GATE & PSU PREPARATION
AJAY BINAY INSTITUTE OF TECHNOLOGY, CUTTACK

About the Initiative

GATE, the Graduate Aptitude Test in Engineering, is a prestigious examination for engineers in India which provides options for both jobs in various PSUs as well as higher education. Ajay Binay Institute of Technology conducts GATE preparatory classes for 3rd and 4th-year students in hybrid (online & offline) mode.

Objective

The GATE Examination acts as a pathway to many public sector jobs, higher studies, and the Junior Research Fellowships programs.

1. The main objective of GATE preparation classes is to help students prepare for the GATE examination, which is an entrance exam for postgraduate engineering courses in India. These classes typically provide students with in-depth knowledge of the subjects covered in the GATE exam, as well as strategies and tips for preparing for and taking the exam.
2. It will help participants to perform in various competitive examinations like PSUs, IES, ISRO, DRDO, BARC, etc., and also to pursue a career in higher studies at IISc /IITs/ NITs/Fellowship at IIM/ NITIE, etc.
3. The main objective of PSU (Public Sector Undertaking) preparation classes is to help students prepare for the recruitment process for public sector companies in India. These classes typically provide students with an understanding of the recruitment process for PSUs, as well as guidance on how to prepare for the various stages of the recruitment process, including the written exam and interview.

Implementation Methods:

The learning process involves various combinations of the below-mentioned modules. Depending on the learning capacity and capability of the students, different combinations will be decided by the track members and reviewers.

1. **In Person Coaching classes**: These classes are specifically designed for students who are preparing for GATE or PSU exams and are looking for in-depth guidance and support. These classes usually include lectures, practice sessions, and mock tests to help students prepare for the exams.
2. **Online classes**: With the increasing popularity of online education, ABIT is now offering GATE and PSU preparation classes also through online platforms. These classes are convenient for students who cannot attend regular classes due to time or location constraints.
3. **Group study sessions**: ABIT offers group study sessions for GATE and PSU preparation, where students can come together and discuss concepts, practice questions, and share study materials. These sessions can be a great way for students to get feedback and support from their peers.
4. **Specialized workshops**: ABIT offers specialized workshops or seminars on specific topics related to GATE or PSU exams. These workshops can help students get a deeper understanding of the concepts and practice questions related to their field of study.

5. **Practice sessions**: Practice sessions are essential for students preparing for GATE or PSU exams. ABIT offers practice sessions where students attempt VST and get scores & feedback from experienced faculty members.

Selected Areas

Selected Areas for GATE and PSU Preparation are:-

- Electrical Engineering
- Mechanical Engineering
- Computer Science Engineering
- Electronics and Tele Communication Engineering
- Civil Engineering
- Master in Computer Application.

Expected Outcomes

The expected outcomes of GATE and PSU preparation classes for students at ABIT are as follows.

- Gain a strong understanding of the concepts and subject matter required for the exams, as well as develop effective study and test-taking skills. Students will be able to demonstrate their knowledge and skills through improved performance on practice exams and mock tests.
- Students may also benefit from networking and mentorship opportunities with faculty and alumni who have successfully navigated the GATE and PSU exam process.
- It will help students to achieve a high score on the GATE & PSU exams and secure a competitive position for employment with top-tier engineering companies or government organizations.

Participants

- The participants of GATE (Graduate Aptitude Test in Engineering) and PSU (Public Sector Undertaking) preparation classes at ABIT are likely to be engineering (3rd year and 4th year) & Masters students who are preparing to take the competitive exams for admission into postgraduate engineering programs or for employment in government-owned engineering companies.

Activities

- Lectures on various engineering subjects including Mathematics, Engineering & Management subjects relevant to the GATE and PSU exams.
- Practice sessions and mock tests to help students get a feel for the actual exam.
- Group discussions and review sessions to help students clarify their doubts and understand concepts better.
- Clarification sessions and personalized coaching as needed and guidance from experienced faculty members to help students overcome their weaknesses and improve their performance.

- Workshops and seminars on current affairs and general knowledge, which are important for the GATE and PSU exams.
- Mentorship programs and career guidance sessions to help students prepare for their professional careers after the exams.
- Online resources and study materials provided to students to help them prepare for the exams from the comfort of their homes.
- Online Test Series to provide a real-time exam experience to the aspirants.
- Hybrid (offline& online) mode of classes will be arranged for smooth preparation of courses.

Activity Calendar (Tentative)

Activity	**Time Line**
Group Enrolment	
Fundamental Knowledge Test (Online Test on Core Domain)	
Session – I (Course of 1st and 2nd Year Curriculum) • Subject-I • Subject-II • Subject-III • Subject-IV	
Unit Tests in Session-I (GATE Pattern)	
Session – I Main Test	
Session – II (Course of 3rd and 4th Year Curriculum) • Subject-V • Subject-VI • Subject-VII • Subject-VIII • Mathematics	
Unit Tests in Session-II (GATE Pattern)	
Session – II Main Test	

Support

- Teaching: Faculty from respective departments.
- Mentoring: Support from experienced GATE and PSU examiners or professors to provide guidance to students during these classes.
- Networking: Support from alumni (who have cleared GATE or PSU in the past) to guide the students.

Mentors

1. Dr. Satyajit Mohanty (Asst. Professor, Vellore Institute of Technology, Vellore, India)
2. Dr. Ritesh Dash (Asst. Professor, REVA University, Karnataka)

NOTICE

Date: 03.04.2021

Department of Electrical Engineering

It is hereby informed to all the students of the 5th semester Electrical Engineering that the Department will be conducting GATE & Competitive Preparatory Classes from 15th April 2021 onwards. Interested students are required to register their names through their respective proctors by 10th April 2021. The GATE Classes will be conducted on blended mode (Online and Physical Mode of Teaching).

The GATE classes will be conducted as per the following time table.

TENTATIVE SCHEDULE FOR GATE & COMPETITIVE PREPARATORY CLASSES			
PHASE-I			
Day	**Time**	**Subject**	**Faculty Assigned**
Mon	5.00 to 6.30 PM	Circuit Theory	Satyaranjan Das
Tue	5.00 to 6.30 PM	Electrical Measurements	Manjushree Mohapatra
Wed	5.00 to 6.30 PM	Electrical Machines-I	M. C. Bhanja Deo
Thu	5.00 to 6.30 PM	Network Theory	Shakti Prasad Mohanty
Fri	5.00 to 6.30 PM	Control Systems	Subhadra Behera
Sat	5.00 to 6.30 PM	Electrical Power System	Chandan Mandal
PHASE-II			
Day	**Time**	**Subject**	**Faculty Assigned**
Mon	5.00 to 6.30 PM	Power Electronics	Dr. P. K. Pani
Tue	5.00 to 6.30 PM	Electro Magnetic Theory	A. K. Mohapatra
Wed	5.00 to 6.30 PM	Electrical Machines-II	Prasantini Samal
Thu	5.00 to 6.30 PM	Engineering Mathematics	Bansidhar Panda
Fri	5.00 to 6.30 PM	Electronics (AEC, DEC)	Ch. Prasanjit Nanda
Sat	5.00 to 6.30 PM	Signals and Systems	Annapurna Sahoo

Copy to: Principal/Dean Academics/Dean Operations/Proctor/Concerned Faculty Members/Notice Board for kind information.

H.O.D
Department of Electrical Engineering
ABIT, Cuttack.

NOTICE

Date: 28.05.2022

Department of Electrical Engineering

It is hereby informed to all the students of the 5th semester Electrical Engineering that the Department will be conducting GATE & Competitive Preparatory Classes from 07th June 2022 onwards. Interested students are required to register their names through their respective proctors by 5th June 2022. The GATE Classes will be conducted on blended mode (Online and Physical Mode of Teaching).

