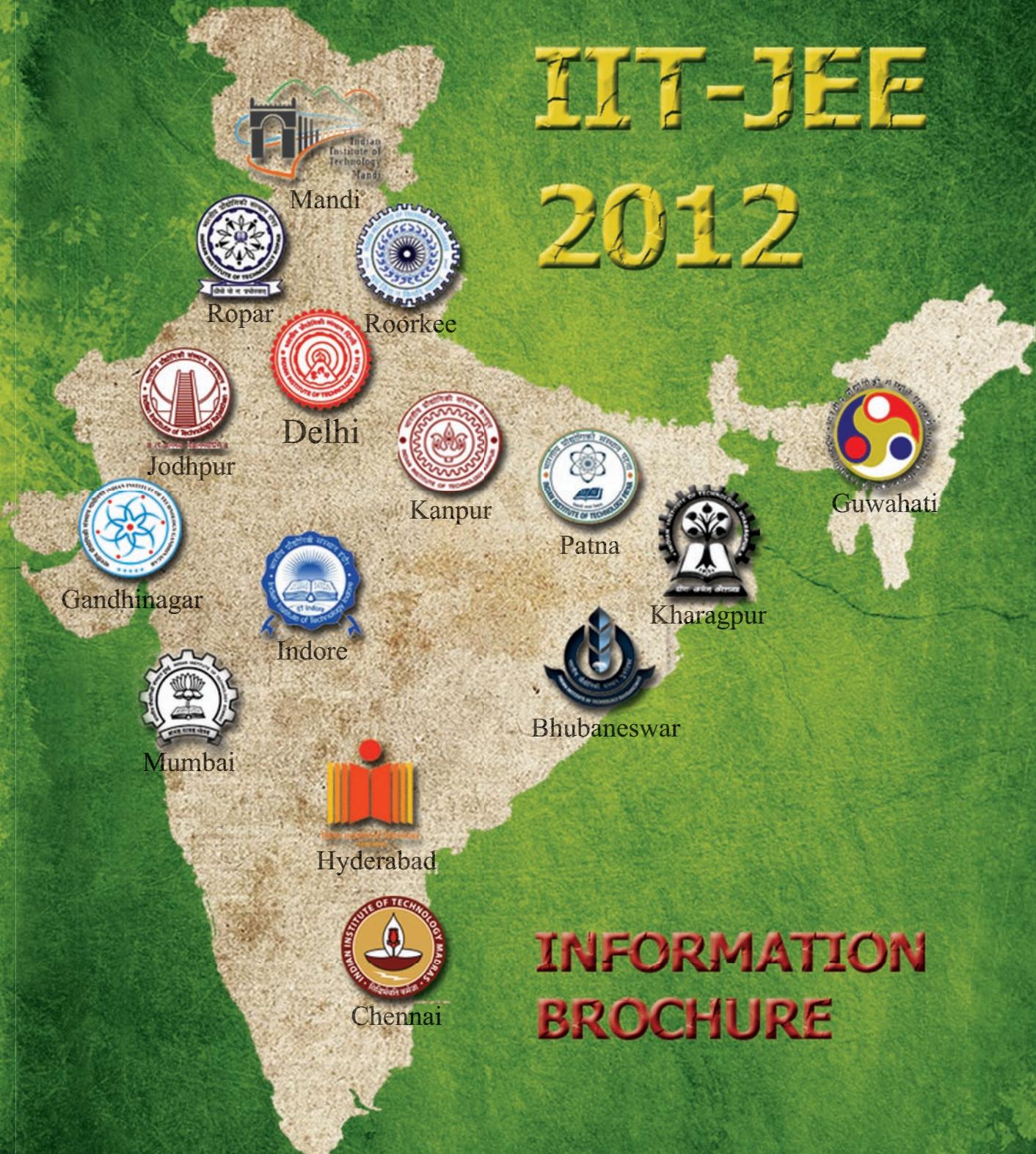


IIT-JEE

2012



**INFORMATION
BROCHURE**

IMPORTANT NOTES

Candidates for IIT-JEE 2012 have the option to apply either Offline or Online.

- Please ensure that you are using the correct Offline Application Form:
 - (a) Form priced ₹ 200/- (in pink color envelope) for all Female candidates,
 - (b) Form priced ₹ 1000/- (in light blue color envelope) for SC/ST/PD male candidates,
 - (c) Form priced ₹ 1800/- (in grey color envelope) for general/OBC male candidates.
- The fee for Online application is ₹ 1600/- for General/OBC male candidates, ₹ 800 for SC/ST/PD male candidates and NIL for all female candidates. For Online registration visit IIT-JEE 2012 websites (APPENDIX-7).
- All candidates who wish to appear for IIT-JEE 2012 in Dubai city must apply Online with a fee of US\$ 200.

Please go through the following general information for filling and submitting the Offline Application Form.

1. Ensure that you fulfill all eligibility criteria given in Section 3.
2. Submit only one Application Form. The name in the Application Form MUST BE the same as that in the bank challan. The completed Application Form must reach the zonal IIT on or before 15 December 2011.
3. Your application must be complete in all respects. Incomplete Application Forms are liable to be rejected.
4. Application Forms will be machine processed. The machine will read only fully darkened bubbles. Please see the Application Form for correct method of filling bubbles. Also, please go through Section 6.4 for detailed instructions for filling the Application Form.
5. Options once selected in the Application Form cannot be changed at a later stage.
6. Completed Application Form with all enclosures must be sent only by Registered Post / Speed Post to the Chairman, JEE of the zone to which the examination cities of your choice belong. For further details see Section 7.
7. All correspondence should be addressed to the zonal IIT. The Application Form number must be mentioned in all such correspondence. Therefore, it is essential to note down the Application Form number printed near the barcode.
8. You may check the status of your application through SMS and on the IIT-JEE 2012 website/IVRS of your zonal IIT. No acknowledgement card will be sent to you.
9. The application fee is non-refundable.

Note: The Courts at Delhi alone shall have the jurisdiction to settle and decide all matters and disputes related to IIT-JEE 2012 as IIT Delhi is the Organizing Institute.

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1. INTRODUCTION

The Indian Institutes of Technology (popularly known as IITs) are institutions of national importance established through an Act of Parliament for fostering excellence in education. There are fifteen IITs at present, located at Bhubaneswar, Chennai, Delhi, Gandhinagar, Guwahati, Hyderabad, Indore, Jodhpur, Kanpur, Kharagpur, Mandi, Mumbai, Patna, Ropar and Roorkee. Over the years IITs have created world class educational platforms and dynamically sustained them through internationally recognized research based on excellent infrastructural facilities. The faculty and alumni of IITs continue to make huge impact in all sectors of society, both in India and abroad. Institute of Technology - Banaras Hindu University (IT-BHU) Varanasi and Indian School of Mines (ISM) Dhanbad, are amongst the oldest institutions in India and are known for their immense contributions towards society at large and for science and technology in particular.

The primary objectives of these institutions are to:

- build a solid foundation of scientific and technical knowledge and thus to prepare competent and motivated engineers and scientists
- create environment for freedom of thought, cultivate vision, encourage growth, develop personality and self-discipline for pursuit of excellence
- kindle entrepreneurial streak in the students

All of the above help to prepare the students admitted to these institutions for successful professional and social lives. Today, alumni of these institutions occupy key positions in industry and academia, in India and abroad.

Each institute has well-equipped modern laboratories, state-of-the-art computer network and well-stocked technical library. Teaching methods rely on direct personal contact between the teachers and the students, and the use of traditional and modern instructional techniques. Students live in a pleasant and intellectually stimulating environment with people having similar goals and aspirations, which is an exciting and unique experience.

