



IIT-JEE (JOINT ENTRANCE EXAMINATION)

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Introduction

The Indian Institutes of Technology are institutions of national importance established through an Act of Parliament. These Institutes play a leading role in technological manpower development and have research programmes comparable to the best in the world. The admissions to the Undergraduate Programmes for all Indian and Foreign nationals at these institutions are made through the Joint Entrance Examination (JEE).

Institute of Technology- Banaras Hindu University, Varanasi is one of the oldest institutions devoted to education in various engineering disciplines. Indian School of Mines, Dhanbad, a deemed university, is the oldest institution of its kind in India. The admissions to the Undergraduate Programmes at these institutions are also made through JEE.

All these institutions are known for providing quality education in science and technology and for research in frontier areas. The environment at these institutions is highly conducive for

- Building a solid foundation of knowledge,
- Development of personality,
- Confidence building,
- Pursuit of excellence and self-discipline,
- Enhancement of creativity through motivation and drive, which helps to prepare

for the professional and social life.

Today, alumni of these institutions occupy key positions in industry and academia in India and abroad.

Each Institute has well-equipped modern laboratories, a state-of-the-art library, and computer networks. The selected candidates live in a pleasant and intellectually stimulating environment. The teaching methods rely on direct personal contact between the teacher and the students. Living in such an environment with people having similar goals and aspirations is an exciting experience during one's academic life.

Credit-based academic programmes offer flexibility to progress at a student's own pace. A minimum level of performance is necessary for satisfactory progress. The medium of instruction is English. These institutions offer courses leading to Bachelor's degree in a number of engineering, technological and scientific disciplines.

M.Sc. Integrated courses in pure and applied sciences and M.Tech. Integrated courses in a few disciplines are also offered by some of these Institutes. In addition, some IITs offer Dual Degree M.Tech. programmes wherein both B.Tech. and M.Tech. degrees are awarded at the end of the programme.

Pattern for JEE-2006

Question Papers

The examination will consist of three separate papers in Physics, Mathematics and Chemistry, each of two hours duration. The questions in these papers will be of objective type, which are to be answered on the specially designed machine-gradable sheet using HB pencils only. **Incorrect answers will be awarded negative marks.**

Language of Question Papers

Candidates can opt for Question Papers either in English or in Hindi. The option should be exercised while filling the application form. It cannot be changed at any stage later.

Use of Calculators and Log Tables

Use of calculators and log tables is **NOT permitted.**

Aptitude Test for B. Arch. and B. Des.

Candidates called for counselling and desirous of joining the B. Arch. and B. Des. Courses will be required to qualify in an Aptitude Test to be conducted at each counselling Institute on **June 23, 2006**. The test will be of two hours duration from 10.00 a.m. to 12.00 Noon. Candidates who fail to qualify in the Aptitude Test will not be eligible for admission to either B. Arch. or B. Des. Courses.

Reservation of Seats

SC/ST Candidates

15% and 7.5% seats in each course are reserved for candidates belonging to SC and ST categories, respectively. Candidates belonging to these categories are admitted on the basis of relaxed criteria (compared to GE/DS category candidates). In case all the reserved seats are not filled, a further relaxation is made in the admission criteria and a limited number of candidates are admitted to a Preparatory Course of one-year duration. This course attempts to prepare the students in Physics, Mathematics, and Chemistry. On successful completion of the course, the students will be offered direct admission to the undergraduate programmes in July 2007 against the unfilled reserved seats for JEE-2006.

SC and ST candidates will be required to produce the original caste/tribe certificate issued by a competent authority (list given in Appendix-II) **at the time of counselling**, failing which they will not be considered for admission. Seats remaining vacant in these categories shall not be filled by candidates belonging to any other category.

Persons with Disabilities (PD)

3% seats are reserved for PD (including leprosy-cured) candidates, as specified by the Government of India, who are otherwise fit to pursue the course and qualify JEE with relaxed norms relevant to this category. For any category of disability (viz., locomotor, visual, speech and hearing), benefit would be given to those candidates who have at least 40% permanent physical impairment in relation to a body part / system / extremity / extremities / whole body, etc.

The candidates in this category will be required to be certified by a Medical Board. The Medical Board will decide the following:

- Whether the candidate qualifies for the benefits under this category, and
- If the disability is likely to interfere in his/her studies.

The Medical Board duly constituted for this purpose shall meet at the time of counselling at IIT Delhi on **June 19, 2006 at 3.00 p.m.** Candidates, who are not certified by the Medical Board as PD, will not be counselled under this category.

The decision of the Medical Board shall be held final.

Preferential Allotment of Seats

Two seats are available for preferential allotment of courses in each Institute for children of defence/paramilitary personnel killed or permanently disabled in action during war or peacetime operations (DS category). To avail this preferential allotment, candidates must qualify in the General Category and produce the relevant certificate in original issued by a competent authority in the Directorate of Resettlement and Rehabilitation, New Delhi (under the Ministry of Defence, Govt. of India) or in the Ministry of Home Affairs, Govt. of India, as applicable, **at the time of counselling.**

Eligibility Criteria

Qualifying Examination

Candidates applying for JEE-2006 should have either completed or appearing in 2006 in any one of the following qualifying examinations :

- The final examination of the 10+2 system, conducted by any recognized Central/State Board, such as Central Board of Secondary Education, New Delhi; Council for Indian School Certificate Examination, New Delhi; etc.;
- Intermediate or two-year Pre-University Examination conducted by a recognized Board/ University.
- Final Examination of the two-year course of the Joint Services Wing of the National Defence Academy.
- General Certificate Education (GCE) Examination (London/Cambridge/Sri Lanka) at the Advanced (A) level.
- High School Certificate Examination of the Cambridge University.
- Any Public School/Board/University Examination in India or in any foreign country recognized by the Association of Indian Universities as equivalent to 10+2 system.
- H.S.C. Vocational Examination.
- Senior Secondary School Examination conducted by the National Open School with a minimum of five subjects.
- 3 or 4-year Diploma recognized by AICTE or a State Board of Technical Education.

In case the relevant qualifying examination is not a public examination, the candidate must have passed at least one public (Board or Pre-University) examination at an earlier level.

Eligibility Criteria for Candidates appearing in qualifying examination in 2006

(i) The candidates belonging to the general category must secure a minimum of 60% marks in aggregate in their Qualifying Examination. Candidates belonging to SC, ST and PD categories must secure a minimum of 55% in aggregate in the Qualifying Examination. If any Board awards only letter grades without providing an equivalent percentage of marks on the grade sheet, the candidate should obtain a certificate from the

Board specifying equivalent marks, and submit it at the time of counselling. In case, such a certificate is not provided by the candidate, the decision of the Joint Implementation Committee regarding his/her eligibility shall be held final.

(ii) With effect from 2006, a candidate is allowed only two attempts to write JEE. Furthermore, he/she is allowed to write JEE only in the year in which he/she passes the qualifying examination and/or in the following year.

(iii) **Candidates, who join any of the IITs, IT-BHU Varanasi and ISM Dhanbad through JEE-2006, will not be permitted to appear in JEE in future.**

One-Time Exception

Candidates, who have passed their Qualifying Examination in 2005 or earlier, will be permitted to appear in JEE-2006, **as a last chance**, irrespective of the marks secured in the Qualifying Examination, or the number of earlier attempts at JEE, subject to their satisfying age limit criteria specified in section 8.5. This exception is also applicable to those candidates who are currently registered in any of the IITs, IT-BHU, Varanasi, and ISM, Dhanbad.

