

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL राष्ट्रीय प्रौद्योगिकी संस्थान कर्नाटक, सुरत्कल P.O SRINIVASNAGAR, MANGALORE - 575025

EC Call Letter List

PhD, 2025 - 26

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

#	Name	Reference Number	Branch/Specialisation
1	Dhanyashree	PH2025EC0001	Electronics and Communication Engineering
2	Saurabh Kumar Joshi	PH2025EC0002	Electronics and Communication Engineering
3	· SHREYA SRIVASTAVA	PH2025EC0004	Electronics and Communication Engineering
4	RAJASEKHAR ATLA	PH2025EC0005	Electronics and Communication Engineering
5	ASWATHY KRISHNAN B	PH2025EC0006	Electronics and Communication Engineering
6	RAJA RAMAN K	PH2025EC0007	Electronics and Communication Engineering
7	Morais Kimberly Gemina	PH2025EC0008	Electronics and Communication Engineering
8	INDLA VIDYASAGAR	PH2025EC0012	Electronics and Communication Engineering
9	Vindhya S	PH2025EC0013	Electronics and Communication Engineering

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NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL राष्ट्रीय प्रौद्योगिकी संस्थान कर्नाटक, सुरत्कल P.O SRINIVASNAGAR, MANGALORE - 575025

I	ris	EC Call Letter List PhD, 2025 - 26	
10 #	Dinesh Kumar Nali <b>Name</b>	Reference 0014 Number	Electronics and Communication Branch/Specialisation
11	DUDEKULA NAYABRASOOL	PH2025EC0015	Electronics and Communication Engineering
12	DUDEKULA NAYABRASOOL	PH2025EC0016	Electronics and Communication Engineering
13	KARVANNAN R	PH2025EC0017	Electronics and Communication Engineering
14	МАМАТНА Н	PH2025EC0020	Electronics and Communication Engineering
15	Praveen Hunasigidad	PH2025EC0022	Electronics and Communication Engineering
16	Abhinandana M Naik	PH2025EC0023	Electronics and Communication Engineering
17	Aditya Arora	PH2025EC0024	Electronics and Communication Engineering
18	S GANGADHAR	PH2025EC0025	Electronics and Communication Engineering
19	KIMAVATH VENU NAIK	PH2025EC0027	Electronics and Communication Engineering
20	KOILKONDA NITHIN	PH2025EC0028	Electronics and Communication Engineering
21	SHAIK HEENA KOUSAR	PH2025EC0029	Electronics and Communication Engineering

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Internet mental	NAT	ATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL राष्ट्रीय प्रौद्योगिकी संस्थान कर्नाटक, सुरत्कल P.O SRINIVASNAGAR, MANGALORE - 575025	
1	ris	<b>EC Call Letter List</b> PhD, 2025 - 26	
22 #	CHAITRA S Name	PH2025EC0030 Reference Number	Electronics and Communication Engineering Branch/Specialisation
23	ARCHAKAM AMARESWARA KUMAR	PH2025EC0031	Electronics and Communication Engineering
24	Ashwini	PH2025EC0033	Electronics and Communication Engineering
25	Tony C Thomas	PH2025EC0034	Electronics and Communication Engineering
26	Swetha Rani M	PH2025EC0035	Electronics and Communication Engineering
27	MAHAJAN MANASI AVADHOOT	PH2025EC0036	Electronics and Communication Engineering
28	Aniket chouhan	PH2025EC0037	Electronics and Communication Engineering
29	WADEKAR AMEYA ARVIND	PH2025EC0038	Electronics and Communication Engineering
30	jhansy enjapuri	PH2025EC0039	Electronics and Communication Engineering
31	Varshini N	PH2025EC0040	Electronics and Communication Engineering

M. Romohlin Head Of Department May 13, 2025 Electronics and Communication Engineering -अल/NITK Surathkal -11 - 575 026

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# DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

## NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA SURATHKAL

P.O. SRINIVASNAGAR, MANGALURU-575 025 Telephone: 0824-2473046, Website: www.ece.nitk.ac.in

Date: 09-05-2025

# Syllabus for PhD Programme Aptitude Test- May 2025

### Date and time for:

- Document verifications: May 28, 2025, 9:00 AM onwards
- Written Test: May 28, 2025, 2:00PM to 3:00PM.
- Interview: May 29, 2025, 9:00AM onwards

## Question Paper format: 20 MCQ types questions in 60 minutes, with distribution as below:

The Test paper has 2 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 research domain. Part-1 has 10 multiple choice type questions, whereas, each module of Part-2 has 10 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 (Communication domain)

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 (Signal Processing and Machine Learning domain)

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 domain)

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 Architectures, Embedded Systems.

Weightage of different academic components for evaluation (As per the information brochure):

Ph.D. 40% **Entrance** Test 5% Publication Experience 5% (Research/Academic (M.Tech ME) /Industries) **Technical Interview** 10% **Technical Presentation** (60%)O&A On Technical Presentation (Research Aptitude/ Technical knowledge/Subject 40% knowledge)

> Head of the Department Head of the Department

## NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA SURATHKAL P.O. SRINIVASNAGAR, MANGALURU-575 025

## No. PhD/2025-26/E6

## Date: 07-05-2025

## **Admit Card**

## Sub: Ph.D. Programme - Written Aptitude Test / Interview for the year 2025-26 (July Session)

With reference to your application for admission to Ph.D. 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, GATE Score Card, Degree Certificate and Marks Cards of all semesters (UG programme), if result of the final year exam is awaited then provide a certificate from the head of your institution which states that you are the final year student of (branch) appearing / appeared for the final year / semester examination during academic year 2024-25 and results are awaited, SC/ST/OBC/EWS certificate (if applicable as per proforma), OBC / EWS certificate should be obtained from competent authority as specified in the NITK website and must be dated on or after April 1, 2025, Person with disability certificate (if applicable), Sponsorship letter (if applicable), Conduct Certificate and valid photo identity card. Please keep a selfattested photocopy of all these certificates readily available at the time of interview.

Department	Department of Electronics and Communication Engineering		
Place of Reporting	Department of Electronics and Communication Engineering,		
	NITK Surathkal		
Document verification	May 28, 2025, 9:00AM onwards		
Written Test Date and Time	May 28, 2025, 2:00 PM at ECE Department		
Announcement of shortlisted candidates for interview	May 28, 2025, 5:00 PM		
Interview Date and Time	May 29, 2025, 9:00AM Onwards, Meeting room, ECE Department		

### NOTE:

- 1. Candidates should be prepared to appear for the written Aptitude Test before the interview. Fee Structure for PhD programme and Course syllabus for aptitude test are provided on Institute's website, i.e. <u>www.nitk.ac.in.</u> 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 including Educational Institutions, 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 Research Programme (Full time /External Registrant) 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. (Sponsorship letter should be in the format provided in the Application Form).
- 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 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 11<sup>th</sup> to 17<sup>th</sup> June, 2025 by physically reporting at the Institute.
- 7 Candidates must give 10-minute presentations of their research plans (not more than 6 slides). Email the presentation in PDF format to ecnitk@gmail.com on or before 27th May 2025

ाध्यापक एवं विभागवार्म / PROF & HEAD एवं सी. विभाग / Department of E & C एन.आई.टी.के. सुरत्वाल/NITK Surathkal मंगलूर / MANGALURU - 575 025