These institutions offer courses leading to Bachelor's degree in a number of engineering,

technological and scientific disciplines. Integrated M.Sc. courses in pure and applied sciences and Integrated M.Tech. courses in a few disciplines are also offered by some of these Institutions. In addition, some IITs offer Dual-Degree M.Tech. programmes, wherein both B.Tech. and M.Tech. degrees are awarded.

Credit-based academic programmes offer flexibility to students to progress at their own pace. A minimum level of performance is necessary for satisfactory progress. The medium of instruction is English.

Admission to the Undergraduate Programmes at these institutions for all Indian and Foreign nationals is made through a Joint Entrance Examination, IIT-JEE (formerly known as JEE).

2. ABOUT IIT-JEE 2012

IIT-JEE is jointly conducted by IIT Bombay, IIT Delhi, IIT Guwahati, IIT Kanpur, IIT Kharagpur, IIT Madras and IIT Roorkee. These institutes are referred to as the zonal IITs in this document.

The details of the pattern and the date of examination, eligibility criterion and the application process are outlined here:

2.1 Schedule of IIT-JEE 2012

The examination will be held on Sunday, April 8, 2012 as per the schedule given below:

Paper 1: 09.00 to 12.00 hrs (IST)

Paper 2: 14.00 to 17.00 hrs (IST)

The schedule will remain unaltered even if the above day is declared a public holiday.

2.2 Type of Examination

There will be two question papers, each of three hours duration. Each of the question papers will consist of separate sections on Physics, Chemistry and Mathematics. The detailed syllabi are given in **APPENDIX-1**. The questions will be of objective type, designed to test comprehension, reasoning and analytical ability of candidates. In some sections, incorrect answers may be awarded negative marks.

The answers for each of the questions are to be marked on a separate, 2-part carbonless paper. Candidates must not separate or disturb the alignment of the top and bottom parts at any

stage during the examination. The top part is specially designed machine-readable sheet of paper (ORS-Optical Response Sheet). While answering each of the questions the candidate is expected to darken the bubble(s) against correct answer(s) only on the top sheet using black ball point pen. The darkening should be done in such a manner that the impression is created on the bottom part. The responses recorded on the top part only will be taken as final. The candidate can take away the bottom part with the permission of the invigilator(s).

2.3 Choice of Language of Question Papers

A candidate can opt for question papers either in English or in Hindi. This option should be exercised while filling the Application Form and it cannot be changed at a later stage.

2.4 Availability of Question Papers Printed in Larger Font

Candidate with physical disability and having poor vision can ask for question papers printed in larger font. They must send a request letter addressed to the Chairman, JEE of the zonal IIT concerned along with the Application Form. The format of the letter is given in **APPENDIX-2**.

A blind candidate can request for the services of amanuensis (Scribe). For this, the candidate must submit a separate request letter and a copy of the PD certificate. A blind candidate may be exempted from answering questions having figures.

2.5 Cities/Towns of IIT-JEE 2012 Examination Centres

IIT-JEE 2012 will be conducted in major cities and towns of India as well as in Dubai. The list is given in **APPENDIX-3**. While applying, candidates should select two towns/cities in the same zone. All correspondence should be addressed to that particular zonal IIT.

Efforts will be made to allot candidates' first or second choice. However, in some exceptional circumstances, a different city in the same zone may be allotted.

2.6 Request for Change of Examination City/Town

Requests for a change of centre within a city

will not be entertained. Under exceptional circumstances, a change of examination city within the zone or outside the zone may be permitted. For this the candidate should send a request letter to the zonal IIT from where he/she received the Admit Card. The request letter should clearly indicate the Registration Number with valid reason(s) for the change and should be received on or before **March 28, 2012** along with a demand draft for ₹1000 drawn in favour of "Chairman, JEE" of the zonal IIT. In this regard, the decision of the Chairman JEE will be final.

2.7 Use of Calculator and Communication Aids

Use of electronic devices like mobile phone, calculator, iPod, etc. is **NOT PERMITTED** in IIT-JEE 2012. Also materials like log table, book, notebook, etc. should NOT be brought into the examination hall.

3. ELIGIBILITY FOR IIT-JEE 2012

Candidates must make sure that they satisfy all the eligibility conditions given below for appearing in IIT-JEE 2012:

3.1 Date of Birth

General (GE) and Other Backward Classes (OBC) category candidates must have been born on or after October 01, 1987. Those born earlier are not eligible to appear in IIT-JEE 2012.

Candidates belonging to Scheduled Castes (SC), Scheduled Tribes (ST), and those with Physical Disability (PD) must have been born on or after October 01, 1982. SC/ST/PD candidates born before October 01, 1982 are not eligible to appear in IIT-JEE 2012.

The date of birth as recorded in the High School/ First Board/Pre-University certificate will be accepted. If the certificate does not mention the date of birth, a candidate must submit along with the application, an authenticated document indicating the date of birth.

3.2 Year of Passing Qualifying Examination (QE)

To appear in IIT-JEE 2012, a candidate must have either passed the QE for the first time, on or after October 01, 2010 or should be appearing for the first time in 2012. Those who are going to appear in the QE later than September 30, 2012

are not eligible to appear in IIT-JEE 2012.

The year of passing the QE will be determined based on the examination he/she has passed the earliest out of the qualifying examinations listed below. In case the applicant has passed more than one QE or attempted successfully the same QE more than once, the year of the first successful QE attempt will be used to determine the eligibility for IIT-JEE 2012.

The qualifying examinations are listed below:

- i) 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 the Indian School Certificate Examinations, New Delhi; etc.
- ii) Intermediate or two-year Pre-University examination conducted by a recognized Board/ University.
- iii) Final examination of the two-year course of the Joint Services Wing of the National Defence Academy.
- iv) General Certificate Education (GCE) examination (London / Cambridge / Sri Lanka) at the Advanced (A) level.
- v) High School Certificate Examination of the Cambridge University or International Baccalaureate Diploma of the International Baccalaureate Office, Geneva.
- vi) H.S.C. vocational examination.
- vii) Senior Secondary School Examination conducted by the National Institute of Open Schooling with a minimum of five subjects.
- viii) A Diploma recognized by AICTE or a state board of technical education of at least 3 year duration.
- ix) Any Public School/ Board/ University examination in India or in any foreign country recognized as equivalent to the 10+2 system by the Association of Indian Universities (AIU).

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

3.3 Minimum Percentage of Marks in QE

Candidates belonging to GE and OBC categories must secure at least 60% marks in aggregate in QE. SC, ST and PD candidates must secure at least 55% marks in aggregate in QE.

The percentage of marks awarded by the

Board will be treated as final. If the Board does not award the percentage of marks, it will be calculated based on the marks obtained in all subjects listed in the mark sheet. 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 the equivalent marks, and submit it at the time of counselling/admission. In case such a certificate is not provided the decision taken by the Joint Implementation Committee (JIC) of IIT-JEE 2012 will be final.

3.4 Number of JEE Attempts

A candidate can attempt JEE a maximum of two times in consecutive years irrespective of whether or not he/she passed QE. Those who have attempted JEE in 2010 or earlier are NOT ELIGIBLE to appear in IIT-JEE 2012.

3.5 Earlier Admission Taken Through JEE

Candidates who have taken admission (irrespective of whether or not they continued in any of the programmes) or accepted the admission by paying the registration fee at any of the IITs, IT-BHU Varanasi or ISM Dhanbad, are NOT ELIGIBLE to appear in IIT-JEE 2012.