Important Notes

(i) Those candidates who will be appearing in the qualifying examination in 2007 or later are not eligible to apply for JEE-2006.

(ii) All provisional admissions to candidates who are appearing in the qualifying examination in the year 2006 will stand cancelled, if the proof of having passed the Qualifying Examination, as per the eligibility criteria specified in section 8.2, is not submitted to the concerned Institute latest by **September 30, 2006**.

(iii) All admissions will be subject to verification of facts from the original certificates/documents of the candidates. If an applicant is found ineligible at a later date even after admission to an Institute, his/her admission will be cancelled. The decision of the Joint Admission Board regarding the eligibility of any applicant shall be final.

Date of Birth

Only those candidates, whose date of birth falls on or after **October 01, 1981**, are eligible for JEE-2006. However, in the case of SC, ST and PD candidates, upper age limit is relaxed by 5 years, i.e., SC, ST and PD candidates, who were born on or after **October 01, 1976**, are eligible. Only the date of birth as recorded in the High School/first Board/Pre-University Certificate will be taken as authentic. Candidates must produce this certificate in original as a proof of their age at the time of counselling, failing which they will be disqualified.

Physical Fitness

All qualified candidates will have to submit a Physical Fitness certificate from a Registered Medical Practitioner in the prescribed format that will be made available to them at an appropriate time. They will be admitted only if they are physically fit for pursuing a course of study at the participating Institutes.

Special Requirements for Mining Engineering and Mining Machinery Courses

Candidates opting for these courses should make sure that they are free from colour blindness. They will be required to submit a certificate from a Registered Medical Practitioner to this effect at the time of counselling. The standard of visual acuity with or without glasses will be adhered strictly for candidates seeking admission in Mining as per

DGMS Circular 14 of 1972. Persons with one-eyed vision are not permitted to work underground. Candidates with above limitations are not allowed to opt for admission to Mining Engineering or Mining Machinery Engineering.

Women Candidates for Mining Courses

Section 46 (1) of the Mines Act, 1952 states that “No woman shall, notwithstanding anything contained in any other law, be employed (a) in any part of a mine which is below ground, (b) in any mine above ground except between the hours 6 a.m. and 7 p.m.”. Women candidates are not admitted to Mining Engineering and Mining Machinery Engineering at ISM Dhanbad, whereas the corresponding programmes at IIT Kharagpur and IT-BHU, Varanasi have no such restriction.

Admit Cards

The Admit Card for the examination will be sent by Registered Post/Speed Post only to those eligible candidates who have submitted the Application Form, complete in all respects, **on or before 17:00 hours on January 06, 2006**. The Institutes will not be responsible for any postal delay or irregularity resulting in non-delivery of the Admit Card. **No duplicate Admit Card will be issued.**

The Admit Card will bear the name, photograph, signature, date of birth, address, language of Question Paper, and category of the candidate along with name and address of the JEE Centre allotted. The candidate should carefully examine the Admit Card received by him/her for all the entries made therein. In case of any discrepancy, the candidate should inform the issuing Institute immediately. If the Admit Card is not received by **March 20, 2006**, the candidate should obtain his/her Registration Number and Examination Centre from the Institute of his/her zone through phone (IVRS)/Website. On receiving these data, the candidate should write his/her Name, Application No., Registration No. and Examination Centre on two identical halves of an A4-size paper. He/she should then affix a photograph and put signature (as given in the Application Form) on each of them. The candidate should get the photographs and the signatures attested by the Head of the Institution last attended/gazetted officer/notary public, and meet the IIT Representative with this paper on **April 09, 2006** in the office of the Presiding Officer at the Examination Centre. The candidate must bring the Acknowledgement Card for the receipt of his/her Application Form.

Impersonation is a legally punishable offence. No applicant will normally be permitted to write the examination without a valid Admit Card. The admit card should be presented to the invigilators for verification. The candidate’s identity will be verified in respect of his/her details on the admit card/centre verification record. If the identity is in doubt, the candidate may not be allowed to appear in the examination. The authorities may at their discretion permit the candidate to appear for the examination after completing formalities including taking of thumb impression. No extra time will be allowed for these formalities to be completed.

Since the successful candidates are required to produce the Admit Card at the time of counselling and admission, it should be carefully preserved till the admission through JEE-2006 is completed

Merit List

Ranking

Based on the cut-off marks in the individual subjects as well as aggregate marks in the Examination, a common merit list will be prepared without any relaxed criteria. In addition, separate merit lists of candidates belonging to SC, ST, and PD categories will be prepared with different relaxed norms relevant to their categories. While preparing these merit lists, if a candidate belongs to more than one category of relaxed norms, he/she shall be considered only in the category in which he/she gets the maximum benefit. There will not be any separate list of wait-listed candidates.

Tie Breaking

Tie breaking criterion adopted for awarding ranks to the candidates who have scored same aggregate marks is as follows:

For each subject, the mean marks will be calculated on the basis of marks obtained by those candidates who have appeared in all three subjects. A candidate will be ranked higher, if he/she has scored higher marks in the subject having the lowest mean marks. If two or more candidates score the same marks in the above mentioned subject, then the marks of the subject with second lowest mean marks will be used for breaking the tie. Candidates scoring the same marks in all three subjects will be given the same rank.

Regrading and Retotalling

Since the machine-gradable sheets are graded and scrutinized with extreme care, there is no provision for regrading and retotalling. No photocopies of the machine-gradable sheets will be made available. No correspondence in this regard will be entertained

Counselling

Candidates qualified for counselling will be informed of their All India Ranks (AIR) by post and will be called for counselling in order of their AIR. A candidate can also obtain this information on the website, IVRS or by calling the JEE office from where he/she received the admit card, one day after the declaration of the results of JEE-2006. In case a qualified candidate does not receive the counselling letter, the candidate must still appear for counselling on the dates specified on the back cover of this brochure at the Institute from where he/she had received the admit card. The counselling brochure will also be made available on the website.

Counselling is not meant for instant seat-allocation at these Institutes. During counselling, candidates are helped in exercising their options for courses and Institutes. Seat allocation is made centrally on a later date on the basis of AIR-cum-choices exercised by the candidates. Each candidate will be counselled only once as per the schedule.

The dates for counselling (that is, verification of documents and submission of choice sheets for courses and Institutes) are given on the back cover. During counselling, various documents for verifying identity, age, marks sheet of qualifying examination, and category, should be brought, **all in original with two photocopies of each**. On failing to establish the authenticity of any one of the above documents, the candidate will not be considered for admission.

In addition, the candidates must bring a physical fitness certificate from a Registered Medical Practitioner in a format that will be made available to them at an appropriate time.

Performance Cards

The performance cards will be sent to all candidates. The performance card of the examination cannot be used by any person/institution without prior permission of Joint Admission Board (JAB) of JEE-2006

SYLLABUS:

Physics

General: Units and dimensions, dimensional analysis; least count, significant figures; Methods of measurement and error analysis for physical quantities pertaining to the following experiments: Experiments based on using vernier calipers and screw gauge (micrometer), Determination of g using simple pendulum, Young's modulus by Searle's method, Specific heat of a liquid using calorimeter, focal length of a concave mirror and a convex lens using $u-v$ method, Speed of sound using resonance column, Verification of Ohm's law using voltmeter and ammeter, and specific resistance of the material of a wire using meter bridge and post office box.