The GATE classes will be conducted as per the following time table.

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H.O.D
Department of Electrical Engineering
ABIT, Cuttack.

GATE

PREPARATORY BATCH - 2022

ABIT
GATE & COMPETITIVE PREPARATION CELL INITIATIVES

Course Takeaways

- Subjectwise Preparation
- MOCK Tests
- VSTs
- Last 05 years GATE and PSUs Questions Discussion

For Details

Contact
Prof. D. Swain
09861283383

03.04.2021	10.04.2021	15.04.2021
REGN. OPEN	REGN. END	CLASS START

GATE

PREPARATORY BATCH - 2023

ABIT
GATE & COMPETITIVE PREPARATION CELL INITIATIVES

Course Takeaways

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For Details

Contact
Prof. D. Swain
09861283383

28.05.2022	05.06.2022	07.06.2022
REGN. OPEN	REGN. END	CLASS START

GATE CLASS ENROLLMENTS						
DEPARTMENT OF EE - 2018-2022 BATCH						
S.N	REGD. NO.	FIRST NAME	SURNAME	DOMAIN	EMAIL ID	PASSWORD
1	1801206004	ABINASH	NAYAK	abit.edu.in	180ele004@abit.edu.in	NAYAK.004Ee137
2	1801206005	ABINASH	SAMAL	abit.edu.in	180ele005@abit.edu.in	SAMAL.005Ee146
3	1801206011	AKASH	BEHERA	abit.edu.in	180ele011@abit.edu.in	BEHERA.011Ee155
4	1801206016	AMIT	BEHERA	abit.edu.in	180ele016@abit.edu.in	BEHERA.016Ee164
5	1801206019	AMIYA	SWAIN	abit.edu.in	180ele019@abit.edu.in	SWAIN.019Ee173
6	1801206023	ANIMESH	OJHA	abit.edu.in	180ele023@abit.edu.in	OJHA.023Ee182
7	1801206035	ASISH	PANDA	abit.edu.in	180ele035@abit.edu.in	PANDA.035Ee191
8	1801206037	BADAL	BEHERA	abit.edu.in	180ele037@abit.edu.in	BEHERA.037Ee200
9	1801206045	BIKASH	MALLICK	abit.edu.in	180ele045@abit.edu.in	MALLICK.045Ee209
10	1801206046	BINAYAK	SWAIN	abit.edu.in	180ele046@abit.edu.in	SWAIN.046Ee218
11	1801206063	DEBASIS	RATH	abit.edu.in	180ele063@abit.edu.in	RATH.063Ee227
12	1801206064	DEBENDRA	BEHERA	abit.edu.in	180ele064@abit.edu.in	BEHERA.064Ee236
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45	1921206070	SUBHAM	BEHERA	abit.edu.in	192ele070@abit.edu.in	BEHERA.070Ee533
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GATE CLASS ENROLLMENT						
DEPARTMENT OF EE - 2019-2023 BATCH						
S.N	**REGD. NO.**	**FIRST**	**NAME**	**DOMAIN**	**EMAIL ID**	**PASSWORD**
1	1901206139	AHKAM	KHAN	abit.edu.in	190ele139@abit.edu.in	KHAN.139Ee117
2	1901206140	AMARENDRA	OJHA	abit.edu.in	190ele140@abit.edu.in	OJHA.140Ee124
3	1901206141	AMRIT	PARIDA	abit.edu.in	190ele141@abit.edu.in	PARIDA.141Ee131
4	1901206142	ARGHYARUPA	PANDA	abit.edu.in	190ele142@abit.edu.in	PANDA.142Ee138
5	1901206143	ASHIS	BEHERA	abit.edu.in	190ele143@abit.edu.in	BEHERA.143Ee145
6	1901206144	BADAL	BHOI	abit.edu.in	190ele144@abit.edu.in	BHOI.144Ee152
7	1901206145	BARSHA	BADARA	abit.edu.in	190ele145@abit.edu.in	BADARA.145Ee159
8	1901206146	BEDANT	DAS	abit.edu.in	190ele146@abit.edu.in	DAS.146Ee166
9	1901206147	BHARGAV	JHA	abit.edu.in	190ele147@abit.edu.in	JHA.147Ee173
10	1901206148	BHOJAGENDRA	MOHANTA	abit.edu.in	190ele148@abit.edu.in	MOHANTA.148Ee180
11	1901206149	BISWAJIT	MOHANTY	abit.edu.in	190ele149@abit.edu.in	MOHANTY.149Ee187
12	1901206150	CHANDAN	LENKA	abit.edu.in	190ele150@abit.edu.in	LENKA.150Ee194
13	1901206152	CHANDRASEKHAR	SAHOO	abit.edu.in	190ele152@abit.edu.in	SAHOO.152Ee201
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15	1901206154	JATIN	MALLICK	abit.edu.in	190ele154@abit.edu.in	MALLICK.154Ee215
16	1901206155	JEEBANSAMRAT	SAMAL	abit.edu.in	190ele155@abit.edu.in	SAMAL.155Ee222
17	1901206156	MIRZAFAHIM	BAIG	abit.edu.in	190ele156@abit.edu.in	BAIG.156Ee229
18	1901206157	MONALISHA	MOHANTY	abit.edu.in	190ele157@abit.edu.in	MOHANTY.157Ee236
19	1901206158	MOUSUMI	MALLICK	abit.edu.in	190ele158@abit.edu.in	MALLICK.158Ee243
20	1901206159	NARESH	SWAIN	abit.edu.in	190ele159@abit.edu.in	SWAIN.159Ee250
21	1901206160	NIRANJAN	BEHERA	abit.edu.in	190ele160@abit.edu.in	BEHERA.160Ee257
22	1901206161	NIRANJAN	BEHERA	abit.edu.in	190ele161@abit.edu.in	BEHERA.161Ee264
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28	1901206168	SAMEER	BEHERA	abit.edu.in	190ele168@abit.edu.in	BEHERA.168Ee306
29	1901206169	SASWATI	PRIYADARSHINI	abit.edu.in	190ele169@abit.edu.in	PRIYADARSHINI.169Ee313
30	1901206170	SATYAJIT	SETHY	abit.edu.in	190ele170@abit.edu.in	SETHY.170Ee320
31	1901206171	SIDHANT	MALICK	abit.edu.in	190ele171@abit.edu.in	MALICK.171Ee327
32	1901206172	SIKHA	KHATUA	abit.edu.in	190ele172@abit.edu.in	KHATUA.172Ee334
33	1901206173	SIMRAN	SETHY	abit.edu.in	190ele173@abit.edu.in	SETHY.173Ee341
34	1901206174	SOUMYA	BEHERA	abit.edu.in	190ele174@abit.edu.in	BEHERA.174Ee348
35	1901206175	SUBHAKANTA	BEHERA	abit.edu.in	190ele175@abit.edu.in	BEHERA.175Ee355
36	1901206176	SUBHAMAYA	MALLICK	abit.edu.in	190ele176@abit.edu.in	MALLICK.176Ee362
37	1901206177	TAMASA	BISOI	abit.edu.in	190ele177@abit.edu.in	BISOI.177Ee369
38	1901206178	TAPAN	BEHERA	abit.edu.in	190ele178@abit.edu.in	BEHERA.178Ee376

Department of Electrical Engineering
Ajay Binay Institute of Technology, CDA, Sector-I, Cuttack

Dear Dr. Ritesh Das
Asst. Professor, REVA University, Karnataka, India.

I hope this letter finds you in good health and high spirits. I am writing this letter to request your kind support in mentoring our students for GATE and PSU preparation.