3.6 Important Points

- (i) The offer of admission is subject to verification of original certificates/ documents at the time of admission. If any candidate is found ineligible at a later date even after admission to an Institute, his/her admission will be cancelled.
- (ii) If a candidate is expecting the results of the QE in 2012, his/her admission will only be provisional until he/she submits the relevant documents. The admission stands cancelled if the documents are not submitted in original to the concerned Institute on or before September 30, 2012.
If a Board invariably declares the results of the QE after September 30, every year, the candidate is advised not to attempt IIT-JEE 2012.
- (iii) The decision of the Joint Admission Board of IIT-JEE 2012 regarding the eligibility/ admission of any applicant shall be final.

4. RESERVATION OF SEATS

As per Government of India rules candidates

belonging to certain categories are admitted to seats reserved for them based on relaxed criteria.

These categories are:

- Other Backward Classes (OBC) if they belong to Non-Creamy Layer (NCL)
- Scheduled Castes (SC)
- Scheduled Tribes (ST)
- Persons with Physical Disability (PD)

Benefit of reservation shall be given only to those classes/castes/tribes which are in the respective central list published by the Government of India.

4.1 OBC Candidates

For the purpose of reservation of seats in IIT-JEE 2012, a candidate will be considered as OBC only if he/she belongs to the non-creamy layer of this category. Those belonging to the creamy layer of OBC are NOT entitled for reservation.

For candidates belonging to OBC (non-creamy layer), 27% of the seats are reserved in all IITs, IT-BHU Varanasi and ISM Dhanbad.

In case the reserved seats in this category are not filled, they can be filled by GE category candidates.

The OBC candidates (non-creamy layer) will be required to produce original OBC (NCL) certificate issued on or after January 01, 2012 by a competent authority in the prescribed format (**APPENDIX-4**) at the time of admission.

Certificates in any other format will not be accepted. Attested copies of these certificates must be received by the respective zonal IITs on or before June 01, 2012, failing which they will NOT be considered for admission to the respective reserved seats.

4.2 SC/ST Candidates

For the SC and ST categories, 15% and 7.5% seats, respectively, are reserved in every programme in all IITs, IT-BHU Varanasi and ISM Dhanbad. Candidates belonging to these categories are declared qualified on the basis of a relaxed criterion.

Candidate belonging to SC/ST categories will be required to produce the original caste/ tribe certificate issued by a competent authority in the prescribed format (**APPENDIX-5**) at the time of

admission. Certificates in any other format will not be accepted. Attested copies of these certificates must be received by respective zonal IITs on or before June 01, 2012, failing which they will NOT be considered for admission to the respective reserved seats. Seats remaining vacant in these categories shall not be filled by candidates belonging to any other category.

4.3 Persons with Physical Disability (PD)

In each institute 3% of seats in every category are reserved for PD candidates. For any category of disability (viz., locomotor, visual, dyslexia, speech, and/or hearing) benefit would be given to those who have at least 40% physical impairment. Leprosy-cured candidates who are otherwise fit to pursue the course are also included in this category. Candidates belonging to this category are qualified on the basis of a relaxed criterion.

The percentage of disability of the candidates will be certified by a medical board constituted by IITs. The decision of the medical board would be final.

4.4 Preparatory Course

In case the seats reserved for SC/ST/PD candidates are not filled, a limited number of candidates are admitted to a Preparatory Course of one-year duration on the basis of a further relaxation of admission criteria. Admission is given to the candidates in the Preparatory Course provided (a) the seats reserved for the respective category are vacant (b) candidates satisfy minimum norms, and (c) candidates have not undergone the Preparatory Course earlier. On successful completion of the course, the students will be offered direct admission to the undergraduate programmes in July/August 2013, against the unfilled reserved seats for IIT-JEE 2012.

5. PREFERENTIAL ALLOTMENT OF SEATS FOR DS CANDIDATES

Two seats are available for preferential allotment in each Institute for children of defence/paramilitary personnel killed or permanently disabled in action during war or peacetime operations (DS).

Such candidates should submit a copy of the relevant certificate 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, along with the application. To avail this preferential allotment, he/she must obtain a rank in the Common Merit List and should produce the attested copy of certificate at the time of counselling.

6. HOW TO APPLY FOR IIT-JEE 2012

Candidates are advised to read the eligibility criteria (*Section 3*) carefully. A candidate can apply for IIT-JEE 2012 either "Online" or "Offline". The cost of application, including the processing charges of ₹ 200 in case of Offline mode application, is given in the following table:

Applicant's Category (Gender)	Online	Offline
GE/OBC (male)	₹ 1600	₹ 1800
SC/ST/PD (male)	₹ 800	₹ 1000
All Categories (female)	Nil	₹ 200
Candidates opting for Dubai city	US\$ 200	Not available

Note: The applicants must note that after submission of the Application Form it cannot be withdrawn. Claims for refund of application fee will not be entertained.

6.1 Applying Online

Candidates can apply Online if they have access to a computer, a laser printer and Internet by logging on to IIT-JEE 2012 website. The site has been designed in a 'user friendly' way to help candidates for applying Online in a step-by-step fashion. Online application portal will remain open from 10:00 AM (IST) on October 31, 2011 till 5:00 PM (IST) on December 10, 2011.

Candidates can make payment for Online application only through challan of designated banks. Candidates opting for Dubai as examination city must apply Online by paying the application fee (US\$ 200) through demand drafts drawn in favour of Chairman, JEE, IIT Delhi.

6.2 Instructions for Applying Online

- Log-on to IIT-JEE 2012 Website (given in **APPENDIX-7**).
- Follow the instructions given on the IIT-JEE 2012 websites carefully for filling Online Application Form.

- Candidates should paste the address slip printed along with Application Form on the envelope for mailing the application to Zonal IIT. The printed Application Form signed by the candidate and parent / guardian along with the necessary certificate(s) and the photograph, pasted at the appropriate place, should reach the JEE office of the respective zonal IITs before 5:00 PM (IST) on December 15, 2011.
- No written acknowledgement will be given for the receipt of the application. However, the candidate can verify application status on IIT-JEE 2012 website after a week of submission. If you see any discrepancy, call us or email us using the details given in the **APPENDIX-7**.

6.3 Applying Offline

Sale of Offline Optical Machine Readable (OMR) Application Form and Information Brochure will start at 10:00 AM (IST) on November 11, 2011 and close at the end of the banking hours on December 05, 2011. The application material can be obtained from any of the designated bank branches during the banking hours. Refer to **APPENDIX-6** for the complete list of bank branches.

Please ensure that you are using the correct Application Form. Offline Application Form prices (including processing charges of ₹200) are:

- (a) ₹200 (in **pink** color envelope) for female candidates only,
- (b) ₹1000 (in **light blue** color envelope) for male SC/ST/PD candidates, and
- (c) ₹1800 (in **grey** color envelope) for male GE/OBC candidates.

Candidates wishing to appear in IIT-JEE 2012 in Dubai city must apply online with application fee of US\$ 200.

6.4. Instructions for Filling OMR Application Form

- i) The Application Form is in Optical Machine Readable (OMR) format. That means a special machine reads only the dark bubbles that you make on the OMR sheet.
- ii) Do not scribble, smudge, cut, tear, or wrinkle the Application Form. Do not put any stray marks or whitener anywhere on the Application Form. Do not write or place any mark over the barcodes.
- iii) Use only black ball point pen for filling the OMR Application Form. Do not use gel/ink/felt pen as it might smudge the form.