Mechanics: Kinematics in one and two dimensions (Cartesian coordinates only), projectiles; Uniform Circular motion; Relative velocity.

Newton's laws of motion; Inertial and uniformly accelerated frames of reference; Static and dynamic friction; Kinetic and potential energy; Work and power; Conservation of linear momentum and mechanical energy.

Systems of particles; Centre of mass and its motion; Impulse; Elastic and inelastic collisions.

Law of gravitation; Gravitational potential and field; Acceleration due to gravity; Motion of planets and satellites in circular orbits; Escape velocity.

Rigid body, moment of inertia, parallel and perpendicular axes theorems, moment of inertia of uniform bodies with simple geometrical shapes; Angular momentum; Torque; Conservation of angular momentum; Dynamics of rigid bodies with fixed axis of rotation; Rolling without slipping of rings, cylinders and spheres; Equilibrium of rigid bodies; Collision of point masses with rigid bodies.

Linear and angular simple harmonic motions.

Hooke's law, Young's modulus.

Pressure in a fluid; Pascal's law; Buoyancy; Surface energy and surface tension, capillary rise; Viscosity (Poiseuille's equation excluded), Stoke's law; Terminal velocity, Streamline flow, equation of continuity, Bernoulli's theorem and its applications.

Wave motion (plane waves only), longitudinal and transverse waves, superposition of waves; Progressive and stationary waves; Vibration of strings and air columns; Resonance; Beats; Speed of sound in gases; Doppler effect (in sound).

Thermal physics: Thermal expansion of solids, liquids and gases; Calorimetry, latent heat; Heat conduction in one dimension; Elementary concepts of convection and radiation; Newton's law of cooling; Ideal gas laws; Specific heats (C_v and C_p for monoatomic and diatomic gases); Isothermal and adiabatic processes, bulk modulus of gases; Equivalence of heat and work; First law of thermodynamics and its applications (only for ideal gases). Blackbody radiation: absorptive and emissive powers; Kirchhoff's law; Wien's displacement law, Stefan's law.

Electricity and magnetism: Coulomb's law; Electric field and potential; Electrical potential energy of a system of point charges and of electrical dipoles in a uniform electrostatic field; Electric field lines; Flux of electric field; Gauss's law and its

application in simple cases, such as, to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell. Capacitance; Parallel plate capacitor with and without dielectrics; Capacitors in series and parallel; Energy stored in a capacitor.

Electric current; Ohm's law; Series and parallel arrangements of resistances and cells; Kirchhoff's laws and simple applications; Heating effect of current.

Biot-Savart's law and Ampere's law; Magnetic field near a current-carrying straight wire, along the axis of a circular coil and inside a long straight solenoid; Force on a moving charge and on a current-carrying wire in a uniform magnetic field.

Magnetic moment of a current loop; Effect of a uniform magnetic field on a current loop; Moving coil galvanometer, voltmeter, ammeter and their conversions.

Electromagnetic induction: Faraday's law, Lenz's law; Self and mutual inductance; RC, LR and LC circuits with d.c. and a.c. sources.

Optics: Rectilinear propagation of light; Reflection and refraction at plane and spherical surfaces; Total internal reflection; Deviation and dispersion of light by a prism; Thin lenses; Combinations of mirrors and thin lenses; Magnification.

Wave nature of light: Huygen's principle, interference limited to Young's double-slit experiment.

Modern physics: Atomic nucleus; Alpha, beta and gamma radiations; Law of radioactive decay; Decay constant; Half-life and mean life; Binding energy and its calculation; Fission and fusion processes; Energy calculation in these processes.

Photoelectric effect; Bohr's theory of hydrogen-like atoms; Characteristic and continuous X-rays, Moseley's law; de Broglie wavelength of matter waves.

Mathematics

Algebra: Algebra of complex numbers, addition, multiplication, conjugation, polar representation, properties of modulus and principal argument, triangle inequality, cube roots of unity, geometric interpretations.

Quadratic equations with real coefficients, relations between roots and coefficients, formation of quadratic equations with given roots, symmetric functions of roots.

Arithmetic, geometric and harmonic progressions, arithmetic, geometric and harmonic means, sums of finite arithmetic and geometric progressions, infinite geometric series, sums of squares and cubes of the first n natural numbers.

Logarithms and their properties.

Permutations and combinations, Binomial theorem for a positive integral index, properties of binomial coefficients.

Matrices as a rectangular array of real numbers, equality of matrices, addition, multiplication by a scalar and product of matrices, transpose of a matrix, determinant of a square matrix of order up to three, inverse of a square matrix of order up to three, properties of these matrix operations, diagonal, symmetric and skew-symmetric matrices and their properties, solutions of simultaneous linear equations in two or three variables.

Addition and multiplication rules of probability, conditional probability, Bayes Theorem, independence of events, computation of probability of events using permutations and combinations.

Trigonometry: Trigonometric functions, their periodicity and graphs, addition and subtraction formulae, formulae involving multiple and sub-multiple angles, general solution of trigonometric equations.

Relations between sides and angles of a triangle, sine rule, cosine rule, half-angle formula and the area of a triangle, inverse trigonometric functions (principal value only).

Analytical geometry

Two dimensions: Cartesian coordinates, distance between two points, section formulae, shift of origin.

Equation of a straight line in various forms, angle between two lines, distance of a point from a line; Lines through the point of intersection of two given lines, equation of the bisector of the angle between two lines, concurrency of lines; Centroid, orthocentre, incentre and circumcentre of a triangle.

Equation of a circle in various forms, equations of tangent, normal and chord.

Parametric equations of a circle, intersection of a circle with a straight line or a circle, equation of a circle through the points of intersection of two circles and those of a circle and a straight line.

Equations of a parabola, ellipse and hyperbola in standard form, their foci, directrices and eccentricity, parametric equations, equations of tangent and normal.

Locus Problems.

Three dimensions: Direction cosines and direction ratios, equation of a straight line in space, equation of a plane, distance of a point from a plane.

Differential calculus: Real valued functions of a real variable, into, onto and one-to-one functions, sum, difference, product and quotient of two functions, composite functions, absolute value, polynomial, rational, trigonometric, exponential and logarithmic functions.

Limit and continuity of a function, limit and continuity of the sum, difference, product and quotient of two functions, L'Hospital's rule of evaluation of limits of functions.

Even and odd functions, inverse of a function, continuity of composite functions, intermediate value property of continuous functions.

Derivative of a function, derivative of the sum, difference, product and quotient of two functions, chain rule, derivatives of polynomial, rational, trigonometric, inverse trigonometric, exponential and logarithmic functions.

Derivatives of implicit functions, derivatives up to order two, geometrical interpretation of the derivative, tangents and normals, increasing and decreasing functions, maximum and minimum values of a function, Rolle's Theorem and Lagrange's Mean Value Theorem.

Integral calculus: Integration as the inverse process of differentiation, indefinite integrals of standard functions, definite integrals and their properties, Fundamental Theorems of Integral Calculus.

Integration by parts, integration by the methods of substitution and partial fractions, application of definite integrals to the determination of areas involving simple curves.

Formation of ordinary differential equations, solution of homogeneous differential equations, separation of variables method, linear first order differential equations.