As you know, GATE and PSU exams are highly competitive and require thorough preparation and guidance. We believe that your expertise and experience in this field will greatly benefit our students and enhance their chances of success.

Our institution is committed to providing the best possible education and support to our students. We believe that your mentorship will greatly enhance our efforts and help our students achieve their academic and professional goals.

We would be honoured if you could spare some of your valuable time to mentor our students. Your guidance and mentorship would be highly appreciated and will help us achieve our objectives.

Please let us know if you are available and interested in mentoring our students.

Best regards,

Prof. Durgamadhab Swain

H.O.D
Dept. Of Electrical Engineering
ABIT, Cuttack.

Department of Electrical Engineering
Ajay Binay Institute of Technology, CDA, Sector-I, Cuttack

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Asst. Professor, Vellore Institute of Technology, Vellore, India

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Best regards,

Prof. Durgamadhab Swain

H.O.D
Dept. Of Electrical Engineering
ABIT, Cuttack.

EE:	Electrical Engineering

Section 1: Engineering Mathematics

Linear Algebra: Matrix Algebra, Systems of linear equations, Eigenvalues, Eigenvectors.

Calculus: Mean value theorems, Theorems of integral calculus, Evaluation of definite and improper integrals, Partial Derivatives, Maxima and minima, Multiple integrals, Fourier series, Vector identities, Directional derivatives, Line integral, Surface integral, Volume integral, Stokes's theorem, Gauss's theorem, Divergence theorem, Green's theorem.

Differential equations: First order equations (linear and nonlinear), Higher order linear differential equations with constant coefficients, Method of variation of parameters, Cauchy's equation, Euler's equation, Initial and boundary value problems, Partial Differential Equations, Method of separation of variables.

Complex variables: Analytic functions, Cauchy's integral theorem, Cauchy's integral formula, Taylor series, Laurent series, Residue theorem, Solution integrals.

Probability and Statistics: Sampling theorems, Conditional probability, Mean, Median, Mode, Standard Deviation, Random variables, Discrete and Continuous distributions, Poisson distribution, Normal distribution, Binomial distribution, Correlation analysis, Regression analysis.

Section 2: Electric circuits

Network elements: ideal voltage and current sources, dependent sources, R, L, C, M elements; Network solution methods: KCL, KVL, Node and Mesh analysis; Network Theorems: Thevenin's, Norton's, Superposition and Maximum Power Transfer theorem; Transient response of dc and ac networks, sinusoidal steady-state analysis, resonance, two port networks, balanced three phase circuits, star-delta transformation, complex power and power factor in ac circuits.

Section 3: Electromagnetic Fields

Coulomb's Law, Electric Field Intensity, Electric Flux Density, Gauss's Law, Divergence, Electric field and potential due to point, line, plane and spherical charge distributions, Effect of dielectric medium, Capacitance of simple configurations, Biot-Savart's law, Ampere's law, Curl, Faraday's law, Lorentz force, Inductance, Magnetomotive force, Reluctance, Magnetic circuits, Self and Mutual inductance of simple configurations.

Section 4: Signals and Systems

Representation of continuous and discrete time signals, shifting and scaling properties, linear time invariant and causal systems, Fourier series representation of continuous and discrete time periodic signals, sampling theorem, Applications of Fourier Transform for continuous and discrete time signals, Laplace Transform and Z transform.

Section 5: Electrical Machines

Single phase transformer: equivalent circuit, phasor diagram, open circuit and short circuit tests, regulation and efficiency; Three-phase transformers: connections, vector groups, parallel operation; Auto-transformer, Electromechanical energy conversion principles; DC machines: separately excited, series and shunt, motoring and generating mode of operation and their characteristics, speed control of dc motors; Three-phase induction machines: principle of operation, types, performance, torque-speed characteristics, no-load and blocked-rotor tests, equivalent circuit, starting and speed control; Operating principle of single-phase induction motors; Synchronous machines: cylindrical and salient pole machines, performance and characteristics, regulation and parallel operation of generators, starting of synchronous motors; Types of losses and efficiency calculations of electric machines

Section 6: Power Systems

Basic concepts of electrical power generation, ac and dc transmission concepts, Models and performance of transmission lines and cables, Series and shunt compensation, Electric field distribution and insulators, Distribution systems, Per-unit quantities, Bus admittance matrix, Gauss- Seidel and Newton-Raphson load flow methods, Voltage and Frequency control, Power factor correction, Symmetrical components, Symmetrical and unsymmetrical fault analysis, Principles of over-current, differential, directional and distance protection; Circuit breakers, System stability concepts, Equal area criterion, Economic Load Dispatch (with and without considering transmission losses).

Section 7: Control Systems

Mathematical modeling and representation of systems, Feedback principle, transfer function, Block diagrams and Signal flow graphs, Transient and Steady-state analysis of linear time invariant systems, Stability analysis using Routh-Hurwitz and Nyquist criteria, Bode plots, Root loci, Lag, Lead and Lead-Lag compensators; P, PI and PID controllers; State space model, Solution of state equations of LTI systems, R.M.S. value, average value calculation for any general periodic waveform.

Section 8: Electrical and Electronic Measurements

Bridges and Potentiometers, Measurement of voltage, current, power, energy and power factor; Instrument transformers, Digital voltmeters and multimeters, Phase, Time and Frequency measurement; Oscilloscopes, Error analysis.

Section 9: Analog and Digital Electronics

Simple diode circuits: clipping, clamping, rectifiers; Amplifiers: biasing, equivalent circuit and frequency response; oscillators and feedback amplifiers; operational amplifiers: characteristics and applications; single stage active filters, Sallen Key, Butterworth, VCOs and timers, combinatorial and sequential logic circuits, multiplexers, demultiplexers, Schmitt triggers, sample and hold circuits, A/D and D/A converters.

Section 10: Power Electronics

Static V-I characteristics and firing/gating circuits for Thyristor, MOSFET, IGBT; DC to DC conversion: Buck, Boost and Buck-Boost Converters; Single and three-phase configuration of uncontrolled rectifiers; Voltage and Current commutated Thyristor based converters; Bidirectional ac to dc voltage source converters; Magnitude and Phase of line current harmonics for uncontrolled and thyristor based converters; Power factor and Distortion Factor of ac to dc converters; Single-phase and three-phase voltage and current source inverters, sinusoidal pulse width modulation.

Lesson Plan
Subject: - Electric Circuits
Department of Electrical Engineering
ABIT, Cuttack.

Resource Person:-

1. **Prof. Satyaranjan Das (Dept. of Electrical Engineering)**
2. **Prof. Shakti Prasad Mohanty (Dept. of Electrical & Computer Engineering)**

Lesson Plan: GATE Preparatory Classes for Electric Circuit

Topic: Electric Circuit

Syllabus Coverage:

1. Network elements: ideal voltage and current sources, dependent sources, R, L, C, M elements
2. Network solution methods: KCL, KVL, Node and Mesh analysis
3. Network Theorems: Thevenin's, Norton's, Superposition and Maximum Power Transfer theorem
4. Transient response of dc and ac networks, sinusoidal steady-state analysis, resonance, two port networks
5. Balanced three phase circuits, star-delta transformation, complex power and power factor in ac circuits.

