# Indian Institute of Information Technology Kalyani

## List of Candidates Shortlisted for PhD Admission Test/Interview (PhD Admission-Autumn 2023-2024)

Ref. Advt. No. IIITK/ACAD/PHD/23-24/35 dated: 30.05.2023 Date: 26.06.2023

Date of admission test and interview for **Physics and Mathematics**: **05.07.2023**
Date of admission test and interview for **CSE and ECE**: **12.07.2023**
Venue: IIIT Kalyani Campus (Webel IT Park, Kalyani)
Room: G03
Reporting time: 10:00 A.M.
Written test: 10:15 A.M. – 11:45 A.M.
Result publication: 12:45 P.M.
Interview: 1:30 P.M. onwards

List of candidates:

**Computer Science & Engineering (CSE)**

| Name | Status | Comments |
|---|---|---|
| ABHIMANYU CHATTERJEE | **Shortlisted** | |
| ABHINANDAN GHOSH | **Shortlisted** | |
| ABHISHEK DAS | **Shortlisted** | |
| ABRITI PAUL | **Shortlisted** | |
| DEBMITRA GHOSH | **Shortlisted** | |
| DIBYO | **Shortlisted** | |
| MOHIT KUMAR HALDER | **Shortlisted** | |
| NIBEDITA MITRA | **Shortlisted** | |
| PIYALI CHAKRABORTY | **Shortlisted** | |
| RATAN KUMAR MONDAL | **Shortlisted** | |
| SANCHAYAN BHAUMIK | **Shortlisted** | |
| SHREEA BOSE | **Shortlisted** | |
| SIDDHARTHA PRADHAN | **Shortlisted** | |
| SUMAN SOM | **Shortlisted** | |
| TANUSHREE PARMAR | **Shortlisted** | |
| TANUSHREE ROY | **Shortlisted** | |
| ATIKUL ISLAM | Rejected | XII Board cutoff |
| SHUVRAJIT NATH | Rejected | XII Board cutoff |
| UMESH PAL | Rejected | X Board cutoff |

**Electronics and Communication Engineering (ECE)**

| Name | Status | Comments |
|---|---|---|
| ABHISHEK SENGUPTA | **Shortlisted** | |

## Mathematics

| Name | Status | Comments |
|---|---|---|
| ABHINANDITA PAUL | **Shortlisted** | |
| KRISHNENDU BERA | **Shortlisted** | |
| SHANTANU MANDAL | **Shortlisted** | |
| ARITRAJIT ROY | Rejected | No GATE/NET |
| MEGHANIL SINHA | Rejected | Graduation cut off |

## Physics

| Name | Status | Comments |
|---|---|---|
| ARIJIT GHOSAL | **Shortlisted** | |

**Note:**

1. If any candidates is selected for both CSE and ECE, he/she will be allowed to appear for any one discipline.
2. Candidate should produce NOC from employer (for part-time category) if he/she has not submitted it with application form.
3. Candidate should bring original mark sheets, certificates and related documents.
4. Candidate should bring any photo ID card on the day of admission test and interview.

## Syllabus for Ph.D. Admission: written test (CSE)

Question Pattern: MCQ based problem solving (except English writing)

1. English writing and communication skill
2. Mathematics : Probability and statistics, Linear Algebra, Discrete Mathematics
3. C-Programming Skill
4. Data Structure and Algorithms
5. Formal Languages and Automata Theory
6. Operating Systems
7. Computer Organization and Architecture
8. Database Management System
9. Computer Networks

## Syllabus for Ph.D. Admission: written test (ECE)

Question Pattern: MCQ based problem solving (except English writing)

1. English writing and communication skill
2. Mathematics : Probability and statistics, Linear algebra, Differential calculus
3. C-Programming Skill
4. Analog and Digital Electronics
5. Solid State Device
6. Analog and Digital Communication
7. Circuit Theory
8. Theory of Linear Control Systems

## Syllabus for Ph.D. Admission: written test (Mathematics)

Question Pattern: MCQ based problem solving (except English writing)

1. English writing and communication skill
2. Mathematics: Elasticity, Linear Algebra, Linear Integral Equations, Ordinary Differential Equations, Partial Differential Equations.

**Elasticity:**

Analysis of strain and stress, strain and stress tensors; Geomatrical representation; Compatibility conditions; Strain energy function; Constitutive relations; Elastic solids Hookes law; Saint-Venant's principle, Equations of equilibrium; Plane problems-Airy's stress function, vibrations of elastic, cylindrical and spherical media.

**Linear Algebra:**

Finite dimensional vector spaces; Linear transformations and their matrix representations, rank; systems of linear equations, eigenvalues and eigenvectors, minimal polynomial, Cayley-Hamilton Theorem, diagonalization, Jordan-canonical form, Hermitian, Skew-Hermitian and unitary matrices; Finite dimensional inner product spaces, Gram-Schmidt orthonormalization process, self-adjoint operators, definite forms.

**Linear Integral Equations:**

Linear integral equation of the first and second kind of Fredholm and Volterra type, Solutions with separable kernels. Characteristic numbers and eigen functions, resolvent kernel.

**Ordinary Differential Equations:**

First order ordinary differential equations, existence and uniqueness theorems for initial value problems, systems of linear first order ordinary differential equations, linear ordinary differential equations of higher order with constant coefficients; linear second order ordinary differential equations with variable coefficients; method of Laplace transforms for solving ordinary differential equations, series solutions; Legendre and Bessel functions and their orthogonal properties.

**Partial Differential Equations:**

Linear and quasilinear first order partial differential equations, method of characteristics; second order linear equations in two variables and their classification; Cauchy, Dirichlet and Neumann problems; solutions of Laplace, wave in two dimensional Cartesian coordinates, Interior and exterior Dirichlet problems in polar coordinates; Separation of variables method for solving wave and diffusion equations in one space variable; Fourier series and Fourier transform and Laplace transform methods of solutions for the above equations.

## Syllabus for Ph.D. Admission: written test (Physics)

1. English writing and communication skill
2. Classical Mechanics
3. Thermodynamics & Statistical Physics

4. Atomic & Molecular Physics
5. Mathematical Methods in Physics
6. Space and Atmospheric Physics
7. Quantum Mechanics
8. Electromagnetic Theory
9. Solid State Physics
10. C-Programming Skill