- iv) Since it is not possible to erase and correct pen-filled bubble, you are advised to be extremely careful. To guide you on how to fill the form correctly, we suggest the following:
 - a) Take a photocopy of both sides of the blank OMR sheet and try to fill them first. After making sure that the entries in this form are correct, you can start filling-in the original OMR and bubble the corresponding entries in the sheet, so that you may avoid errors while filling it. You should only send the filled original OMR form. DO NOT send the photocopies.
 - b) A sample filled OMR Application Form is given in **APPENDIX-9** showing how the Application Form will appear after bubbling correctly.
- v) If there is any discrepancy between the written data and the bubbled data in your application, the bubbled data will be taken as final.
- vi) Your application must be complete in all respects. You should fill all the fields. Incomplete Application Form may be rejected.

Step-by-step instructions to fill the OMR Application Form are given below.

S.No. 1: NAME OF THE CANDIDATE AS IN THE 10th CLASS CERTIFICATE

Write your name in capital letters as given in your 10th class certificate or equivalent. Write each single letter in each of the boxes one by one. Leave only one blank box between consecutive words of your name.

Do not use any dots in between initials. If your name has several initials, leave one blank after each of them. Darken the appropriate alphabet bubble underneath each letter of your name. For a blank space, do not darken any bubble in that column. If your name requires more than 34 boxes, then write '+' in 35th box and darken the bubble marked '+' below it.

S.No. 2: CATEGORY

The codes for different categories are as follows.

Category	Code
General	GE
Other Backward Classes (Non-Creamy Layer)	OBC(NCL)
Scheduled Castes	SC
Scheduled Tribes	ST

Darken the appropriate bubble against the category you belong.

Note: All OBC applicants must read carefully *Section 4.1* and the possible scenarios given below:

- (a) If an applicant belongs to OBC (Creamy Layer) at the time of submitting the Application Form and he/she is sure that the category status will remain as OBC (Creamy Layer) up to June 01, 2012, then he/she may darken the bubble corresponding to GE.
- (b) If an applicant belongs to OBC (Creamy Layer) at the time of submitting the Application Form and he/she anticipates category change from "Creamy Layer" to "Non-Creamy Layer" any time on or before June 01, 2012, then he/she is advised to darken the bubble corresponding to OBC(NCL).
- (c) All OBC(NCL) applicants may darken the bubble corresponding to OBC (NCL).

S.No. 3: NATIONALITY

If you are an Indian citizen then darken the bubble against "INDIAN". If you are a foreign passport holder or have either Person of Indian Origin (PIO) or Overseas Citizen of India (OCI) status then darken the bubble against "FOREIGN".

S.No. 4: GENDER

Darken the appropriate bubble.

S.No. 5: ENTITLED FOR DS SEAT

If you belong to the DS category (refer to *Section 5*), then darken the bubble marked "YES", else bubble "NO". Please enclose an attested copy of the DS certificate.

S.No. 6: PHYSICALLY DISABLED

If you are a person with physical disability (refer to *Section 4.3*), then darken the bubble against 'YES'. Otherwise you must fill the bubble corresponding to 'NO'. Please enclose a copy of the Physically Disabled certificate.

S.No.7: VISUALLY IMPAIRED AND REQUIRE ENLARGED FONT QUESTION PAPERS

If you are visually impaired and unable to read question papers printed in normal size font even with corrective spectacles/lenses and require

question papers with enlarged font, then darken the bubble corresponding to 'YES'. You must send a request letter, in the format given in **APPENDIX-2**, along with the Application Form. This provision is available only to visually impaired PD candidates. A blind candidate should opt for 'NO' and send a request letter for the services of an amanuensis (scribe).

S.No. 8: YEAR OF PASSING QUALIFYING EXAMINATION (10+2 OR EQUIVALENT) WITH REQUIRED MINIMUM MARKS

If you are appearing for 10+2 or an equivalent qualifying examination for the first time in 2012, you should darken the bubble corresponding to "APPEARING IN 2012". You need not darken any other bubble in this item.

If you have passed 10+2 or an equivalent qualifying examination, as defined in *Section 3.2* for the first time on or after October 01, 2010 you should darken the bubble corresponding to "PASSED ON OR AFTER 1st Oct 2010".

Note: A candidate who has filled the bubble corresponding to "PASSED ON OR AFTER 1st Oct 2010" must verify his/her aggregate percentage of marks in QE. A candidate having aggregate percentage of marks less than the minimum required (60% for GE/OBC or 55% for SC/ST/PD) is advised not to apply unless he/she will be appearing for improvement.

If you have passed 10+2 or an equivalent qualifying examination, as defined in *Section 3.2* for the first time earlier than October 01, 2010 you should darken the bubble corresponding to "PASSED EARLIER THAN 1st Oct 2010".

S.No. 9: DATE OF BIRTH

Enter the date, month, and year of your birth as per the English calendar and as recorded in your 10th class or equivalent certificate. Use numerals 01 to 31 for DATE, 01 to 12 (corresponding to January - December) for MONTH, and the last two digits of the YEAR of birth (the digits '19' are already there). For example, if you were born on 6th March 1993, then the date should be entered as follows: "06 03 93". Darken the appropriate bubbles for the date, month, and year in each column.

S.No.10: YEAR OF PASSING 10TH CLASS

Write the year of passing your 10th Class or

equivalent examination and darken the bubbles corresponding to the appropriate numerals.

S.No.11: CHOICE OF EXAMINATION CITIES

APPENDIX-3 gives the list of the cities/towns and their corresponding codes where the examination centres are located. Select two different city codes both from the same zone. Your first preference must be entered under CHOICE-I and the second under CHOICE-II. Then darken the bubble corresponding to the appropriate numeral (code) in each column. The candidate MUST fill in both the city choices. In case either is left blank a city at random from the same zone will be assigned. Choice of two cities from different zones will make the second choice invalid.

S.No. 12: FIRST ATTEMPT AT JEE

If you are appearing in IIT-JEE 2012 and did not attempt JEE in earlier years then darken the bubble corresponding to "IN 2012". Otherwise, darken the appropriate bubble corresponding to the year of your first attempt at JEE.

S.No.13: QUESTION PAPER LANGUAGE

During the examination, question papers can be provided in either English or Hindi, according to the candidate's choice. If you wish to obtain the question paper in Hindi darken the bubble corresponding to "HINDI" otherwise darken the bubble against "ENGLISH". This choice, once exercised, cannot be changed at any later stage. If no option is exercised, only question papers in English language will be provided.

S.No.14: CANDIDATE NAME AND COMPLETE MAILING ADDRESS

Write the complete postal address to which any communication is to be sent from December 2011 to July 2012. The address must include your name, c/o name (if required), and other details, including the PIN code. Indicate mobile number/landline number with the STD code, and email address. Please note that this block will be machine scanned, and, therefore, it should be written very clearly in CAPITAL LETTERS using a black ballpoint pen only. E-mail address may contain small letters. Your address must not overflow this box. Please do NOT give the address of your school / college or any other institute.

S.No. 15: RECENT COLOUR PHOTOGRAPH

Your recent colour photograph should be taken with a white background, preferably wearing dark-coloured clothes. The approximate size of the photograph should be 3.5 cm x 4.5 cm (taken not earlier than two months). Your face should cover about 75 % of the photo. Please write your name and application number on the reverse side of the photograph. This will help matching your photograph with your Application Form in case it gets detached from the form during processing. Paste the photograph (use good quality gum, not glue stick or stapler) in the box provided. Do NOT sign or write anything on the front side of your photograph and also do not get it attested. Keep four more copies of the same photograph with you for future use.

S.No.16: SIGNATURE OF THE CANDIDATE

Put your usual signature in black ballpoint pen within the box provided. Your signature must not overflow or touch the border of the box. Your signature establishes your identity. Hence, do not merely write your name in capital letters. This may lead to rejection of your application.