Duration: 12 Weeks

Week 1,2: Introduction and Network Elements

- Introduction to electric circuits, types of networks
- Network elements: ideal voltage and current sources, dependent sources
- R, L, C, M elements, their properties and applications in electric circuits
- Problem-solving exercises on network elements

Week 3,4: Network Solution Methods

- Kirchhoff's Laws: KCL and KVL, their applications in solving electric circuits
- Node analysis and mesh analysis, their applications and limitations
- Problem-solving exercises on network solution methods

Week 5,6: Network Theorems

- Thevenin's theorem: statement, proof, and its applications
- Norton's theorem: statement, proof, and its applications
- Superposition theorem: statement, proof, and its applications
- Maximum Power Transfer theorem: statement, proof, and its applications
- Problem-solving exercises on network theorems

Week 7,8: Transient Response of Electric Circuits

- Transient response of RC, RL, and RLC circuits

- Sinusoidal steady-state analysis: phasor representation, complex impedance, and admittance
- Resonance: series and parallel resonance circuits, quality factor, bandwidth
- Problem-solving exercises on transient response and steady-state analysis

Week 9,10: Two Port Networks

- Two port networks: properties and applications
- Analysis of two port networks: Z, Y, ABCD parameters
- Problem-solving exercises on two port networks

Week 11,12: Balanced Three-Phase Circuits

- Balanced three-phase systems: voltages, currents, and power
- Star-delta transformation and its applications
- Complex power and power factor in ac circuits
- Problem-solving exercises on balanced three-phase circuits and power calculations

Assessment:

- Monthly Test to assess understanding of the concepts covered.
- Mid-term examination to evaluate progress.
- Final examination to assess overall understanding and proficiency in electric circuit analysis

Note: The lesson plan is flexible and can be adapted as per the learning pace and requirements of the students.

Lesson Plan
Subject: - Electromagnetic Fields
Department of Electrical Engineering
ABIT, Cuttack.

Resource Person:-

1. **Prof. A. K. Mohapatra (Dept. of Electrical Engineering)**

Lesson Plan: GATE Preparation for Electromagnetism

Syllabus

Coulomb's Law, Electric Field Intensity, Electric Flux Density, Gauss's Law, Divergence, Electric field and potential due to point, line, plane and spherical charge distributions, Effect of dielectric medium, Capacitance of simple configurations, Biot-Savart's law, Ampere's law, Curl, Faraday's law, Lorentz force, Inductance, Magnetomotive force, Reluctance, Magnetic circuits, Self and Mutual inductance of simple configurations.

Duration: 20 Weeks

Week 1,2: Coulomb's Law and Electric Field Intensity

- Coulomb's Law and its mathematical expression
- Electric Field Intensity and its definition
- Relation between Coulomb's Law and Electric Field Intensity
- Calculation of Electric Field Intensity for point charges

Week 3,4: Electric Flux Density and Gauss's Law

- Definition of Electric Flux Density
- Gauss's Law and its mathematical expression
- Calculation of Electric Flux Density and Gauss's Law for simple charge configurations

Week 5,6: Electric Field and Potential due to Point Charge Distributions

- Calculation of Electric Field and Potential due to a point charge distribution
- Concept of equipotential surfaces
- Calculation of potential difference

Week 7,8: Electric Field and Potential due to Line, Plane, and Spherical Charge Distributions

- Calculation of Electric Field and Potential due to line, plane, and spherical charge distributions
- Application of Laplace's and Poisson's equations

Week 9,10: Effect of Dielectric Medium and Capacitance

- Concept of dielectric medium and its effect on electric fields
- Calculation of capacitance for simple configurations
- Calculation of energy stored in a capacitor

Week 11,12: Biot-Savart's Law and Ampere's Law

- Biot-Savart's Law and its mathematical expression
- Calculation of magnetic field intensity due to current carrying conductors
- Ampere's Law and its mathematical expression
- Calculation of magnetic field intensity for simple current configurations

Week 13,14: Curl and Faraday's Law

- Definition of Curl and its mathematical expression
- Faraday's Law and its mathematical expression
- Calculation of induced EMF and induced electric field

Week 15,16: Lorentz Force and Magnetic Fields

- Definition of Lorentz force and its mathematical expression
- Calculation of force on a charged particle in a magnetic field
- Calculation of magnetic field intensity due to a magnetic dipole

Week 17,18: Inductance and Magnetomotive Force

- Definition of inductance and its mathematical expression
- Calculation of inductance for simple configurations
- Definition of magnetomotive force and its mathematical expression

Week 19,20: Reluctance, Magnetic Circuits, and Mutual Inductance

- Concepts on Reluctance, Magnetic Circuits, and Mutual Inductance
- Problem discussion on Reluctance, Magnetic Circuits, and Mutual Inductance

Assessment:

- Monthly Test to assess understanding of the concepts covered.
- Mid-term examination to evaluate progress.
- Final examination to assess overall understanding and proficiency in electric circuit analysis

Note: The lesson plan is flexible and can be adapted as per the learning pace and requirements of the students.

Lesson Plan
Subject: - Signals and Systems
Department of Electrical Engineering
ABIT, Cuttack.

Resource Person:-

1. **Prof. A. Sahoo (Dept. of Electronics and Telecommunication)**

Lesson Plan: GATE Preparation for Signals and Systems.

Syllabus - The objective of this lesson plan is to provide a comprehensive understanding of the fundamental concepts of Signals and Systems, including representation of continuous and discrete-time signals, shifting and scaling properties, linear time-invariant and causal systems, Fourier series representation of continuous and discrete-time periodic signals, sampling theorem, applications of Fourier Transform for continuous and discrete-time signals, Laplace Transform, and Z-transform.

Duration: 22 Weeks

Week 1,2: Introduction to Signals and Systems

- Definition of Signals and Systems
- Classification of Signals and Systems
- Time-domain and Frequency-domain analysis

Week 3,4: Representation of Continuous-time Signals

- Continuous-time signals and their mathematical representation
- Properties of continuous-time signals: periodicity, even/odd signals, energy and power signals
- Shifting and scaling properties of continuous-time signals

Week 5,6: Representation of Discrete-time Signals

- Discrete-time signals and their mathematical representation
- Properties of discrete-time signals: periodicity, even/odd signals, energy and power signals
- Shifting and scaling properties of discrete-time signals

Week 7,8: Linear Time-Invariant Systems

- Definition of Linear Time-Invariant Systems (LTI)
- Properties of LTI systems: linearity, time-invariance, causality, stability
- Convolution operation and its properties

Week 9,10: Fourier Series Representation of Continuous-time Periodic Signals

- Fourier Series representation of continuous-time periodic signals
- Properties of Fourier Series: linearity, time-shifting, frequency-shifting, symmetry

Week 11,12: Fourier Series Representation of Discrete-time Periodic Signals

- Discrete-time Fourier Series representation of periodic signals
- Properties of Discrete-time Fourier Series: linearity, time-shifting, frequency-shifting, symmetry

Week 13,14: Fourier Transform for Continuous-time Signals

- Definition of Fourier Transform
- Properties of Fourier Transform: linearity, time-shifting, frequency-shifting, duality
- Applications of Fourier Transform for the analysis of continuous-time signals: spectrum analysis, filtering, modulation

Week 15,16: Fourier Transform for Discrete-time Signals

- Definition of Discrete-time Fourier Transform (DTFT)
- Properties of DTFT: linearity, time-shifting, frequency-shifting, duality
- Applications of DTFT for the analysis of discrete-time signals: spectrum analysis, filtering, modulation

Week 17,18: Sampling Theorem

- Sampling Theorem and its mathematical expression
- Reconstruction of continuous-time signals from their discrete-time samples
- Aliasing and its effects on signal reconstruction

Week 19,20: Laplace Transform

- Definition of Laplace Transform
- Properties of Laplace Transform: linearity, time-shifting, time-scaling, convolution
- Applications of Laplace Transform for the analysis of continuous-time signals and systems: stability, transfer function, impulse response

Week 21,22: Z-transform

- Definition of Z-transform
- Properties of Z-transform: linearity, time-shifting, time-scaling, convolution
- Applications of Z-transform for the analysis of discrete-time signals and systems: stability, transfer function, impulse response

Lesson Plan
Subject: - Electrical Machines
Department of Electrical Engineering
ABIT, Cuttack.

