and resistivity; generation and recombination of carriers; P-N junction, Zener diode, BJT, MOS capacitor, MOSFET, LED, photo diode, basic electronic circuits

Transducers, Mechanical Measurement and Industrial Instrumentation: Resistive, Capacitive, Inductive and piezoelectric transducers and their signal conditioning. Measurement of displacement, velocity and acceleration (translational and rotational), force, torque, vibration and shock. Measurement of pressure, flow, temperature and liquid level. Measurement of pH, conductivity, viscosity and humidity.

Electrical and Electronic Measurements: Bridges and potentiometers, measurement of R, L and C. Measurements of voltage, current, power, power factor and energy. A.C & D.C current probes. Extension of instrument ranges. Q-meter and waveform analyzer. Digital voltmeter and multi-meter. Time, phase and frequency measurements. Cathode ray oscilloscope. Serial and parallel communication. Shielding and grounding. Measurement of power (1 phase and 3 phase, both active and re-active) and energy, 2 wattmeter method of 3 phase power measurement. Measurement of frequency and phase angle. Ammeter and voltmeter (both moving oil and moving iron type), extension of range wattmeter, Multimeters, Megger, Energy meter AC Bridges. Use of CRO, Signal Generator, CT, PT and their uses. Earth Fault detection.

Digital Electronics: Boolean algebra, minimization of Boolean functions; logic gates; digital IC families (DTL, TTL, ECL, MOS, CMOS). Combinatorial circuits: arithmetic circuits, code converters, multiplexers, decoders, PROMs and PLAs. Sequential circuits: latches and flip-flops, counters and shift-registers. Sample and hold circuits, ADCs, DACs. Semiconductor memories. Microprocessor (8085): architecture, programming, memory and I/O interfacing

Signals and Systems: Definitions and properties of Laplace transform. Continuous-time and discrete-time Fourier series, continuous-time and discrete-time Fourier Transform, DFT and FFT, z-transform. Sampling theorem. Linear Time-Invariant (LTI) Systems: definitions and properties; causality, stability, impulse response, convolution, poles and zeros, parallel and cascade structure, frequency response, group delay, phase delay.

Control Systems: Basic control system components; block diagrammatic description, reduction of block diagrams. Open loop and closed loop (feedback) systems and

stability analysis of these systems. Signal flow graphs and their use in determining transfer functions of systems; transient and steady state analysis of LTI control systems and frequency response. Tools and techniques for LTI control system analysis: root loci, Routh-Hurwitz criterion, Bode and Nyquist plots. Control system compensators: elements of lead and lag compensation, elements of Proportional Integral-Derivative (PID) control. State variable representation and solution of state equation of LTI control systems.

Communications: Deterministic and Random signals, types of noise, Autocorrelation, power spectral density. Analog communication systems: amplitude and angle modulation and demodulation systems, spectral analysis of these operations, superheterodyne receivers; elements of hardware, realizations of analog communication systems; signal-to-noise ratio (SNR) calculations for amplitude modulation (AM) and frequency modulation (FM) for low noise conditions. Fundamentals of information theory and channel capacity theorem. Digital communication systems: pulse code modulation (PCM), differential pulse code modulation (DPCM), digital modulation schemes: amplitude, phase and frequency shift keying schemes (ASK, PSK, FSK), matched filter receivers, bandwidth consideration and probability of error calculations for these schemes. Basics of TDMA, FDMA and CDMA and GSM

Safety & Health: Introduction and Importance of Occupational Safety and Health

Occupational Hazards: Basic Hazards, Chemical Hazards, Vibroacoustic Hazards, Mechanical Hazards, Electrical Hazards, Thermal Hazards.

Occupational health, Occupational hygienic, Occupational Diseases/ Disorders & its prevention

Accident & safety: Basic principles for protective equipment, Accident Prevention techniques – control of accidents and safety measures • First Aid: Care of injured & Sick at the workplaces, First-Aid & Transportation of sick person • Basic Provisions: Idea of basic provision of safety, health, welfare under legislation of India Environment Education

Ecosystem: Introduction to Environment, Relationship between Society and Environment, Ecosystem and Factors causing imbalance • Pollution: Pollution and pollutants including liquid, gaseous, solid and hazardous waste • Energy Conservation: Conservation of Energy, re-use and recycle • Global warming: Global warming, climate change and Ozone layer depletion • Ground Water: Hydrological cycle, ground and surface water, Conservation and Harvesting of water • Environment: Right attitude towards environment, Maintenance of in-house environment

b) SYLLABUS FOR JUNIOR TECHNICIANS (MECHANICAL ENGINEERING) for Both Test 2 and Test 3:

Engineering Mechanics: Free body diagrams and equilibrium; kinematics and dynamics of particles and of rigid bodies in plane motion.
Strength of Materials: Stress and strain, stress-strain relationship and elastic constants, Mohr's circle for plane stress and plane strain; shear force and bending moment diagrams; torsion of circular shafts; thermal stresses.
Theory of Machines: Displacement, velocity and acceleration analysis of plane mechanisms; gear trains; Free and forced vibration of single degree of freedom systems; effect of damping.
Design: Design for static and dynamic loading; failure theories; fatigue strength and the S-N diagram.
Fluid Mechanics: Fluid properties; fluid statics, manometry, buoyancy; control-volume analysis of mass, momentum and energy; fluid acceleration; differential equations of continuity and momentum; Bernoulli's equation; viscous flow of incompressible fluids; flow through pipes, head losses in pipes, etc.
Heat-Transfer: Modes of heat transfer; one dimensional heat conduction, resistance concept, electrical analogy, dimensionless parameters in free and forced convective heat transfer, various correlations for heat transfer in flow over flat plates and through pipes; thermal boundary layer; heat exchanger performance, LMTD and NTU methods.
Thermodynamics: Zeroth, First and Second laws of thermodynamics; thermodynamic system and processes; Carnot cycle; behaviour of ideal and real gases, properties of pure substances, calculation of work and heat in ideal processes; Steam Tables, Rankine, Brayton cycles.
I.C. Engines: Fundamentals of IC Engines, Otto, Diesel cycles.
Refrigeration: Vapour refrigeration cycle, heat pumps, gas refrigeration, Reverse Brayton cycle.
Engineering Materials: Structure and properties of engineering materials, heat treatment, stress- strain diagrams for engineering materials.
Metal Casting: Design of patterns, moulds and cores; solidification and cooling; riser and gating design, design considerations.
Forming: Plastic deformation and yield criteria; fundamentals of hot and cold working processes; forging, rolling, extrusion, drawing and sheet (shearing, deep drawing, bending) metal forming processes; principles of powder metallurgy.
Joining: Physics of welding, brazing and soldering; adhesive bonding.
Machining and Machine Tool Operations: Mechanics of machining, single and multi-point cutting tools, tool geometry and materials, tool life and wear.
Metrology and Inspection: Limits, fits and tolerances; linear and angular measurements; form and finish measurement.
Computer Integrated Manufacturing: Basic concepts of CAD/CAM and their integration tools.

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c) **SYLLABUS FOR JUNIOR ASSISTANT for Both Test 2 and Test 3:**

Introduction to Computers: Computer and its applications, Hardware and peripherals, switching on and shutting down of computer, Basics of Operating systems, different types of operating systems,

Windows OS: Create, Copy, Move and delete Files and Folders, Use of External memory like pen drive, CD, DVD etc.

MS office: Basic operations of Word Processing (Cut /Copy /Paste/ Formatting), Basics of Excel worksheet (Commands/simple formulas and functions)

INTERNET: Computer Networks (LAN/WAN), Applications of Internet (Browsing, Searching, Emailing, Social Networking), World Wide Web (WWW), Web Browsing,

Information Security and antivirus tools, Awareness of IT – ACT, Importance of information security and IT act, types of cyber crimes.

Basic principles of Accountancy (cash book, bank operations, Vocuher preparation) , General Finance Rules (GFR)

Letter writing, preparation of presentation using power point.

Stores and purchase procedures, Ledger preparation, Audit report preparation

ICT in Higher Education, Knowledge of National Knowledge network, on line data sharing, principles of database and Managment Information Systems, Modren data analysis, Digitization of administartion, Governance, SWAYAM, MOOCS, Four quadrant for content development, Noting and drafting, Letter writing, other related syllabus for the post.

Features of Tally, PFMS, GeM software tools

Safety & Health: Introduction and Importance of Occupational Safety and Health

Occupational Hazards: Basic Hazards, Chemical Hazards, Vibroacoustic Hazards, Mechanical Hazards, Electrical Hazards, Thermal Hazards.

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