Note: This signature will appear in your Admit Card and will be verified during the examination.

S.No.17: NAME OF ONE PARENT/ GUARDIAN AS IN THE 10th CLASS CERTIFICATE

Write the name of your father/mother or guardian as mentioned in your 10th class or equivalent certificate. Write the name of your father/mother or guardian, if no such name is mentioned in the 10th class certificate. Write a single letter in each box. Leave only one blank box between consecutive words of the name. Do not write dots after initials; leave a blank box. Even if the name has several initials, leave one blank after each of them. Darken the bubble corresponding to the appropriate letter underneath each letter of the name. For a blank space, do not darken any bubble in that column. If the name of the parent/guardian requires more than 34 boxes then write + in the 35th box and darken the bubble marked '+' below it.

S.No.18: PLACE OF 10th CLASS SCHOOLING

Darken the appropriate bubble.

S.No. 19: TYPE OF PREPARATION

If you are preparing for IIT-JEE 2012 on your

own, darken the bubble against "SELF", else, darken "OTHER". This information is used only for post-examination statistics.

S.No. 20: BOARD OF QUALIFYING EXAMINATION

Darken the appropriate bubble.

S.No. 21: OCCUPATION OF PARENT/ GUARDIAN

Darken the appropriate bubble corresponding to occupation/service.

S.No. 22: PARENTS' EDUCATIONAL BACKGROUND

Darken the appropriate bubble.

S.No. 23: TOTAL ANNUAL INCOME OF PARENTS/GUARDIAN

The annual income should be as on March 31, 2011. In case both parents are employed, the combined annual income is to be indicated. Darken the appropriate bubble.

S.No. 24: MOTHER TONGUE

Choose and write the code corresponding to your mother tongue from the table below. Darken the appropriate bubbles for the code.

Assamese	01	Bengali	02
English	03	Gujarati	04
Hindi	05	Kannada	06
Kashmiri	07	Malayalam	08
Marathi	09	Oriya	10
Punjabi	11	Sanskrit	12
Sindhi	13	Tamil	14
Telugu	15	Urdu	16
Others	17		

S.No. 25: PIN CODE OF PERMANENT PLACE OF RESIDENCE

Write the PIN code of your permanent place of residence in the space provided. Darken the bubble corresponding to the appropriate numeral underneath each digit.

S.No. 26: MOBILE NUMBER OF THE CANDIDATE

Write the mobile number in the box provided

through which you can be contacted or a message can be sent to you. Darken the bubbles corresponding to the appropriate numerals below the mobile number.

S.No. 27: LANDLINE NO. WITH STD CODE

Write landline number with STD code in the box provided through which you can be contacted. Darken the bubbles corresponding to the appropriate numerals below the landline phone number.

S.No. 28: DECLARATION BY THE CANDIDATE

The candidate must sign the declaration. The place and date should also be entered. The two signatures, the one below this declaration and the other in the box below your photograph (S.No. 16), should be identical. Applications without signatures or with dissimilar signatures at the two places will be treated as incomplete and rejected. The declaration by the candidate must be countersigned by parent/guardian. Write the name of parent/ guardian who countersigns the declaration in the space provided.

7. OTHER INFORMATION RELATED TO OMR APPLICATION FORM

You must take a photocopy of the filled-in form duly signed with photograph, etc., and keep it safely with you till the admission procedure is complete. You must note down your application number and quote the same in all future correspondence.

7.1 Check-list of items to be sent to JEE offices in different zones

- a) Completed original OMR Application Form with photo and signatures.
- b) Duly attested photocopy of your 10th class or equivalent examination pass certificate where your date of birth is mentioned clearly. In case, the certificate is not available, enclose copy of your 10th class mark sheet. In case, the 10th class certificate/mark sheet does not mention your date of birth, enclose a copy of an authenticated document mentioning your date of birth.
- c) A copy of your category certificate issued by a competent authority, in the format provided in **APPENDIX-4** or **APPENDIX-5**.
- d) Write your Application Form number at the right

top corner of each document enclosed with the Application Form.

- e) The "IIT copy" of the bank challan.
- f) Request letter for question papers printed in larger font (see **APPENDIX-2**), if opted for it.
- g) Verify that you and your parent / guardian have signed at the appropriate places on SIDE-2 of the OMR Application Form.

7.2 Procedure to Put the Application Form in the Envelope

- Please write all relevant information on the envelope carefully.
- Duly completed OMR Application Form should be folded only along the original fold (shown in the middle by a dotted line on the SIDE-2). Make sure that your photograph, your signature and the BARCODE are on the outer side of the fold.
- Do not staple or paste together the Application Form and the attested copies of certificates. Keep the photocopies of certificates on the inner side of the folded OMR form.
- While putting the enclosures into the envelope, make sure the BARCODE and the application number on the OMR form are visible through the window of the envelope. This will help us to scan the BARCODE without opening the envelope, as soon as it is received in our office for quick processing.

7.3 Where and How to Send the Completed Application Form

- The envelope containing the completed OMR Application Form and enclosures should be sent to the zonal IIT (both examination cities chosen by you should belong to this zone, refer **APPENDIX-3**).
- The contact addresses of the zonal IITs to which you should send your envelope with the application are given on the back cover of this brochure.
- The envelope must be sent by Registered Post/Speed Post ONLY. Do not send it through ordinary post or private courier services. Please keep the postal receipt for future reference.

7.4 Last Date for Receipt of the Completed Application Form

The last date for receipt of duly completed Application Forms (Offline or printed copy of Online) at IITs is **5:00 PM (IST) on December 15**,

2011. Any application received after this date will not be accepted. Office of JEE is not responsible for any postal delay or irregularity or loss during postal transit.

7.5 Proof of Having Sent the Completed Application Form

- No acknowledgement card will be sent.
- No claim of submission of the application will be entertained unless it is supported with the photocopies of the postal receipt and of the filled OMR Application Form.
- No correspondence with regard to the application, eligibility, and admit card will be entertained unless the application number is quoted.
- You can check the receiving status of your application through IIT-JEE 2012 websites/ SMS/IVRS (Interactive Voice Response System) (see **APPENDIX-7**) 15 days after of the posting the application form by registered post and acceptance status from January 10, 2012 onwards.

8. ADMIT CARD

The Admit Card will bear the name, application number, registration number, photograph, signature, date of birth, address, language of Question Paper, and category of the candidate, along with name and address of the examination centre allotted.

The Admit Cards will be sent by Speed Post to the address mentioned in the Application Form only to those candidates who have submitted valid Application Forms, complete in all respects and received at IITs within the stipulated period and found to be eligible as per criteria mentioned in *Section 3*. JEE office 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.

You should carefully examine the Admit Card received by you for all the entries made there in. In case of any discrepancy, you should inform the issuing Institute immediately. You must bring the Admit Card to the examination centre. Only those candidates, who hold valid Admit Cards, will be allowed to write the examination.

If the Admit Card is not received by March 15, 2012:

You can obtain your registration number and examination centre from the institute of your zone through phone (IVRS) / Website (**APPENDIX-7**). After obtaining the data, write your name, registration number and the examination centre on two identical halves of an A4-size paper. Affix your photographs (same version of photograph which you have pasted in your Application Form) one on each half and sign on the bottom of the photographs. Then get this attested by the Head of your School / Institution last attended / gazetted officer / notary public.

Meet the IIT Representative with this paper on the day of examination (April 8, 2012) one hour before the commencement of the examination at the office of the Presiding Officer of the examination centre. The IIT Representative will retain one half and give the other half back to you. You will be allowed to write the examination provisionally.