Resource Person:-

1. **Prof. M. C. Bhanja Deo (Dept. of Electrical Engineering)**
2. **Prof. Prasantini Samal (Dept. of Electrical & Computer Engineering)**

Lesson Plan: GATE Preparation for Electrical Machines.

Syllabus:- Single phase transformer: equivalent circuit, phasor diagram, open circuit and short circuit tests, regulation and efficiency; Three-phase transformers: connections, vector groups, parallel operation; Auto-transformer, Electromechanical energy conversion principles; DC machines: separately excited, series and shunt, motoring and generating mode of operation and their characteristics, speed control of dc motors; Three-phase induction machines: principle of operation, types, performance, torque-speed characteristics, no-load and blocked-rotor tests, equivalent circuit, starting and speed control; Operating principle of single-phase induction motors; Synchronous machines: cylindrical and salient pole machines, performance and characteristics, regulation and parallel operation of generators, starting of synchronous motors; Types of losses and efficiency calculations of electric machines

Duration: 24 Weeks

Week 1,2: Introduction to Electrical Machines

- Definition of Electrical Machines
- Classification of Electrical Machines
- Basic Principles of Electromechanical Energy Conversion

Week 3,4: Single-phase Transformer

- Construction and Working Principle of Single-phase Transformer
- Equivalent Circuit, Phasor Diagram, Open Circuit, and Short Circuit Tests
- Regulation and Efficiency of Single-phase Transformer

Week 5,6: Three-phase Transformers

- Construction and Working Principle of Three-phase Transformer
- Connections and Vector Groups
- Parallel Operation and Regulation of Three-phase Transformer

Week 7,8: Auto-transformer

- Construction and Working Principle of Auto-transformer

- Applications of Auto-transformer

Week 9,10: DC Machines

- Construction and Working Principle of DC machines
- Types of DC Machines: Separately Excited, Series and Shunt
- Motoring and Generating Mode of Operation and Their Characteristics

Week 11,12: Speed Control of DC Motors

- Speed Control Techniques for DC Motors: Armature Control, Field Control, and Ward-Leonard Control

Week 13,14: Three-phase Induction Machines

- Construction and Working Principle of Three-phase Induction Machines
- Types of Three-phase Induction Machines: Squirrel Cage and Wound Rotor
- Performance and Torque-speed Characteristics

Week 15,16: No-load and Blocked-rotor Tests

- No-load and Blocked-rotor Tests for Three-phase Induction Machines
- Equivalent Circuit of Three-phase Induction Machines

Week 17,18: Starting and Speed Control of Three-phase Induction Motors

- Starting Techniques for Three-phase Induction Motors: Direct On-line, Star-Delta, and Auto-transformer
- Speed Control Techniques for Three-phase Induction Motors: Stator Voltage Control, Rotor Resistance Control, and Frequency Control

Week 19,20: Operating Principle of Single-phase Induction Motors

- Construction and Working Principle of Single-phase Induction Motors
- Types of Single-phase Induction Motors: Split Phase, Capacitor Start, and Capacitor Start-Capacitor Run

Week 21,22: Synchronous Machines

- Construction and Working Principle of Synchronous Machines
- Types of Synchronous Machines: Cylindrical and Salient Pole Machines
- Performance and Characteristics
- Regulation and Parallel Operation of Generators
- Starting of Synchronous Motors

Week 23,24: Types of Losses and Efficiency Calculations of Electric Machines

- Types of Losses in Electrical Machines: Copper Loss, Iron Loss, and efficiency calculation and problem discussion.

Assessment:

- Monthly Test to assess understanding of the concepts covered.
- Mid-term examination to evaluate progress.
- Final examination to assess overall understanding and proficiency in electric circuit analysis

Lesson Plan
Subject: - Electrical Power Systems
Department of Electrical Engineering
ABIT, Cuttack.

Resource Person:-

1. **Prof. Chandan Mandal (Dept. of Electrical Engineering)**

Lesson Plan: GATE Preparation for Electrical Power Systems

Syllabus:-

Basic concepts of electrical power generation, ac and dc transmission concepts, Models and performance of transmission lines and cables, Series and shunt compensation, Electric field distribution and insulators, Distribution systems, Per-unit quantities, Bus admittance matrix, Gauss- Seidel and Newton-Raphson load flow methods, Voltage and Frequency control, Power factor correction, Symmetrical components, Symmetrical and unsymmetrical fault analysis, Principles of over-current, differential, directional and distance protection; Circuit breakers, System stability concepts, Equal area criterion, Economic Load Dispatch (with and without considering transmission losses).

Duration: 10 Weeks

Week 1,2: Basic Concepts of Electrical Power Generation and AC Transmission

- Introduction to power generation systems and their components
- Basic concepts of AC transmission lines and their models
- Transmission line parameters: resistance, inductance, capacitance and conductance
- Voltage regulation of transmission lines and power transfer capacity
- Power flow in transmission lines and compensation techniques: series and shunt compensation

Week 3,4: DC Transmission Concepts and Distribution Systems

- Basic concepts of DC transmission systems and their components
- Comparison between AC and DC transmission systems
- Types of DC transmission systems: bipolar and monopolar
- Distribution systems: radial, ring and meshed
- Voltage drop and power loss calculations in distribution systems

Week 5,6: Per-Unit Quantities and Load Flow Analysis

- Per-unit quantities and their importance in power system analysis
- Y-bus and Z-bus matrices and their formation
- Gauss-Seidel and Newton-Raphson load flow methods
- Voltage and frequency control techniques: reactive power compensation, tap-changing transformers and synchronous condensers
- Power factor correction techniques and their importance

Week 7,8: Fault Analysis and Protection Systems

- Fault analysis and types of faults: symmetrical and unsymmetrical faults
- Fault current calculation techniques and their applications
- Principles of over-current, differential, directional and distance protection
- Circuit breaker types and their characteristics
- Earthing and grounding systems

Week 9,10: Stability Analysis and Economic Load Dispatch

- System stability concepts and their importance
- Equal area criterion for transient stability analysis
- Economic Load Dispatch (ELD) and its importance
- ELD with and without considering transmission losses
- Energy management systems and their components

Assessment:

- Monthly Test to assess understanding of the concepts covered.
- Mid-term examination to evaluate progress.
- Final examination to assess overall understanding and proficiency in electric circuit analysis

Lesson Plan
Subject: - Electrical Control Systems
Department of Electrical Engineering
ABIT, Cuttack.

Resource Person:-

1. **Prof. Subhadra Behera (Dept. of Electrical Engineering)**

Lesson Plan: GATE Preparation for Electrical Control Systems

Syllabus:-

Mathematical modeling and representation of systems, Feedback principle, transfer function, Block diagrams and Signal flow graphs, Transient and Steady-state analysis of linear time invariant systems, Stability analysis using Routh-Hurwitz and Nyquist criteria, Bode plots, Root loci, Lag, Lead and Lead-Lag compensators; P, PI and PID controllers; State space model, Solution of state equations of LTI systems, R.M.S. value, average value calculation for any general periodic waveform.