Vectors: Addition of vectors, scalar multiplication, dot and cross products, scalar triple products and their geometrical interpretations.

Mathematics

Algebra: Algebra of complex numbers, addition, multiplication, conjugation, polar representation, properties of modulus and principal argument, triangle inequality, cube roots of unity, geometric interpretations.

Quadratic equations with real coefficients, relations between roots and coefficients, formation of quadratic equations with given roots, symmetric functions of roots.

Arithmetic, geometric and harmonic progressions, arithmetic, geometric and harmonic means, sums of finite arithmetic and geometric progressions, infinite geometric series, sums of squares and cubes of the first n natural numbers.

Logarithms and their properties.

Permutations and combinations, Binomial theorem for a positive integral index, properties of binomial coefficients.

Matrices as a rectangular array of real numbers, equality of matrices, addition, multiplication by a scalar and product of matrices, transpose of a matrix, determinant of a square matrix of order up to three, inverse of a square matrix of order up to three, properties of these matrix operations, diagonal, symmetric and skew-symmetric matrices and their properties, solutions of simultaneous linear equations in two or three variables. Addition and multiplication rules of probability, conditional probability, Bayes Theorem, independence of events, computation of probability of events using permutations and combinations.

Trigonometry: Trigonometric functions, their periodicity and graphs, addition and subtraction formulae, formulae involving multiple and sub-multiple angles, general solution of trigonometric equations.

Relations between sides and angles of a triangle, sine rule, cosine rule, half-angle formula and the area of a triangle, inverse trigonometric functions (principal value only).

Analytical geometry

Two dimensions: Cartesian coordinates, distance between two points, section formulae, shift of origin.

Equation of a straight line in various forms, angle between two lines, distance of a point from a line; Lines through the point of intersection of two given lines, equation of the bisector of the angle between two lines, concurrency of lines; Centroid, orthocentre, incentre and circumcentre of a triangle.

Equation of a circle in various forms, equations of tangent, normal and chord.

Parametric equations of a circle, intersection of a circle with a straight line or a circle, equation of a circle through the points of intersection of two circles and those of a circle and a straight line.

Equations of a parabola, ellipse and hyperbola in standard form, their foci, directrices and eccentricity, parametric equations, equations of tangent and normal.

Locus Problems.

Three dimensions: Direction cosines and direction ratios, equation of a straight line in space, equation of a plane, distance of a point from a plane.

Differential calculus: Real valued functions of a real variable, into, onto and one-to-one functions, sum, difference, product and quotient of two functions, composite functions, absolute value, polynomial, rational, trigonometric, exponential and logarithmic functions.

Limit and continuity of a function, limit and continuity of the sum, difference, product and quotient of two functions, L'Hospital's rule of evaluation of limits of functions.

Even and odd functions, inverse of a function, continuity of composite functions, intermediate value property of continuous functions.

Derivative of a function, derivative of the sum, difference, product and quotient of two functions, chain rule, derivatives of polynomial, rational, trigonometric, inverse trigonometric, exponential and logarithmic functions.

Derivatives of implicit functions, derivatives up to order two, geometrical interpretation of the derivative, tangents and normals, increasing and decreasing functions, maximum and minimum values of a function, Rolle's Theorem and Lagrange's Mean Value Theorem.

Integral calculus: Integration as the inverse process of differentiation, indefinite integrals of standard functions, definite integrals and their properties, Fundamental Theorems of Integral Calculus.

Integration by parts, integration by the methods of substitution and partial fractions, application of definite integrals to the determination of areas involving simple curves.

Formation of ordinary differential equations, solution of homogeneous differential equations, separation of variables method, linear first order differential equations.

Vectors: Addition of vectors, scalar multiplication, dot and cross products, scalar triple products and their geometrical interpretations.

Chemistry

Physical chemistry

General topics: Concept of atoms and molecules; Dalton's atomic theory; Mole concept; Chemical formulae; Balanced chemical equations; Calculations (based on mole concept) involving common oxidation-reduction, neutralisation, and displacement reactions; Concentration in terms of mole fraction, molarity, molality and normality.

Gaseous and liquid states: Absolute scale of temperature, ideal gas equation; Deviation from ideality, van der Waals equation; Kinetic theory of gases, average, root mean square and most probable velocities and their relation with temperature; Law of partial pressures; Vapour pressure; Diffusion of gases.

Atomic structure and chemical bonding: Bohr model, spectrum of hydrogen atom, quantum numbers; Wave-particle duality, de Broglie hypothesis; Uncertainty principle; Qualitative quantum mechanical picture of hydrogen atom, shapes of s, p and d orbitals; Electronic configurations of elements (up to atomic number 36); Aufbau principle; Pauli's exclusion principle and Hund's rule; Orbital overlap and covalent bond; Hybridisation involving s, p and d orbitals only; Orbital energy diagrams for homonuclear diatomic species; Hydrogen bond; Polarity in molecules, dipole moment (qualitative aspects only); VSEPR model and shapes of molecules (linear, angular, triangular, square planar, pyramidal, square pyramidal, trigonal bipyramidal, tetrahedral and octahedral).

Energetics: First law of thermodynamics; Internal energy, work and heat, pressure-volume work; Enthalpy, Hess's law; Heat of reaction, fusion and vapourization; Second law of thermodynamics; Entropy; Free energy; Criterion of spontaneity.

Chemical equilibrium: Law of mass action; Equilibrium constant, Le Chatelier's principle (effect of concentration, temperature and pressure); Significance of ΔG and

DGo in chemical equilibrium; Solubility product, common ion effect, pH and buffer solutions; Acids and bases (Bronsted and Lewis concepts); Hydrolysis of salts.

Electrochemistry: Electrochemical cells and cell reactions; Standard electrode potentials; Nernst equation and its relation to DG; Electrochemical series, emf of galvanic cells; Faraday's laws of electrolysis; Electrolytic conductance, specific, equivalent and molar conductivity, Kohlrausch's law; Concentration cells.

Chemical kinetics: Rates of chemical reactions; Order of reactions; Rate constant; First order reactions; Temperature dependence of rate constant (Arrhenius equation).

Solid state: Classification of solids, crystalline state, seven crystal systems (cell parameters a, b, c, alpha, beta, gamma), close packed structure of solids (cubic), packing in fcc, bcc and hcp lattices; Nearest neighbours, ionic radii, simple ionic compounds, point defects.

Solutions: Raoult's law; Molecular weight determination from lowering of vapour pressure, elevation of boiling point and depression of freezing point.

Surface chemistry: Elementary concepts of adsorption (excluding adsorption isotherms); Colloids: types, methods of preparation and general properties; Elementary ideas of emulsions, surfactants and micelles (only definitions and examples).

Nuclear chemistry: Radioactivity: isotopes and isobars; Properties of alpha, beta and gamma rays; Kinetics of radioactive decay (decay series excluded), carbon dating; Stability of nuclei with respect to proton-neutron ratio; Brief discussion on fission and fusion reactions.

Inorganic Chemistry

Isolation/preparation and properties of the following non-metals: Boron, silicon, nitrogen, phosphorus, oxygen, sulphur and halogens; Properties of allotropes of carbon (only diamond and graphite), phosphorus and sulphur.