8.1 Identity Verification

At the examination hall, the Admit Card should be presented to the invigilators for verification. The candidate's identity will be verified with respect to his/her details on the Admit Card and the centre verification record. If the identity is in doubt, the candidate will 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. Any impersonation will lead to disqualification in IIT-JEE 2012.

8.2 Safe-keep of the Admit Card

Since the qualified candidates are required to produce the Admit Card at the time of counselling and admission, it should be carefully preserved till the admission process through IIT-JEE 2012 is completed.

9. RESULTS OF IIT-JEE 2012

The answer paper of IIT-JEE 2012 is a machine-readable Optical Response Sheet (ORS). These sheets are graded and scrutinized with extreme care after the examination.

Candidates will get to know their All India Ranks (AIR) / Category ranks through IIT-JEE 2012 websites / SMS / IVRS on or after

May 18, 2012.

Candidates can view the answer keys of IIT-JEE 2012 on JEE websites from May 7, 2012.

Only those candidates who attempted both Paper 1 and Paper 2 will be considered for the ranking. Marks in Physics in IIT-JEE 2012 will be equal to marks in Physics section of Paper 1 plus marks in Physics section of Paper 2. Similar procedure will be followed for Chemistry and Mathematics. The sum of the marks obtained in the individual subjects in IIT-JEE 2012 will be the aggregate marks for the candidate.

Detailed procedure for ranking, tie-break and cut-off marks determination is given in APPENDIX-11.

10. COUNSELLING AND ADMISSIONS

10.1 Counselling

The courses available in the participating Institutes are given in APPENDIX-10. Institutes may offer new courses, which are not listed in the appendix. Updated information regarding these courses will be available at the time of counselling.

The seats in various courses of the institutes (IITs, IT-BHU Varanasi and ISM Dhanbad) are allotted strictly on the basis of the All India Rank, category rank, and the choices of each qualified student submitted at the time of counselling.

The details of the counselling and admission procedure will be published on the IIT-JEE 2012 websites and in the Counselling Brochure.

The results of IIT-JEE 2012 are also being used by other institutions for admissions to their courses / programmes. Therefore IIT-JEE 2012 provides performance data to these institutes. The names of these institutes will be published on the IIT-JEE 2012 website at a later date. Candidates should contact these institutes directly for admission.

10.2 Physical Fitness

Candidates who qualify in IIT-JEE 2012 will have to submit a physical fitness certificate from a

registered medical practitioner in the prescribed format that will be made available at an appropriate time. Candidates will be admitted only if they are physically fit for pursuing a course of study at the participating institutes.

10.3 Requirements for Mining Courses

Those who opt for Mining Engineering and Mining Machinery courses should make sure that they do not have any form of colour blindness. They will be required to submit a certificate from a registered medical practitioner to this effect at the time of counselling/ admission. The standards of visual acuity with or without glasses will be adhered to strictly for candidates seeking admission to Mining Engineering as per DGMS Circular 14 of 1972. Persons with one-eyed vision are not permitted to work underground. Candidates with the above limitations are not allowed to opt for admission to Mining Engineering or Mining Machinery Engineering.

10.4 Female 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 06.00 and 19.00 hrs.". Hence, female 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.

10.5 Aptitude Test for Admission to B. Arch. for the IIT-JEE 2012 Qualified Candidates

Candidates desirous of joining the B. Arch. (Architecture) courses will be required to qualify in an Aptitude Test to be conducted at all zonal IITs on June 03, 2012. However, the seat allotment will be done based on the JEE rank(s). The test will consist of one paper of three hours duration - from 09:00 to 12:00 hrs. Question papers for Aptitude Test for B. Arch. will be in English only. Syllabus for this test is given in APPENDIX-8. Candidates must register online for this Aptitude Test between 25 and 30 May, 2012.

SYLLABUS FOR IIT-JEE 2012

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 ΔG° 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 ΔG ; 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*, α , β , γ), close packed structure of solids (cubic), packing in fcc, bcc and hcp lattices; Nearest neighbors, ionic radii, simple ionic compounds, point defects.

Solutions: Raoult's law; Molecular weight determination from lowering of vapor 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 α , β and γ 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.

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 Fe^{2+} , Cu^{2+} and Zn^{2+} ; Potassium permanganate, potassium dichromate, silver oxide, silver nitrate, silver thiosulphate.

Ores and minerals: Commonly occurring ores and minerals of iron, copper, tin, lead, magnesium, aluminum, 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 aluminum); Cyanide process (silver and gold).

Principles of qualitative analysis: Groups I to V (only Ag^+ , Hg^{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 : Hybridization 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.

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.

Analytical geometry: 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 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 Theorem 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.

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), Stokes' 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.

**FORMAT OF REQUEST LETTER FOR QUESTION PAPERS PRINTED IN
LARGER FONT**

From

Date : _____

Name of candidate

Application Number

Address :

Phone : _____

Mobile : _____

Email : _____

To

The Chairman
IIT-JEE 2012
IIT _____
(Write Appropriate Zone)

Dear Sir,

Sub: Requirement of Question Papers Printed in Larger Font

I am a candidate with poor eye-sight and unable to read question papers printed in normal size font even with corrective spectacles/lenses.

I would like to have question papers printed in larger font (English / Hindi) for IIT-JEE 2012.

Thanking you,

Signature of the candidate

(Name of the candidate)

Signature of the Parent/Guardian

(Name of the Parent/Guardian)

LIST OF EXAMINATION CITIES / TOWNS FOR IIT-JEE 2012

IIT BOMBAY ZONE																																																																																																																																																																																																									
State/City/Town	Code																																																																																																																																																																																																								
GOA Panaji	101	Mathura	216	Port Blair	501																																																																																																																																																																																																				
GUJARAT Ahmedabad	102	UAE Dubai	217	ANDHRA PRADESH Visakhapatnam	502																																																																																																																																																																																																				
IIT GUWAHATI ZONE																																																																																																																																																																																																									
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ARUNACHAL PRADESH Itanagar	301	CHHATTISGARH Bhilai	503	PUDUCHERRY Puducherry	616																																																																																																																																																																																																				
ASSAM Dibrugarh	302	Bilaspur	504	TAMIL NADU Chennai	617																																																																																																																																																																																																				
Goalpara	303	Raipur	505	Coimbatore	618																																																																																																																																																																																																				
Guwahati	304	JHARKHAND Bokaro	506	Madurai	619																																																																																																																																																																																																				
Jorhat	305	Dhanbad	507	Salem	620																																																																																																																																																																																																				
Silchar	306	Jamshedpur	508	Trichy	621																																																																																																																																																																																																				
Tezpur	307	Ranchi	509	Tirunelveli	622																																																																																																																																																																																																				
BIHAR Bhagalpur	308	ORISSA Balasore	510	IIT ROORKEE ZONE																																																																																																																																																																																																					
Gaya	309	Berhampur	511	State/City/Town	Code			CHANDIGARH Chandigarh	701	Katihar	310	Bhubaneswar	512	HARYANA Ambala	702	Muzaffarpur	311	Cuttack	513	Kurukshetra	703	Patna	312	Rourkela	514	Panipat	704	MANIPUR Imphal	313	Sambalpur	515	Rohtak	705	MEGHALAYA Shillong	314	SIKKIM Gangtok	516	Sonipat	706	WEST BENGAL Siliguri	315	TRIPURA Agartala	517	Yamuna Nagar	707	WEST BENGAL Asansol	518	WEST BENGAL Burdwan	519	HIMACHAL PRADESH Mandi	708	Burdwan	519	Belur	520	Palampur	709	Belur	520	Durgapur	521	Shimla	710	Durgapur	521	Kharagpur	522	PUNJAB Amritsar	711	Kharagpur	522	Kolkata (North)	523	Bathinda	712	Kolkata (Salt Lake)	524	Kolkata (South)	525	Jalandhar	713	Kolkata (South)	525	Malda	526	Ludhiana	714	Malda	526	UTTARAKHAND Dehradun	716	Patiala	715	IIT DELHI ZONE		Roorkee	717	UTTARAKHAND Roorkee	716	State/City/Town	Code	IIT KANPUR ZONE		UTTAR PRADESH Bareilly	718	DELHI Delhi (East)	201	State/City/Town	Code	Gautam Budh Nagar	719	Delhi (West)	202	MADHYA PRADESH Bhopal	401	(Noida)		Delhi (North)	203	Gwalior	402	Ghaziabad	720	Delhi (South)	204	Jabalpur	403	Meerut	721	Delhi (Central)	205	UTTARAKHAND Nainital	404	Moradabad	722	HARYANA Ballabgarh	206	Pantnagar	405	Saharanpur	723	Faridabad	207	UTTAR PRADESH Agra	406	Varanasi	724	Gurgaon	208	Allahabad	407			JAMMU & KASHMIR Jammu	209	Gorakhpur	408			MADHYA PRADESH Indore	210	Jhansi	409			Ujjain	211	Kanpur	410			RAJASTHAN Alwar	212	Lucknow	411			Sikar	213	Raibareilly	412			Udaipur	214	IIT KHARAGPUR ZONE				UTTAR PRADESH Aligarh	215	State/City/Town	Code					ANDAMAN AND NICOBAR ISLANDS			
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FORM OF CERTIFICATE TO BE PRODUCED BY OTHER BACKWARD CLASSES APPLYING FOR ADMISSION TO CENTRAL EDUCATIONAL INSTITUTIONS (CEIs), UNDER THE GOVERNMENT OF INDIA