Lesson Plan: Control Systems

Subject: Control Systems for GATE Preparation

Duration: 08 Weeks

Week 1,2: Mathematical Modeling and Feedback Principles

- Introduction to control systems and their applications
- Mathematical modeling of physical systems: mechanical, electrical and electromechanical systems
- Transfer function and its importance in control systems
- Block diagrams and signal flow graphs
- Feedback principle and its importance in control systems

Week 3,4: Transient and Steady-state Analysis of LTI Systems

- Response of a system to a step input and ramp input
- Analysis of first-order and second-order systems
- Steady-state error and its calculation for various inputs
- Effect of poles and zeros on the system response
- Frequency domain analysis using Laplace transform

Week 5,6: Stability Analysis and Compensation Techniques

- Stability analysis using Routh-Hurwitz and Nyquist criteria
- Bode plots and their importance in control systems
- Root loci and their applications
- Lag, lead and lead-lag compensators and their design

- P, PI and PID controllers and their design

Week 7,8: State Space Model and Periodic Waveform Analysis

- Introduction to state space modeling and its importance
- Solution of state equations of LTI systems
- R.M.S. value and average value calculation for any general periodic waveform
- Practical applications of control systems in industry and daily life

Assessment:

- Monthly Test to assess understanding of the concepts covered.
- Mid-term examination to evaluate progress.
- Final examination to assess overall understanding and proficiency in electric circuit analysis

Lesson Plan
Subject: - Electrical and Electronic Measurements
Department of Electrical Engineering
ABIT, Cuttack.

Resource Person:-

1. **Prof. Manjushree Mohapatra (Dept. of ECE)**

Lesson Plan: GATE Preparation for Electrical and Electronic Measurements

Syllabus:-

Bridges and Potentiometers, Measurement of voltage, current, power, energy and power factor; Instrument transformers, Digital voltmeters and multimeters, Phase, Time and Frequency measurement; Oscilloscopes, Error analysis.

Duration: 08 Weeks

Week 1,2: Basics of Measurement and Instrumentation

- Introduction to measurement systems
- Measurement units and standards
- Errors in measurements and their types
- Sensitivity, accuracy and precision of measuring instruments

Week 3,4: Measurement of Voltage, Current, Power, Energy and Power Factor

- Measurement of DC and AC voltages and currents
- Principles of power measurement using wattmeter and energy meter
- Measurement of power factor and reactive power
- Three-phase power measurement

Week 5,6: Instrument Transformers and Digital Meters

- Current and voltage transformers and their applications
- Digital voltmeters and multimeters and their types
- Principle and working of digital meters

Week 7,8: Phase, Time and Frequency Measurements, Oscilloscopes and Error Analysis

- Phase angle and time interval measurements
- Frequency measurement using different techniques
- Introduction to oscilloscopes and their types
- Error analysis and correction techniques

Assessment:

- Monthly Test to assess understanding of the concepts covered.
- Mid-term examination to evaluate progress.
- Final examination to assess overall understanding and proficiency in electric circuit analysis

Lesson Plan
Subject: - Power Electronics
Department of Electrical Engineering
ABIT, Cuttack.

Resource Person:-

1. **Dr. P. K. Pany (Dept. of Electrical Engineering)**

Lesson Plan: GATE Preparation for Power Electronics

Syllabus:-

Static V-I characteristics and firing/gating circuits for Thyristor, MOSFET, IGBT; DC to DC conversion: Buck, Boost and Buck-Boost Converters; Single and three-phase configuration of uncontrolled rectifiers; Voltage and Current commutated Thyristor based converters; Bidirectional ac to dc voltage source converters; Magnitude and Phase of line current harmonics for uncontrolled and thyristor based converters; Power factor and Distortion Factor of ac to dc converters; Single-phase and three-phase voltage and current source inverters, sinusoidal pulse width modulation.

Duration: 08 Weeks

Week 1,2: Thyristors and Firing Circuits
- Introduction to power electronic devices
- Thyristors: types, characteristics and applications
- Firing circuits for Thyristors, MOSFET and IGBT
- Triggering techniques for Thyristors

Week 3,4: DC-DC Converters
- Basic principle of DC-DC converters
- Buck, Boost and Buck-Boost converters
- Analysis and design of DC-DC converters
- Control methods for DC-DC converters

Week 5,6: AC-DC Converters
- Single-phase and three-phase uncontrolled rectifiers
- Voltage and current commutated Thyristor based converters
- Bidirectional ac to dc voltage source converters
- Harmonic analysis of uncontrolled and thyristor based converters

Week 7,8: DC-AC Converters
- Single-phase and three-phase voltage source inverters
- Pulse width modulation techniques for inverters
- Sinusoidal pulse width modulation
- Power factor and distortion factor of ac to dc converters

Assessment:

- Monthly Test to assess understanding of the concepts covered.
- Mid-term examination to evaluate progress.
- Final examination to assess overall understanding and proficiency in electric circuit analysis

Lesson Plan
Subject: - Analog and Digital Electronics
Department of Electrical Engineering
ABIT, Cuttack.

Resource Person:-

1. **Prof. Ch. Prasanjit Nanda (Dept. of Electronics & Telecimmunication)**

Lesson Plan: GATE Preparation for Analog and Digital Electronics

Syllabus:-

Simple diode circuits: clipping, clamping, rectifiers; Amplifiers: biasing, equivalent circuit and frequency response; oscillators and feedback amplifiers; operational amplifiers: characteristics and applications; single stage active filters, Sallen Key, Butterworth, VCOs and timers, combinatorial and sequential logic circuits, multiplexers, demultiplexers, Schmitt triggers, sample and hold circuits, A/D and D/A converters.

Duration – 10 Weeks
Week 1,2: Diode circuits

- Introduction to diode circuits and their applications
- Types of diodes: ideal and real diodes, Zener diodes, light emitting diodes (LEDs)
- Clipping circuits: positive and negative clipper circuits, voltage doubler circuits
- Clamping circuits: positive and negative clamper circuits, voltage multiplier circuits
- Rectifiers: half-wave and full-wave rectifiers, center-tapped and bridge rectifiers
- Diode peak detector and capacitor filter circuits
- Practice problems and quizzes

Week 3,4: Amplifiers

- Introduction to amplifiers: types of amplifiers, transistor basics, amplifier parameters
- Biasing techniques: fixed bias, emitter bias, voltage divider bias, bias stability, thermal runaway
- Small signal equivalent circuit and frequency response of amplifiers
- Common emitter, common collector and common base amplifiers
- Feedback amplifiers: positive and negative feedback, feedback topologies
- Practice problems and quizzes

Week 5,6: Oscillators and operational amplifiers

- Introduction to oscillators: types of oscillators, Barkhausen criterion, Hartley, Colpitts and crystal oscillators
- Feedback amplifier: theory and characteristics of ideal and real operational amplifiers
- Inverting and non-inverting amplifier circuits
- Voltage follower, adder, subtractor and integrator circuits using op-amps
- Practice problems and quizzes

Week 7,8: Active filters and logic circuits

- Single stage active filters: low-pass, high-pass, band-pass and band-reject filters
- Second order active filters: Sallen Key and Butterworth filters
- Voltage-controlled oscillators (VCOs) and timers: astable and monostable multivibrators
- Combinatorial logic circuits: AND, OR, NOT, NAND and NOR gates, Boolean algebra
- Sequential logic circuits: flip-flops, shift registers, counters
- Multiplexers, demultiplexers and Schmitt triggers
- Practice problems and quizzes

Week 9,10: A/D and D/A converters

- Analog to digital converters (ADCs): types of ADCs, sampling theorem, quantization error
- Digital to analog converters (DACs): types of DACs, binary and weighted resistor DACs
- Practice problems and quizzes
- Review and practice sessions for the entire syllabus

Assessment:

- Monthly Test to assess understanding of the concepts covered.
- Mid-term examination to evaluate progress.
- Final examination to assess overall understanding and proficiency in electric circuit analysis

Lesson Plan
Subject: - Engineering Mathematics
Department of Electrical Engineering
ABIT, Cuttack.