Preparation and properties of the following compounds: Oxides, peroxides, hydroxides, carbonates, bicarbonates, chlorides and sulphates of sodium, potassium, magnesium and calcium; Boron: diborane, boric acid and borax; Aluminium: alumina, aluminium chloride and alums; Carbon: oxides and oxyacid (carbonic acid); Silicon: silicones, silicates and silicon carbide; Nitrogen: oxides, oxyacids and ammonia; Phosphorus: oxides, oxyacids (phosphorus acid, phosphoric acid) and phosphine; Oxygen: ozone and hydrogen peroxide; Sulphur: hydrogen sulphide, oxides, sulphurous acid, sulphuric acid and sodium thiosulphate; Halogens: hydrohalic acids, oxides and oxyacids of chlorine, bleaching powder; Xenon fluorides.

Transition elements (3d series): Definition, general characteristics, oxidation states and their stabilities, colour (excluding the details of electronic transitions) and calculation of spin-only magnetic moment; Coordination compounds: nomenclature of mononuclear coordination compounds, *cis-trans* and ionisation isomerisms, hybridization and geometries of mononuclear coordination compounds (linear, tetrahedral, square planar and octahedral).

Preparation and properties of the following compounds: Oxides and chlorides of tin and lead; Oxides, chlorides and sulphates of Fe²⁺, Cu²⁺ and Zn²⁺; Potassium permanganate, potassium dichromate, silver oxide, silver nitrate, silver thiosulphate.

Ores and minerals: Commonly occurring ores and minerals of iron, copper, tin, lead, magnesium, aluminium, zinc and silver.

Extractive metallurgy: Chemical principles and reactions only (industrial details excluded); Carbon reduction method (iron and tin); Self reduction method (copper and lead); Electrolytic reduction method (magnesium and aluminium); Cyanide process (silver and gold).

Principles of qualitative analysis: Groups I to V (only Ag^+ , Hg_2^{2+} , Cu^{2+} , Pb^{2+} , Bi^{3+} , Fe^{3+} , Cr^{3+} , Al^{3+} , Ca^{2+} , Ba^{2+} , Zn^{2+} , Mn^{2+} and Mg^{2+}); Nitrate, halides (excluding fluoride), sulphate and sulphide.

Organic Chemistry

Concepts: Hybridisation of carbon; Sigma and pi-bonds; Shapes of simple organic molecules; Structural and geometrical isomerism; Optical isomerism of compounds containing up to two asymmetric centres, (*R,S* and *E,Z* nomenclature excluded); IUPAC nomenclature of simple organic compounds (only hydrocarbons, mono-functional and bi-functional compounds); Conformations of ethane and butane (Newman projections); Resonance and hyperconjugation; Keto-enol tautomerism; Determination of empirical and molecular formulae of simple compounds (only combustion method); Hydrogen bonds: definition and their effects on physical properties of alcohols and carboxylic acids; Inductive and resonance effects on acidity and basicity of organic acids and bases; Polarity and inductive effects in alkyl halides; Reactive intermediates produced during homolytic and heterolytic bond cleavage; Formation, structure and stability of carbocations, carbanions and free radicals.

Preparation, properties and reactions of alkanes: Homologous series, physical properties of alkanes (melting points, boiling points and density); Combustion and halogenation of alkanes; Preparation of alkanes by Wurtz reaction and decarboxylation reactions.

Preparation, properties and reactions of alkenes and alkynes: Physical properties of alkenes and alkynes (boiling points, density and dipole moments); Acidity of alkynes; Acid catalysed hydration of alkenes and alkynes (excluding the stereochemistry of addition and elimination); Reactions of alkenes with KMnO_4 and ozone; Reduction of alkenes and alkynes; Preparation of alkenes and alkynes by elimination reactions; Electrophilic addition reactions of alkenes with X_2 , HX , HOX and H_2O ($\text{X}=\text{halogen}$); Addition reactions of alkynes; Metal acetylides.

Reactions of benzene: Structure and aromaticity; Electrophilic substitution reactions: halogenation, nitration, sulphonation, Friedel-Crafts alkylation and acylation; Effect of *o*-, *m*- and *p*-directing groups in monosubstituted benzenes.

Phenols: Acidity, electrophilic substitution reactions (halogenation, nitration and sulphonation); Reimer-Tieman reaction, Kolbe reaction.

Characteristic reactions of the following (including those mentioned above): Alkyl halides: rearrangement reactions of alkyl carbocation, Grignard reactions, nucleophilic substitution reactions; Alcohols: esterification, dehydration and oxidation, reaction with sodium, phosphorus halides, $\text{ZnCl}_2/\text{concentrated HCl}$, conversion of alcohols into aldehydes and ketones; Ethers: Preparation by Williamson's Synthesis; Aldehydes and Ketones: oxidation, reduction, oxime and hydrazone formation; aldol condensation, Perkin reaction; Cannizzaro reaction; haloform reaction and nucleophilic addition reactions (Grignard addition); Carboxylic acids: formation of esters, acid chlorides and amides, ester hydrolysis; Amines: basicity of substituted anilines and aliphatic amines,

preparation from nitro compounds, reaction with nitrous acid, azo coupling reaction of diazonium salts of aromatic amines, Sandmeyer and related reactions of diazonium salts; carbylamine reaction; Haloarenes: nucleophilic aromatic substitution in haloarenes and substituted haloarenes (excluding Benzyne mechanism and Cine substitution).

Carbohydrates: Classification; mono- and di-saccharides (glucose and sucrose); Oxidation, reduction, glycoside formation and hydrolysis of sucrose.

Amino acids and peptides: General structure (only primary structure for peptides) and physical properties.

Properties and uses of some important polymers: Natural rubber, cellulose, nylon, teflon and PVC.

Practical organic chemistry: Detection of elements (N, S, halogens); Detection and identification of the following functional groups: hydroxyl (alcoholic and phenolic), carbonyl (aldehyde and ketone), carboxyl, amino and nitro; Chemical methods of separation of mono-functional organic compounds from binary mixtures.

SYLLABUS FOR APTITUDE TEST FOR B. Arch. and B.Des

Freehand drawing: This would comprise of simple drawing depicting the total object in its right form and proportion, surface texture, relative location and details of its component parts in appropriate scale. Common domestic or day-to-day life usable objects like furniture, equipment, etc., from memory. **Geometrical**

drawing: Exercises in geometrical drawing containing lines, angles, triangles, quadrilaterals, polygons, circles etc. Study of plan (top view), elevation (front or side views) of simple solid objects like prisms, cones, cylinders, cubes, splayed surface holders etc. **Three-dimensional perception:** Understanding and appreciation of three-dimensional forms with building elements, colour, volume and orientation. Visualization through structuring objects in memory. **Imagination**

and aesthetic sensitivity: Composition exercise with given elements. Context mapping. Creativity check through innovative uncommon test with familiar objects. Sense of colour grouping or application. **Architectural awareness:** General interest and awareness of famous architectural creations - both national and international, places and personalities (architects, designers etc.) in the related domain. State/City/Town

CodeGOAPanaji101GUJARATAhmedabad102Rajkot103Surat104Vadodara105KARNATAKABelgaum106MADHYA

PRADESHBhopal107Indore108Jabalpur109Ujjain110MAHARASHTRA Aurangabad111 Mumbai (Central)112Mumbai (North East)113Mumbai (North West)114Mumbai (South)115Mumbai (West)116Nagpur117Nashik118Navi

