

Department of Information Technology
School of Technology
North-Eastern Hill University, Shillong- 793 022

Ph.D. in Information Technology Entrance Examination 2026

To select candidates amongst the applicants (List of applicants given in **Annexure-I**) for admission into the PhD (IT) programme for a limited number of seats, a written test (detailed syllabus is given in **Annexure-II**) of one hour duration (**total marks 50**) will be conducted, followed by a personal interview (PI). Merit list shall be prepared as per NEHU rules.

The decision of the admission committee in all matters shall be binding and final. Date, time, and venue of the written test as well as personal interview are as follows:

Date of Written Test and Interview	25 th August 2026
Time of written Test	10.30 AM – 11:30 PM
Time of interview	3:00 PM onwards
Venue	Department of Information Technology, School of Technology, NEHU, Shillong 793022
Reporting Time	9:30AM (at the venue) Document verification will start from 9:30 AM

In case, any candidate fails to report on the specified date and time mentioned above, she/he will forfeit her/his claim to appear for entrance examination and Interview. Please note that only the candidates who are eligible as per the advertisement shall be provisionally allowed to appear in Written Test and Personal Interview.

You are hereby informed to bring the following documents in **ORIGINAL** for verification failing which you will not be allowed to appear in the entrance test and personal interview:

1. Pass certificates of all board/council/University examinations starting from HSLC or equivalent.
2. Mark sheets/grade cards of all board/council/University examinations starting from HSLC or equivalent.
3. Documents to substantiate the grade conversion into percentage of marks for qualifying examination, if applicable.
4. Valid certificate for SC/ST issued by Deputy Commissioner (DC) or competent authority under the seal of DC's office only (for SC/ST candidates only).
5. Permanent Resident Certificate for those who claims the permanent resident of Meghalaya.
6. Date of Birth Certificate or HSLC certificate.
7. No Objection Certificate from Employer as per format approved by NEHU Authority (**In case of Employment**) (**As shown in Annexure-III**).
8. Valid GATE/NET score card, if any.
9. Printed copy of Application Form along with supporting documents.
10. Any other certificates in support of your application.

Annexure-I

List of applicants for Admission into Ph.D (IT) programme, 2026

Sl. No.	Application No	Name
1	NEHU260000339	LENNY NATHAN SIANGBUD
2	NEHU260000372	DAMINOT KHARDUIT
3	NEHU260000908	KUKIPRIYA KUTUM
4	NEHU260001251	MEBANTEI SALAHE
5	NEHU260001294	DIPANWITA KALITA
6	NEHU260001337	GUNJAN KUMAR RAY
7	NEHU260001513	GEETA SINGH
8	NEHU260001544	ANOWAR SAYEED
9	NEHU260001576	RISHAB RAJ

Annexure-II

The detailed syllabus of written test for PhD Entrance Examination-2026

Part-I

Marks : 25

(a) Research Methodology

Basic Concepts of Research Methodology, Pictorial representation of Ph.D., Learning outcome of Research, Development of Research Idea, How to give a good seminar presentation, PhD research proposal writing, How to study a Research paper, Selection of PhD thesis topic, Strategies for narrowing a research question, How to write a paper. Ethics & related issues in Research.

(b) Mathematical Tools

Algebra: Matrices, Rank of Matrix, Eigen Values and Eigen Vectors- Inverse of a Matrix, Laws of set theory, partitions, permutation and combination, Functions, Relations, properties of relations, closure operations on relation.

Number Theory: Divisibility, Greatest Common Divisor, Fundamental Theorem of Arithmetic, Modular Arithmetic, Arithmetic with a Prime Modulus.

Calculus: Limit and continuity, differentiability of functions, successive differentiation, integration and properties of definite integrals.

Mathematical Logic & Proofs: Truth table, principles of counting, recurrence relations, Sets, Relations, Propositional Logic and Predicate Logic, Proposition, Induction, Proof by Cases, Proof by Contradiction.

Probability & Statistics: Introduction to probability, Bayes theorem, random variables and probability distributions and density functions, binomial Poisson and normal distributions and their properties, correlation and regression, method of least squares, introduction to sampling and sampling distributions like Chi-square, t and F distributions, test of significance based on t, Chi-square and F distributions.

Part-II

Marks : 25

(a) Data Structure & Algorithm

Linear Data Structures- List, Stack, Queue, Non-linear Data Structure- Representation of Tree, Binary Trees, Tree traversals, Binary Search Tree, AVL Tree, Graphs, Sorting and Searching, Hashing, B & B+ Tree.

Classification of Algorithms, Complexity, Asymptotic Notations, Dynamic Programming, Greedy Algorithm, NP- Problems, Amortized Analysis, Master Theorem, Probabilistic Analysis: Sort, Search, Random Binary Search trees.

(b)Computer System & Programming

Programming in C, User Defined Functions and Library Functions, Local and Global Variables, Parameter Passing, Pointers, Arrays, Strings, C Preprocessors, Structures.

Number system, Boolean Expression, Instruction, Central Processing Unit, Memory, I/O devices.

Theory of Computation, Regular Grammars, Formal Grammars & Language, Turing Machines & Pushdown Automata

Process and threads, Mutual exclusion, Semaphores, Deadlock, Memory management requirements, Virtual memory, scheduling algorithms.

ISO/OSI Model, TCP/IP Model, Multiple access protocols, IEEE 802.X LANs and MANs- Ethernet, Token Ring, Token Bus, TCP and UDP.

The test paper shall be of multiple-choice type question (MCQ).

Annexure-III

Format for No-Objection Certificate from Employer in Official Letterhead

Ref No:

Date:

To
The Registrar,
North-Eastern Hill University
Mawkynroh-Umshing, Shillong-22

Sub: No objection certificate

Dear Sir/ Madam

It is hereby certified that Mr./Ms _____ has been working in this organization as _____ since _____.

This organization has no objection to his/her being admitted to the Ph.D. programme in Department of Information Technology, North-Eastern Hill University from the session starting on _____. He / She will be granted leaves as required for pursuing his/her PhD course, as per NEHU regulations.

Date:

Place:

Signature:

Name:

Designation

Seal of competent authority.