This is to certify that Shri / Smt. / Kum*. _____ Son / Daughter*
 of Shri / Smt.* _____ of Village/Town*
 _____ District/Division* _____ in the
 State belongs to the _____
 community which is recognized as a backward class under:

- (i) Resolution No. 12011/68/93-BCC(C) dated 10/09/93 published in the Gazette of India Extraordinary Part I Section I No. 186 dated 13/09/93.
- (ii) Resolution No. 12011/9/94-BCC dated 19/10/94 published in the Gazette of India Extraordinary Part I Section I No. 163 dated 20/10/94.
- (iii) Resolution No. 12011/7/95-BCC dated 24/05/95 published in the Gazette of India Extraordinary Part I Section I No. 88 dated 25/05/95.
- (iv) Resolution No. 12011/96/94-BCC dated 9/03/96.
- (v) Resolution No. 12011/44/96-BCC dated 6/12/96 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 11/12/96.
- (vi) Resolution No. 12011/13/97-BCC dated 03/12/97.
- (vii) Resolution No. 12011/99/94-BCC dated 11/12/97.
- (viii) Resolution No. 12011/68/98-BCC dated 27/10/99.
- (ix) Resolution No. 12011/88/98-BCC dated 6/12/99 published in the Gazette of India Extraordinary Part I Section I No. 270 dated 06/12/99.
- (x) Resolution No. 12011/36/99-BCC dated 04/04/2000 published in the Gazette of India Extraordinary Part I Section I No. 71 dated 04/04/2000.
- (xi) Resolution No. 12011/44/99-BCC dated 21/09/2000 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 21/09/2000.
- (xii) Resolution No. 12015/9/2000-BCC dated 06/09/2001.
- (xiii) Resolution No. 12011/1/2001-BCC dated 19/06/2003.
- (xiv) Resolution No. 12011/4/2002-BCC dated 13/01/2004.
- (xv) Resolution No. 12011/9/2004-BCC dated 16/01/2006 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 16/01/2006.

Shri / Smt. / Kum. _____ and / or his family
 ordinarily reside(s) in the _____ District / Division of _____
 State. This is also to certify that he/she does not belong to the persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the Government of India, Department of Personnel & Training O.M. No.36012/22/93-Estt.(SCT) dated 08/09/93 which is modified vide OM No. 36033/3/2004 Estt.(Res.) dated 09/03/2004, further modified vide OM No. 36033/3/2004-Estt. (Res.) dated 14/10/2008 or the latest notification of the Government of India.

Dated:

District Magistrate /
 Deputy Commissioner /
 Competent Authority

Seal

* Please delete the word(s) which are not applicable.

NOTE :

- (a) The term 'Ordinarily resides' used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.
- (b) The authorities competent to issue Caste Certificates are indicated below:
 - (i) District Magistrate / Additional Magistrate / Collector / Deputy Commissioner / Additional Deputy Commissioner / Deputy Collector / 1st Class Stipendiary Magistrate / Sub-Divisional magistrate / Taluka Magistrate / Executive Magistrate / Extra Assistant Commissioner (not below the rank of 1st Class Stipendiary Magistrate).
 - (ii) Chief Presidency Magistrate / Additional Chief Presidency Magistrate / Presidency Magistrate.
 - (iii) Revenue Officer not below the rank of Tehsildar' and
 - (iv) Sub-Divisional Officer of the area where the candidate and / or his family resides.

DECLARATION / UNDERTAKING - FOR OBC CANDIDATES ONLY

I, _____ son / daughter of Shri _____ resident of village/town/city _____ district _____

State _____ hereby declare that I belong to the _____ community which is recognised as a backward class by the Government of India for the purpose of reservation in services as per orders contained in Department of Personnel and Training Office Memorandum No.36012/22/93- Estt. (SCT), dated 8/9/1993. It is also declared that I do not belong to persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the above referred Office Memorandum, dated 8/9/1993, which is modified vide Department of Personnel and Training Office Memorandum No.36033/3/2004 Estt.(Res.) dated 9/3/2004 and further modified vide OM No 36033/3/2004-Estt.(Res.) dated 14/10/2008 or the latest notification of the Government of India.

I also declare that the condition of status / annual income for 'Creamy Layer' of my parents is within prescribed limits as on financial year ending on March 31, 2011.

Signature of the Candidate

Place:

Date:

Declaration / undertaking not signed by Candidate will be rejected

NOTE:

"The admission is provisional and is subject to the community certificate being verified through the proper channels. If the verification reveals that the claim of the candidate to belong to Other Backward Classes or not to belong to the creamy layer is false, his/her admission will be terminated forthwith without assigning any further reasons and without prejudice to such further action as may be taken under the provisions of the Indian Penal Code for production of false certificates."

