EC Call Letter List

M Tech. (Research), 2024 - 25

The following applicants have been selected for written exam and/or interview for the department of Electronics & Communication Engineering for M Tech. (Research) Programme. The applicants are requested to go through additional information provided in their Call letters.

#	Name	Reference Number	Branch/Specialisation
1	AALIM ANSARI	MTR2024VL0035	VLSI Design
2	VISHWA DEEPAK SINGH	MTR2024VL0036	VLSI Design
3	RITIK VERMA	MTR2024SP0017	Signal Processing and Machine Learning
4	RASHMI S	MTR2024SP0018	Signal Processing and Machine Learning
5	NIDUGURTHY SREEHARI RAO	MTR2024CN0007	Communication Engineering and Networks

Sd/-

Head Of Department
Electronics and Communication Engineering

Dean Academics

No.PG/2024-25/E6   Date: 08-11-2024

Admit Card

<u>To the Shortlisted Candidates:</u>

Sub: M Tech (R) Programme -Written Aptitude Test / Interview for the year 2024-25 (Winter Session).

With reference to your application for admission to the **M Tech (R) Programme in the Department of Electronics and Communication Engineering,** you are requested to appear for the written test/interview at NITK Surathkal. You should produce all the original records such as Date of Birth Certificate, Degree Marks Cards, SC/ST/OBC/EWS certificate (if applicable as per proforma), Person with disability certificate (if applicable), Sponsorship letter (if applicable) and Conduct Certificate during the interview.

Department	: Department of <u>Electronics and Communication Engineering</u>
Place of Reporting	: Department of <u>Electronics and Communication Engineering</u>
Written Test Date and Time	: November 26, 2024, 9:00 AM at ECE Depart.
Announcement of shortlisted candidates for interview	: November 26, 2024, 12:00 PM at ECE Depart.
Interview Date and Time	: November 26, 2024, 2:00 PM at Meeting Room, ECE Depart.

NOTE:
1. Candidates should be prepared to appear for the written Aptitude Test before the interview. Fee Structure for M.Tech(R) programme and Course syllabus for aptitude test are provided on Institute's website, i.e. www.nitk.ac.in. A copy of the syllabus for the aptitude test has been appended to this call letter.
2. Full-time/External Registrants - sponsored from Industry or other organizations, should have been serving in the sponsoring organisation for a period of **at least 2 years** after qualifying degree and have to produce a letter from their employer stating that the candidate is deputed for M.Tech / M.Tech (Research) in the Institute on full salary during the study period. The employer should indicate that the candidate will not be withdrawn midway before the completion of the course.
3. Your candidature for this test is provisional & is subject to your fulfilling the educational qualifications & other criteria prescribed for the programme as mentioned in the Information Brochure, failing which your candidature can be summarily rejected after verification/scrutiny at a later stage
4. Please keep the Admit Card ready during the test and interview. You are responsible for safe custody of the Admit Card and in the event of any other person using this Admit Card, the responsibility lies on you to prove that you have not used the service of an impersonator.
5. Please note that no expenses shall be payable for appearing in the written test/Interview.
6. The Selected candidates are required to pay fees and get admitted during the period from **9th to 13th Dec. 2024** by physically reporting at the Institute.

Sd/-
Head of the Department

Date: 08-11-2024

Syllabus for M. Tech. (Research) Aptitude Test- 2024

The test paper has two Parts: Part-1 is compulsory, and Part-2 is stream-specific modules. The candidate is supposed to attempt Module A or Module B or Module C from Part-2 depending on the candidature for a particular M. Tech(R) streams. Part-1 has 15 multiple choice type questions, whereas, each module of Part-2 has 15 multiple choice type questions. Each correct answer carries 1 mark and wrong answer carries -0.25 marks.

Note: Total duration of Exam is one hour. Calculator is permitted.

Part-1:

Linear Algebra, Calculus, Differential and Difference equations. Numerical methods, Transforms, Linear circuits and networks, Electronic components and Devices, Analog Electronics, Digital Electronics, Signals and Systems, Linear and Digital Control Theory.

Part-2:

Module-A (CEN Stream)

Electromagnetic Waves, Probability and Random Processes, Communication Theory, Communication Circuits, Transmission Lines, Wave Guides, Antennas, Microwave devices and Circuits, Data Communications, Communication Networks, Satellite Communication, Optical Communication, Fundamentals of Signal Processing.

Module-B (SPML stream)

SP Fundamentals: Time domain analysis of discrete-time systems - Basic discrete time signals, discrete-time Fourier Series, Z Transform – definition and properties, Discrete-time Fourier Series and its properties, Properties and applications of DTFT. Relationship between time, Z and frequency domains, DFT fundamentals and Properties of DFT, FIR and IIR filters.

Data Structure Fundamentals: Algorithm analysis, Asymptotic notations. Divide and Conquer algorithms, Analysis of divide and conquer algorithms, master method, examples - merge sort, quick sort, binary search, Data structures, Linked list, stacks and queues.

Module-C (VLSI Design)
Linear and Digital ICs, Digital System Design, VLSI Technology, CMOS VLSI, Mixed Signal Design, HDL, Data converters, Microprocessors, Computer Architecture and Organization, Logic Synthesis, DSP Architecture, Embedded Systems.

Sd/-
Head of the Department