Resource Person:-

1. **Prof. Bansidhar Panda (Dept. of Mathematics)**

Lesson Plan: GATE Preparation for Engineering Mathematics

Lesson Plan Title: GATE Preparation - Mathematics

Subject Coverage: Linear Algebra, Calculus, Differential Equations, Complex Variables, Probability and Statistics

Grade Level: Undergraduate/Graduate

Duration: 15 weeks (45 hours of instruction)

Week 1: Linear Algebra - Matrix Algebra, Systems of linear equations

- Introduction to matrices and operations on matrices
- Types of matrices: Square, Rectangular, Identity, Diagonal, Upper Triangular, Lower Triangular, Symmetric, Skew-Symmetric, Orthogonal, Unitary
- System of linear equations: Gaussian Elimination, LU decomposition, Gauss-Jordan method
- Matrix Inverse: Properties of Inverse, Inverse of a matrix using Gauss-Jordan method

Week 2: Linear Algebra - Eigenvalues and Eigenvectors

- Introduction to Eigenvalues and Eigenvectors
- Calculation of Eigenvalues and Eigenvectors
- Properties of Eigenvalues and Eigenvectors
- Diagonalization of a matrix

Week 3-4: Calculus - Mean value theorems, Theorems of integral calculus, Evaluation of definite and improper integrals, Partial Derivatives, Maxima and minima, Multiple integrals

- Mean value theorem, Rolle's theorem, and Intermediate value theorem
- Fundamental Theorem of Calculus
- Evaluation of definite and improper integrals
- Partial Derivatives, Chain rule, Directional derivative, Gradient, Divergence, and Curl
- Maxima and Minima: First-order necessary conditions, Second-order sufficient conditions, constrained optimization
- Multiple Integrals: Double integrals, Triple integrals, Change of variables

Week 5-6: Calculus - Fourier series, Vector identities, Directional derivatives, Line integral, Surface integral, Volume integral, Stokes's theorem, Gauss's theorem, Divergence theorem, Green's theorem

- Fourier Series: Fourier coefficients, Convergence of Fourier series
- Vector Identities: Vector dot product, Vector cross product, Triple scalar product, Vector triple product
- Line Integral, Surface Integral, Volume Integral
- Theorems of Green, Gauss, and Stokes
- Application of Theorems: Work-Energy theorem, Gauss's Law, Stoke's Law

Week 7-8: Differential equations - First order equations (linear and nonlinear), Higher order linear differential equations with constant coefficients, Method of variation of parameters, Cauchy's equation, Euler's equation, Initial and boundary value problems

- First Order Differential Equations: Separable Equations, Linear Equations, Exact Equations
- Higher Order Linear Differential Equations with Constant Coefficients: Homogeneous Equations, Non-Homogeneous Equations
- Method of Variation of Parameters
- Cauchy's Equation and Euler's Equation
- Initial and Boundary Value Problems: Solution by Laplace transform, Power series

Week 9-10: Differential equations - Partial Differential Equations, Method of separation of variables

- Classification of Partial Differential Equations: Elliptic, Parabolic, Hyperbolic
- Solution of Partial Differential Equations: Method of separation of variables
- Examples of Partial Differential Equations: Heat Equation, Wave Equation, Laplace Equation

Week 11-12: Complex Variables - Analytic functions, Cauchy's integral theorem, Cauchy's integral formula, Taylor series, Laurent series, Residue theorem, Solution integrals

- Analytic Functions: Definition, Cauchy-Riemann Equations
- Cauchy's Integral Theorem and Cauchy's Integral Formula
- Power Series and Taylor Series
- Laurent Series and Residue Theorem
- Evaluation of Integrals using Residue Theorem

Week 13-14: Probability and Statistics -

Assessment:

- Monthly Test to assess understanding of the concepts covered.
- Mid-term examination to evaluate progress.
- Final examination to assess overall understanding and proficiency in electric circuit analysis

Announce something to your class

Dr. Prasanta Kumar Pani posted a new question: Attendance, 09/12/21
Dec 9, 2021

Dr. Prasanta Kumar Pani posted a new question: Attendance, 02/12/2021
Dec 2, 2021

Dr. Prasanta Kumar Pani posted a new question: Attendance, 18/11/2021
Nov 18, 2021

Chandan Mandal posted a new assignment: GATE PREPARATION ASSESSME...
Nov 1, 2021

Dr. Prasanta Kumar Pani posted a new question: Attendance, 28/10/21
Oct 28, 2021

GATE PREPARATORY CLASS
EE+EEE

Stream Classwork People Grades

Dr. Prasanta Kumar Pani posted a new question: Attendance, 23/9/21
Sep 23, 2021

Chandan Mandal
Sep 20, 2021

GATE-POWER SYSTEM-CM
Monday, September 20 · 6:00 – 7:00pm
Google Meet joining info
Video call link: https://meet.google.com/sdz-xozz-ftv
Or dial: (US) +1 218-301-2737 PIN: 529 496 661#

Add class comment...

Dr. Prasanta Kumar Pani posted a new question: Attendance, 16/9/21
Sep 16, 2021

Chandan Mandal
Sep 13, 2021

GATE-PS-CM
Monday, September 13 · 6:00 – 7:00pm
Google Meet joining info
Video call link: https://meet.google.com/sdz-xozz-ftv
Or dial: (US) +1 218-301-2737 PIN: 529 496 661#

Add class comment...

SatyaDas posted a new assignment: GAT-II-CIRCUIT THEORY
Aug 5, 2021

Elel3rdyear coordinator posted a new assignment: GAT-I-ELECTRICAL MAC...

GATE PREPARATORY CLASS
EE+EEE

Stream Classwork People Grades

Manjushree Mohapatra posted a new assignment: GATE ASSESSMENT-1(EEM)
Jul 13, 2021

Manjushree Mohapatra
Jul 13, 2021

GATE ASSESSMENT TEST-1 FOR EEM WILL START AT 6 PM
TIME- 1 HR 30 MINS
INSTRUCTIONS- ALL THE QUESTIONS ARE COMPULSORY & DESCRIPTIVE
PROVIDE EXPLANATION FOR MCQ AND COMPLETE SOLUTION FOR NUMERICAL PROBLEMS

PDF GATE ASSESMENT-1 (1)....

Add class comment...

SatyaDas posted a new assignment: GATE ASSESSMENT TEST-I
Jul 5, 2021

Subhadra Behera
Jun 11, 2021

GATE-CSE-SB
Friday, June 11 · 6:00 – 7:00pm
Google Meet joining info
Video call link: https://meet.google.com/pgw-yror-vjv
Or dial: (US) +1 413-679-2801 PIN: 450 002 337#

Add class comment...

Elel3rdyear coordinator
Apr 17, 2021 (Edited Apr 17, 2021)

https://docs.google.com/spreadsheets/d/1gmuF78ue3ac3GAFu5sb4I4gHVT9Khk7TyY4wr2lb0ng/edit#gid=0

Add class comment...

Elel3rdyear coordinator
Apr 12, 2021

GATE-BEE-SRD
Monday, April 12 · 6:00 – 7:00pm
Google Meet joining info
Video call link: https://meet.google.com/ovt-dpzf-vcs
Or dial: (US) +1 413-752-4130 PIN: 730 031 717#

Add class comment...

Shakti Prasad Mohanty posted a new question: are you present?
Apr 10, 2021

1 class comment

Elel3rdyear coordinator
Apr 10, 2021

GATE-BEE-SPM
Saturday, April 10 · 6:00 – 7:00pm
Google Meet joining info
Video call link: https://meet.google.com/ovt-dpzf-vcs
Or dial: (US) +1 413-752-4130 PIN: 730 031 717#

Add class comment...