Mumbai119Pune120Thane121RAJASTHANAjmer122Bikaner123Jaipur124Jodhpur125 Kota126Udaipur127

List of Cities / Towns of JEE-2006 Centres in Delhi Zone
State/City/Town CodeCHANDIGARHChandigarh201DELHIDelhi (East)202Delhi (West)203Delhi (North) 204Delhi (South) 205Delhi (Central) 206

HARYANAFaridabad207Gurgaon208HIMACHAL PRADESHShimla209JAMMU & KASHMIRJammu210PUNJABAmritsar211Bhatinda212Jalandhar213Ludhiana214Patiala215UTTAR PRADESH Gautam Budh Nagar (Noida) 216Ghaziabad217

List of Cities / Towns of JEE-2006 Centres in Guwhati Zone

State/City/Town Code ARUNACHAL

PRADESH Itanagar 301 ASSAM Dibrugarh 302 Guwahati 303 Silchar 304 BIHAR Barauni 305 Bhagalpur 306 Katihar 307 Patna 308 MANIPUR Imphal 309 MEGHALAYA Shillong 310 WEST BENGAL Siliguri 311

List of Cities / Towns of JEE-2006 Centres in Kanpur Zone

State/City/Town Code UTTAR PRADESH Allahabad 401 Gorakhpur 402 Jhansi 403 Kanpur (East) 404 Kanpur

(West) 405 Lucknow 406 Raibareilly 407 UTTARANCHAL Nainital 408 Pantnagar 409 List of Cities / Towns of JEE-2006 Centres in Kharagpur Zone

State/City/Town Code ANDAMAN AND NICOBAR ISLANDS Port

Blair 501 BIHAR Gaya 502 Muzaffarpur 503 CHATTISGARH Bhailai 504 Bilaspur 505 Raipur 506 JHARKHAND Bokaro 507 Dhanbad 508 Jamshedpur 509 Ranchi 510 ORISSA Balasore 511 Berhampur 512 Bhubaneswar 513 Cuttack 514 Rourkela 515 Sambalpur 516 SIKKIM Gangtok 517 TRIPURA Agartala 518 WEST

BENGAL Asansol 519 Belur 520 Durgapur 521 Kharagpur 522 Kolkata (North) 523 Kolkata (Salt Lake) 524 Kolkata (South) 525 Malda 526 List of Cities / Towns of JEE-2006 Centres in Madras Zone

State/City/Town Code ANDHRA

PRADESH Cuddapah 601 Guntur 602 Hyderabad 603 Nellore 604 Tirupathi 605 Vijayawada 606 Visakhapatnam 607 Warangal 608 KARNATAKA Bangalore 609 Davangere 610 Gulbarga 611 Mangalore 612 Mysore 613 KERALA Kochi 614 Kozhikode 615 Thiruvananthapuram 616 Trissoor 617 PONDICHERY Pondicherry 618 TAMIL

NADU Chennai 619 Coimbatore 620 Madurai 621 Salem 622 Tiruchirapalli 623 Tirunelveli 624

List of Cities / Towns of JEE-2006 Centres in Roorkee Zone

State/City/Town Code HARYANA Kurukshetra 701 Panipat 702 Rohtak 703 MADHYA

PRADESH Gwalior 704 UTTARANCHAL Dehradun 705 Roorkee 706 UTTAR

PRADESH Agra 707 Aligarh 708 Bareilly 709 Mathura 710 Meerut 711 Moradabad 712 Saharanpur 713 Varanasi 714

INDIAN INSTITUTES OF TECHNOLOGY

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JOINT ENTRANCE EXAMINATION (JEE) – 2006

For admission to undergraduate courses at the above mentioned seven **Indian Institutes of Technology**,

Institute of Technology-BHU, Varanasi & Indian School of Mines, Dhanbad

EXAMINATION DATE : SUNDAY, April 9, 2006

All Indian and foreign nationals seeking admission need to appear in JEE.

AGE LIMIT :

General / DS category candidates : Date of Birth not earlier than October 01, 1981

SC/ST/PD category candidates : Date of Birth not earlier than October 01, 1976

ELIGIBILITY :

- Candidates appearing in (10+2) or equivalent qualifying examination in 2006 must secure at least 60% (55% for SC/ST and PD) marks in aggregate in their respective Board Examination.

In case the respective Boards award letter grades, without providing a norm for converting them to equivalent percentage marks, the norms decided by the Joint Implementation Committee of JEE shall be final (details to be provided in the Information Brochure of JEE-2006).

- A student can have only **two attempts** to write JEE with effect from 2006 – in the year in which he or she passes the XII standard examination and/or in the following year.
- Candidates who join any of the IITs, IT-BHU, Varanasi, and ISM, Dhanbad through JEE-2006 will **NOT** be permitted to appear in JEE in future.

ONE TIME EXCEPTION :

Candidates, who have passed their qualifying examination in 2005 or earlier, will be permitted to appear in JEE-2006, **as a last chance**, irrespective of the marks secured or the number of earlier attempts at JEE subject to their satisfying the age limit. This one time exception will also be applicable to the candidates who **are currently registered** in any of the IITs, IT-BHU, Varanasi, and ISM, Dhanbad.

PATTERN OF EXAMINATION :

Three Question papers of **two hours** duration each in Physics, Mathematics, and Chemistry. All questions will be of objective type in nature designed to test comprehension and analytical ability of the candidates.

QUESTION PAPER LANGUAGES: English/Hindi

RESERVATION OF SEATS :

- 15% for SC and 7.5% for ST candidates with relaxed qualifying norms for admission. SC/ST candidates, who do not qualify for admission to the UG courses, may be offered admission to the Preparatory Course of one-year duration provided (i) the seats are available, (ii) the candidates satisfy minimum norms, and (iii) the candidates have not undergone preparatory course earlier in any of these Institutes. Candidates successfully completing the Preparatory Course will be offered admission to the first year in the academic year 2007-08 without appearing in JEE again.
- 3% for PD, including leprosy-cured candidates, who are otherwise fit to pursue the course and who qualify for admission under relaxed norms relevant for this category.

PREFERENTIAL ALLOTMENT OF SEATS :

Two seats in each Institute for children of defence/paramilitary personnel killed or permanently disabled in action during war or peacetime operations (DS) and who qualify in the General Category.

APPLICATION FORMS AND INFORMATION BROCHURE (Application Material) :

Information Brochure contains details regarding application procedure, syllabus of JEE, examination centres, courses of study available at various institutions and other relevant information about JEE-2006.

Cost of application material is Rs.300/- for SC/ST category candidates, Rs.300/- for all female candidates, and Rs.600/- for all other candidates. It includes examination fee.