ATTENDANCE SAMPLE
GATE & COMPETITIVE CLASSES
DEPARTMENT OF ELECTRICAL ENGINEERING
SUBJECT – ELECTRICAL CIRCUIT- I
FACULTY – SATYARANJAN DAS

DATE		12-04-2021	19-04-2021	26-04-2021	03-05-2021	10-05-2021	17-05-2021	26-05-2021	07-06-2021	21-06-2021	28-06-2021	05-07-2021	12-07-2021	19-07-2021	26-07-2021	02-08-2021	09-08-2021	16-08-2021
S.N.	NAME OF THE STUDENT	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
1	ABINASH NAYAK	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
2	AKASH BEHERA	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
3	AMIT KU.BEHERA	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
4	DEBASIS RATH	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
5	DIBYA JIBAN PRADHAN	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
6	HARSHITA PRIYADARSHINI	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
7	SAROJ KUMAR ROUT	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
8	ABINASH RATH	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
9	ANURADHA RANA	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
10	RUBY SAHOO	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
11	SANGHAMITRA PANDA	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
12	MAHESH KUMAR NAYAK	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
13	PRABIN KUMAR MOHARANA	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
14	HRUSHIKESH MAJHI	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
15	PRATYUSHA MOHANTY	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
16	PUSPANJALI BEHERA	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p

Organising Institute
Indian Institute of Technology Bombay

GATE 2021 Scorecard

Graduate Aptitude Test in Engineering (GATE)

GATE 2021 GRADUATE APTITUDE TEST IN ENGINEERING

Candidate's Details

Name

SUBHASIS MISHRA

Parent's / Guardian's Name

KAPIL CHANDRA MISHRA

Registration Number

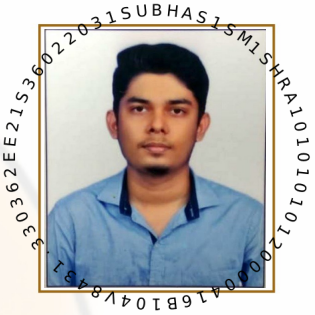
EE21S36022031

Date of Birth

16-Apr-2000

Examination Paper

Electrical Engineering (EE)



Subhasis Mishra

(Candidate's Signature)

Performance

GATE Score	362		
Marks out of 100*	31.33		
Qualifying Marks**	30.3 (General)	27.2 (EWS/OBC (NCL))	20.2 (SC/ST/PwD)

Number of Candidates Appeared in this paper	87559
All India Rank in this paper	10966

Valid up to 31st March 2024

* Normalized marks for Civil Engineering (CE), Computer Science and Information Technology (CS) and Mechanical Engineering (ME) Papers.

** A candidate is considered qualified if the marks secured are greater than or equal to the qualifying marks mentioned for the category for which valid category certificate, if applicable, is produced along with this scorecard.

19th March 2021

Prof. Deepankar Choudhury
Organising Chairperson, GATE 2021
(on behalf of NCB - GATE, for MoE)

d13a6de86635ec85a3b2112e33b70d3e

The GATE 2021 score is calculated using the formula

$$GATE\ Score = S_q + (S_t - S_q)\frac{(M - M_q)}{(\overline{M}_t - M_q)}$$

where,
M is the marks obtained by the candidate in the paper, mentioned on this GATE 2021 scorecard
M_q is the qualifying marks for general category candidate in the paper
$\overline{M}_t$ is the mean of marks of top 0.1% or top 10 (whichever is larger) of the candidates who appeared in the paper (in case of multi-session papers including all sessions)
S_q = 350, is the score assigned to M_q
S_t = 900, is the score assigned to $\overline{M}_t$

In the GATE 2021 score formula, M_q is 25 marks (out of 100) or $\mu + \sigma$, whichever is greater. Here μ is the mean and σ is the standard deviation of marks of all the candidates who appeared in the paper.

Qualifying in GATE 2021 does not guarantee either an admission to a post-graduate program or a scholarship/assistantship. Admitting institutes may conduct further tests and interviews for final selection.

Codes for XE and XL Paper Sections (compulsory section and any other two sections)

XE: Engineering Sciences
A − Engineering Mathematics (compulsory)
B − Fluid Mechanics
C − Materials Science
D − Solid Mechanics
E − Thermodynamics
F − Polymer Science and Engineering
G − Food Technology
H − Atmospheric and Oceanic Sciences

XL: Life Sciences
P − Chemistry (compulsory)
Q − Biochemistry
R − Botany
S − Microbiology
T − Zoology
U − Food Technology

Graduate Aptitude Test in Engineering (GATE) 2021 was organized by Indian Institute of Technology Bombay on behalf of the National Coordination Board (NCB) - GATE for the Department of Higher Education, Ministry of Education (MoE), Government of India.

GATE 2022 Scorecard

Graduate Aptitude Test in Engineering (GATE)

अभियांत्रिकी स्नातक अभिक्षमता परीक्षा

Name of Candidate	SUBHASIS MISHRA
Parent's/Guardian's Name	KAPIL CHANDRA MISHRA
Registration Number	EE22S26419030
Date of Birth	16-Apr-2000
Examination Paper	Electrical Engineering (EE)

Subhasis Mishra

GATE Score:	471	Marks out of 100:	42		
All India Rank in this paper:	4748	Qualifying Marks*	General	EWS/OBC (NCL)	SC/ST/PwD
Number of Candidates Appeared in this paper:	69734		30.7	27.6	20.4

Valid up to 31st March 2025

Prof. Ranjan Bhattacharyya

Organising Chairman, GATE 2022

on behalf of NCB–GATE, for MoE

e0b761fbbb105a607b0ea69b6e814b5d

** A candidate is considered qualified if the marks secured are greater than or equal to the qualifying marks mentioned for the category for which valid category certificate, if applicable, is produced along with this score card.*

Organising Institute: Indian Institute of Technology Kharagpur

General Information

The GATE 2022 score is calculated using the formula

$$\text{GATE Score} = S_q + (S_t - S_q)\frac{(M - M_q)}{(M_t - M_q)}$$

where,

M is the marks obtained by the candidate in the paper, mentioned on this GATE 2022 scorecard

$\mathbf{M}_q$ is the qualifying marks for general category candidate in the paper

$\mathbf{M}_t$ is the mean of marks of top 0.1% or top 10 (whichever is larger) of the candidates who appeared in the paper (in case of multi-session papers including all sessions)

$\mathbf{S}_q = 350$, is the score assigned to $\mathbf{M}_q$

$\mathbf{S}_t = 900$, is the score assigned to $\mathbf{M}_t$

In the GATE 2022 score formula, $\mathbf{M}_q$ is 25 marks (out of 100) or $\mu + \sigma$, whichever is greater. Here μ is the mean and σ is the standard deviation of marks of all the candidates who appeared in the paper.

Qualifying in GATE 2022 does not guarantee either an admission to a post-graduate program or a scholarship/assistantship. Admitting institutes may conduct further tests and interviews for final selection.

Graduate Aptitude Test in Engineering (GATE) 2022 was organized by Indian Institute of Technology Kharagpur on behalf of the National Coordination Board (NCB) – GATE for the Department of Higher Education, Ministry of Education (MoE), Government of India.

GATE 2022 Result [EE]

Name

AMIT KUMAR BEHERA

Registration Number

EE22S26420037

Gender

Male

Amit Kumar Behera

Parent's/Guardian's name

SMRUTI REKHA MUDULI

Date of birth

20-January-2000

Examination Paper

Electrical Engineering (EE)

Marks out of 100#	20.67			All India Rank in this paper	19255
Qualifying Marks##	30.7 (General)	27.6 (OBC (NCL)/EWS)	20.4 (SC/ST/PwD)	GATE Score	243