APPLICATION MATERIAL CAN BE OBTAINED FROM THE FOLLOWING DESIGNATED BRANCHES OF BANKS :

IIT BOMBAY ZONE: CANARA BANK

GOA: Panaji (Mathias Plaza); **GUJARAT: Ahmedabad** (Rewdi Bazar), **Rajkot** (Tricon Baug), **Surat** (Kotsafil Road), **Vadodara** (Prof. Manik Rao Road); **KARNATAKA: Belgaum** (Khade Bazar), **Dharwad** (Market Main); **MADHYA PRADESH: Bhopal** (Maharana Pratap Nagar), **Indore** (M.G. Road), **Jabalpur** (Maharshi Karamchand Chowk); **Ujjain** (Daulat Ganj) **MAHARASHTRA: Amaravati** (Opp.City Kotwali), **Aurangabad** (Shahganj), **Jalgaon** (Visanji Nagar), **Kolhapur** (LaxmiPuri), **Mumbai** (Andheri(W)-Jayprakash Road; Borivli(W)-Near Ajanta Talkies; Byculla-Hotel Heritage; Dadar-Ranade Road; Fort Market-Shahid Bhagpal Pandyan House; Ghatkopar(E)-Ratilal B. Mehta Marg; IIT Bombay- Gulmohar Bldg.; Kanjurmarg-Opp. Naval Dockyard Colony; Malad(W)-Laxminaraya Shopping Centre; Sion(W)-Mukund Niwas), **Nagpur** (Sitabuldi), **Nanded** (Tarasingh Market), **Nashik** (N.C.Cinema), **Navi Mumbai** (Opp. Nerul Railway Station), **Pune** (Sadashiv Peth), **Solapur** (Saraswati Chowk), **Thane** (Naupada); **RAJASTHAN: Ajmer** (M.G.Marg), **Bhilwara** (14 A,PWC Road), **Bikaner** (Phad Bazar), **Jaipur** (Arvind Marg), **Jodhpur** (Jalori Gate), **Kota** (Baran Road), **Sri Ganganagar** (Green Market), **Udaipur** (Sethjiki Bari).

IIT DELHI ZONE: UNION BANK OF INDIA

CHANDIGARH: (64/65-Bank Square, Sector-17B); **DELHI/NEW DELHI: Connaught Place** (14/15F), **Karol Bagh** (Arya Samaj Road), **Model Town-2** (B5), **Nehru Place** (73/74, Sheetala House), **Rajouri Garden** (Patel Market), **S.D.A.** (Opposite IIT Main Gate), **Shahdara** (Raj Block, G.T. Road), **Shalimar Bagh** (BQ Commercial Complex); **HARYANA: Faridabad** (58, Neelam Bata Road), **Gurgaon** (New Railway Road); **HIMACHAL PRADESH: Kangra** (Court Main Bazar, Dharamshala Road), **Mandi** (Hospital road), **Mehatpur** (Main Bazar, Dist. Una), **Shimla** (Bell Villa, The Mall); **JAMMU & KASHMIR: Jammu** (Raghunath Bazar), **Srinagar** (Lal Chowk); **PUNJAB: Amritsar** (Chowk Fuwara), **Bhatinda** (The Mall), **Jalandhar** (Param Market), **Ludhiana** (Kesar Ganj Chowk), **Moga** (Shyamlal Chowk), **Pathankot** (Dalousie Road), **Patiala** (Opposite Malwa Theatre, The Mall); **UTTAR PRADESH: Gautam Budh Nagar** (Brahmaputra Shopping Complex-Sector-29, Noida), **Ghaziabad** (15,G.T. Road).

IIT GUWAHATI ZONE : STATE BANK OF INDIA

ARUNACHAL PRADESH: Itanagar Branch (Papumpara, Itanagar); **ASSAM: Dibrugarh Branch** (Dibrugarh), **Dispur Branch** (Dispur, Guwahati), **Guwahati Branch** (Panbazar, Guwahati), **Jorhat Branch** (Jorhat), **ICD Amingaon Branch** (Amingaon, Guwahati), **New Guwahati Branch** (Bamunimaidan, Guwahati), **Nowgong Branch** (Nowgong), **Sibsagar Branch** (Sibsagar), **Silchar Branch** (Park Road, Silchar), **Tezpur Branch** (Tezpur), **Tinsukia Branch** (Tinsukia); **BIHAR: Anandpuri Branch** (West Boring Canal Road, Patna), **Baily Road Branch** (Technical Secretariat Building, Patna), **Barauni Branch** (Rajendra Road, Barauni), **Barauni Fertilizer Township Branch** (Urvaraknagar, Barauni), **Begusarai Branch** (Begusarai), **Bhagalpur Branch** (Beatson Road, Bhagalpur), **Bhagalpur City Branch** (Bhagalpur), **Bihar Sharif Branch** (Bihar Sharif), **Boring Road Branch** (Patna), **Fraser Road Branch** (Patna), **Hazipur Branch** (Hazipur), **Kankarbagh Branch** (Chandragupta Path, Patna), **Katihar Branch**, (Katihar), **Morya Lok Complex (MLC) Branch** (Patna), **New Market Branch** (Patna),

Patliputra Branch (Patliputra Colony, Patna), **Patna Main Branch** (West Gandhi Maidan, Patna), **Patna Secretariat Branch** (Patna), **Purnea Branch** (Purnea), **Rajendra Nagar Branch** (Patna), **S. K. Puri Branch** (Patna); **MANIPUR: Imphal Branch** (Imphal); **MEGHALAYA: Shillong Branch** (Kachari Road, Shillong); **MIZORAM: Aizwal Branch** (Aizwal); **NAGALAND: Dimapur Branch** (Dimapur); **WEST BENGAL: Siliguri Branch** (Tenzing Norgay Sadak, Siliguri).

IIT KANPUR ZONE: STATE BANK OF INDIA

UTTAR PRADESH: Allahabad (Kutcheri Road; High Court Building), **Amethi** (Railway Station Road) , **Ajamgarh** (Near Collectorate), **Ballia** (near Kutcheri) , **Banda** (Kutcheri Compound), **Etawah** (Shastri Nagar), **Faizabad** (Civil Lines) , **Gonda** (Malviya Nagar, near Gandhi Park) , **Gorakhpur** (Bank Road), **Hardoi** (Station Road) , **Jhansi** (Civil Lines, near Elite crossing) , **Kanpur** (The Mall; IIT Kanpur), **Lucknow** (Moti Mahal Marg; Ashok Marg), **Raeibareli** (Super Market), **Sitapur** (Eye Hospital Road), **Sultanpur** (Near Bus Stand); **UTTARANCHAL: Almorah** (The Mall) , **Haldwani** (Nainital Road) , **Nainital** (The Mall), **Pantnagar** (University Campus).

IIT KHARAGPUR ZONE: CANARA BANK

ANDAMAN & NICOBAR ISLANDS: Port Blair (Aberdeen Bazar); **BIHAR: Bettiah** (Sowe Babu Chowk) , **Darbhanga** (Lalbagh), **Gaya** (85, G.B. Road), **Muzaffarpur** (Motijheel); **CHATTISGARH: Bhilai** (Sector 6B Market), **Bilaspur** (Juna Bilaspur Main Road) , **Raipur** (Near City Kotwali); **JHARKHAND: Bokaro** (8, Western Avenue) , **Chaibasa** (Sadar Bazar) , **Chakradharpur** (Chaibasa Ranchi Main Road), **Dhanbad** (Katras Road), **Hazaribag** (GuruGobinda Singh Road), **Jamshedpur** (Bistupur; Golmuri; Telco), **Ranchi** (Main-S.N. Gangati Road; Doranda; Hatia); **ORISSA: Angul** (Amalpada) , **Balasore** (Sahadev Khunta), **Baripada** (Lalbazar), **Berhampur** (China Bazar), **Bhubaneswar** (Cuttack Road; Saheed Nagar), **Cuttack** (Choudhary Bazar), **Rourkela** (Udit Nagar), **Sambalpur** (Modi Para); **SIKKIM: Gangtok** (M.G.Marg); **TRIPURA: Agartala** (Choumahani); **WEST BENGAL: Asansol** (116,G.T.Road East), **Burdwan** (4,B.C.Road), **Durgapur** (136,R.H.Benachiti), **Kalyani** (Central Park-West), **Kharagpur** (Kharida), **Kolkata** (Alipore; 2-BrabourneRoad; 6A, Shambhu Chatterjee St.-College Street; Gariahat; Grant Street- 2-S.N.Banerjee Road;2-Hare Street; Jadavpur; Sector III-Salt Lake; 14 & 1A.P.C.Road-Sealdah; 67, B.B. Ganguly Street), **Serampore** (120 N.S.Avenue).

IIT MADRAS ZONE: CANARA BANK

ANDHRA PRADESH: Cuddapah (Sankarapuram), **Guntur** (Hindu College), **Hyderabad** (Abid Road; Dilsukh Nagar; Amirpet), **Kakinada** (JawaharStreet), **Nellore** (Jonagaddavari Street), **Secunderabad** (M.G.Road), **Tirupathi** (Biragipatteda), **Vijayawada** (Sivalayam Street), **Visakhapatnam** (Main Branch, opp. Chitralaya Talkies), **Warangal** (Station Road); **KARNATAKA: Bangalore** (Cunningham Road; Malleswaram), **Bellary** (K.C. Road), **Davanagere** (K.R.Road), **Gulbarga** (Super Market Complex), **Mangalore** (Narasimha Prasad), **Mysore** (New Statue Square); **KERALA: Cannanore** (Camp Bardez), **Kochi** (Mattancherry), **Kozhikode** (Cherrooty Road), **Thiruvananthapuram** (M.G.Road), **Trisoor** (Rame Raj Building Round); **Pondicherry** (JawaharlalNehru Street); **TAMILNADU: Chennai** (Anna Nagar East; Habibullah Road; IIT Madras; Thambu Chetty Street), **Coimbatore** (Oppanakkara

Street), **Madurai** (West Perumal Maistry Street), **Salem** (Alagapuram), **Tirunelveli** (Bye-pass Road), **Trichy** (Nandi Koil Street), **Vellore** (Town Hall Road).

IIT ROORKEE ZONE: PUNJAB NATIONAL BANK

HARYANA: **Ambala** (Tandura Bazar, Ambala City), **Hissar** (Model Town), **Kurukshetra** (Railway Road, Thanesar), **Panipat** (G.T. Road), **Rohtak** (Jhajjar Road), and **Yamuna Nagar** (Saharanpur Road); **MADHYA PRADESH :** **Gwalior** (Naya Bazar); **UTTARANCHAL:** **Dehradun** (Astley Hall), **Hardwar** (Ahmedpur), **Roorkee** (IIT Campus), **Srinagar**, **Garhwal** (Main Branch) and **Uttarkashi** (Main Branch); **UTTAR PRADESH:** **Agra** (Raja Ki Mandi), **Aligarh** (Railway Road), **Bareilly** (Shyam Ganj), **Bijnor** (Main Branch), **Mathura** (Chhatta Bazar), **Meerut** (Eastern Kutchehri Road), **Moradabad** (Civil Lines), **Muzaffarnagar** (Gaushala Nai Mandi, South Bhopa Road), **Saharanpur** (Shaheed Ganj) and **Varanasi** (Nichi Bagh).

Alternatively, application material can be obtained, by sending a demand draft along with two self-addressed slips, from the “Chairman, JEE”, IIT Bombay, Mumbai - 400 076; IIT Delhi, New Delhi - 110 016; IIT Guwahati, Guwahati-781 039; IIT Kanpur, Kanpur - 208 016; IIT Kharagpur, Kharagpur -721 302; IIT Madras, Chennai - 600 036; IIT Roorkee, Roorkee - 247 667,. The demand draft for the cost of the application material must be drawn on any Nationalised Bank in favour of “**Chairman, JEE**” of the respective IIT payable at the corresponding city. Application Material will be sent by Ordinary Post. **IITs will not be responsible for any loss or postal delay.**

IMPORTANT DATES

- * Issue of Application Material commences on November 28, 2005
- * Last Date for receipt of postal request for application material December 23, 2005
- * Last date for issue of application forms at designated bank counters January 06, 2006
- * Last date for receipt of completed application forms at IITs January 06, 2006

WEBSITES AND IVRS FOR JEE-2006 Institute Websites STD code Number IIT

Bombay <http://www.iitb.ac.in/jee> 02225767062 IIT Delhi <http://www.iitd.ac.in/jee> 011

26581064, 26582002 IIT Guwahati <http://www.iitg.ac.in/jee> 03612692788 IIT

Kanpur <http://www.iitk.ac.in/jee> 0512 2597236 IIT

Kharagpur <http://www.iitkgp.ernet.in/jee> 03222 281881, 278241 IIT

Madras <http://jee.iitm.ac.in/> 044 22578223 IIT Roorkee <http://www.iitr.ac.in/jee> 01332

279805, 279806

Websites and IVRS for JEE

Institute Websites IVRS STD code Number IIT

Bombay <<http://www.iitb.ac.in/jee>> 02225767062 IIT

Delhi <<http://jee.iitd.ac.in/>> 01126581064, 26582002 IIT

Guwahati <<http://www.iitg.ac.in/jee>> 03612692788 IIT

Kanpur <<http://www.iitk.ac.in/jee>> 05122597236 IIT

Kharagpur <<http://www.iitkgp.ernet.in/jee>>. [ernet.in/jee](http://www.iitkgp.ernet.in/jee)

<<http://www.iitkgp.ernet.in/jee>> 03222281881, 278241 IIT

Madras <<http://jee.iitm.ac.in/>> 04422578223 IIT

Roorkee <<http://www.iitr.ernet.in/jee>> 01332279805, 279806 **Websites of IT-BHU**

Varanasi & ISM Dhanbad

Institute Websites IT- BHU Varanasi <<http://www.itbhu.ac.in>> ISM
Dhanbad <<http://www.ismdhanbad.ac.in>> **Contact Addresses**

Zone Address Phone IIT Bombay Chairman, JEE, IIT Bombay, Powai Mumbai 400
076(022) 25722601 IIT Delhi Chairman, JEE, IIT Delhi, Hauz Khas New Delhi 110
016(011) 26591735 IIT Guwahati Chairman, JEE, IIT Guwahati North Guwahati,
Guwahati 781 039(0361) 2692795 IIT Kanpur Chairman, JEE, IIT Kanpur Kanpur 208
016(0512) 2597335 IIT Kharagpur Chairman, JEE, IIT Kharagpur Kharagpur 721
302(03222) 282102 IIT Madras Chairman, JEE, IIT Madras Chennai 600 036(044)
22578221 IIT Roorkee Chairman, JEE, IIT Roorkee Roorkee 247 667(01332) 276469 **For
all enquiries, candidates may use the Website or the Phone with IVRS facility of the
IIT concerned.**

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Limitation of Liability In no event, JIC will be liable for any damages, including without limitation, direct or indirect, special, incidental, or consequential damages, losses, or expenses arising in connection with this site or use thereof or inability to use by any persons, or in connection with any failure of performance, error, omission, interruption, defect, delay of operation or transmission, computer virus or line or system failure, even if JIC, or representative thereof, are advised of the possibility of such damages, losses or expenses. <[result.htm](#)>