FORM OF CERTIFICATE TO BE PRODUCED BY SCHEDULED CASTES AND SCHEDULED TRIBES CANDIDATES

1. This is to certify that Shri/ Shrimati/ Kumari* _____ son/daughter* of _____ of Village/Town* _____ of State/Union _____ District/Division* _____ Territory* _____ belongs to the _____ Scheduled Caste / Scheduled Tribe* under :-

- * The Constitution (Scheduled Castes) Order, 1950
- * The Constitution (Scheduled Tribes) Order, 1950
- * The Constitution (Scheduled Castes) (Union Territories) Order, 1951
- * The Constitution (Scheduled Tribes) (Union Territories) Order, 1951

[As amended by the Scheduled Castes and Scheduled Tribes Lists (Modification Order) 1956, the Bombay Reorganisation Act, 1960, the Punjab Reorganisation Act, 1966, the State of Himachal Pradesh Act, 1970, the North Eastern Areas (Reorganisation) Act, 1971, the Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 1976 and the Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 2002]

- * The Constitution (Jammu and Kashmir) Scheduled Castes Order, 1956;
- * The Constitution (Andaman and Nicobar Islands) Scheduled Tribes Order, 1959, as amended by the Scheduled Castes and Scheduled Tribes Order (Amendment) Act, 1976;
- * The Constitution (Dadara and Nagar Haveli) Scheduled Castes Order, 1962;
- * The Constitution (Dadara and Nagar Haveli) Scheduled Tribes Order, 1962;
- * The Constitution (Pondicherry) Scheduled Castes Order, 1964;
- * The Constitution (Uttar Pradesh) Scheduled Tribes Order, 1967;
- * The Constitution (Goa, Daman and Diu) Scheduled Castes Order, 1968;
- * The Constitution (Goa, Daman and Diu) Scheduled Tribes Order, 1968;
- * The Constitution (Nagaland) Scheduled Tribes Order, 1970;
- * The Constitution (Sikkim) Scheduled Castes Order, 1978;
- * The Constitution (Sikkim) Scheduled Tribes Order, 1978;
- * The Constitution (Jammu and Kashmir) Scheduled Tribes Order, 1989;
- * The Constitution (Scheduled Castes) Order (Amendment) Act, 1990;
- * The Constitution (Scheduled Tribes) Order (Amendment) Act, 1991;
- * The Constitution (Scheduled Tribes) Order (Second Amendment) Act, 1991;

2. # This certificate is issued on the basis of the Scheduled Castes / Scheduled Tribes* Certificate issued to Shri /Shrimati* _____ father/mother* of Shri /Shrimati /Kumari* _____ of Village/Town* _____ in District/Division* _____ of the State State/Union Territory* _____ who belong to the Caste / Tribe* which is recognised as a Scheduled Caste / Scheduled Tribe* in the State / Union Territory* _____ issued by the _____ dated _____.

3. Shri/ Shrimati/ Kumari * _____ and / or* his / her* family ordinarily reside(s)** in Village/Town* _____ of _____ District/Division* of the State Union Territory* of _____.

Signature : _____
Designation : _____
(with seal of the Office)

Place : _____ State/Union Territory* _____
Date : _____

* Please delete the word(s) which are not applicable.

Applicable in the case of SC/ST Persons who have migrated from another State/UT.

IMPORTANT NOTES

1. The term "ordinarily reside(s)***" used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.
2. Officers competent to issue Caste/Tribe certificates:
 - (i) District Magistrate / Additional District Magistrate / Collector / Deputy Commissioner / Additional Deputy Commissioner / Deputy Collector / Ist Class Stipendiary Magistrate / City Magistrate / Sub-Divisional Magistrate / Taluka Magistrate / Executive Magistrate / Extra Assistant Commissioner.
 - (ii) Chief Presidency Magistrate / Additional Chief Presidency Magistrate / Presidency Magistrate.
 - (iii) Revenue Officers not below the rank of Tehsildar.
 - (iv) Sub-divisional Officer of the area where the candidate and/ or his family normally reside(s).
 - (v) Administrator / Secretary to Administrator / Development Officer (Lakshdweep Island).
3. Certificate issued by any other authority will be rejected.

BANK BRANCHES SELLING OFFLINE APPLICATION FORMS

IIT Bombay Zone:

List of CANARA BANK branches

Goa:

Margao (Kamath House)
Panaji (Mathias Plaza)

Gujarat:

Ahmedabad (Rewdi Bazar; Ashram Road Branch; Bhadra Branch; Naroda Road Branch)
Rajkot (Tricon Baug)
Surat (Kotsafil Road; Majura Gate Branch)
Vadodara (Prof. Manik Rao Road; Vadodara Akota Branch)

Karnataka:

Belgaum (Khade Bazar)
Dharwad (Market Main; Station

Road-Maluuaddi)

Maharashtra:

Akola (MG Road)
Amaravati (Opp.City Kotwali)
Aurangabad (Shahganj; Surana Nagar)
Dombivli(E) (Patkar Road)
Jalgaon (Visanji Nagar)
Kolhapur (Laxmipuri; Rajarampuri)
Latur (Old Kapad Lane)
Mumbai (Andheri (W) - Jayprakash Road; Borivali (W) - S.V.P.Road; Byculla-Hotel Heritage; Dadar (W) - Ranade Road Extension; Fort Market-Shahid Bhagpal Pandiyani House; Ghatkopar (E) - Ratilal B.

Mehta Marg; IIT Bombay-Gulmohar Bldg.; Kanjurmarg (W) -Opp. Naval Dockyard Colony; Malad (W) - Laxminarayana Shopping Centre; Sion (W) -Mukund Niwas; Versova-Seven Bunglows; Worli-Dr.Annie Besant Road)
Nagpur (Sitabuldi; Itwari Branch; khamla Branch; gandhinagar branch; Sadar Bazar Branch)
Nanded (Tarasingh Market)
Nashik (N.C.Cinema; Jail Road)
Navi Mumbai (Opp. Nerul Railway Station; Turbhe Branch)
Pune (Sadashiv Peth; Model Colony; Koregaon Park; MG Road Red cross Bldg; Shivaji Road) Ratnagiri

(Nr.Congress Bhavan)

Satara (Raviwar Peth)
Solapur (Saraswati Chowk; Chatigalibranch)
Thane (Naupada; Thane(E)-Kopri)

Rajasthan:

Ajmer (M.G.Marg: Pratviraj Marg)
Bhilwara (14-A, PWC Road)
Bikaner (Phad Bazar)
Jaipur (Arvind Marg; Malaviya Nagar; Mirza Ismail Road, Manasarovar; Vaishali Nagar)
Jodhpur (Jalori Gate)
Kota (Baran Road)
Sriganganagar (Shiv Circle)

IIT Delhi Zone:

List of UNION BANK OF INDIA branches

Delhi:

Anand Vihar (C-8, Anand Vihar), Connaught Place (14/15F), **Dwarka** (Bansal Plaza Sec.-6), **East Patel Nagar** (26/2), **Janakpuri** (C-15, Community Centre), **Karol Bagh** (Arya Samaj Road), **Model Town-2** (B-5), **Moti Bagh I** (Palika Bhawan), **Nehru Place** (73/74, Sheetala House), **Okhla** (Jamia Nagar), **Pitampura** (Shopping Centre, LU

Block), **Rajouri Garden** (Patel Market), **Rohini** (63, CSC-II, Sector 9), S.D.A. (Opposite IIT Main Gate), **Shahdara** (Raj Block, G.T. Road), **Shram Shakti Bhawan** (Rafi Marg, Behind RBI Bldg.)

Haryana:

Faridabad (58, Neelam Bata Road)
Gurgaon (New Railway Road)

Jammu & Kashmir:

Jammu (Raghunath Bazar)
Srinagar (Lal Chowk)

Madhya Pradesh:

Indore (1/3 Murai Mohalla, Sanyogita Ganj; Vishnupuri, AB Road)
Ujjain (5, Vishala Kshetra, Rishi Nagar)

Rajasthan:

Alwar (Road No. 2, Jai Marg)
Sikar (Rani Sati Road, Ashok Vihar)
Udaipur (Panch Sheel Marg)

Uttar Pradesh:

Aligarh (Patthar Bazar, Rly. Road)
Mathura (1872 Tilak Dwar)

IIT Guwahati Zone:

List of STATE BANK OF INDIA branches

Arunachal Pradesh:

Itanagar (Papumpara)

Assam:

Biswanath Chariali (Main)
Bongaigaon (Main)
Dhubri (Main)
Dibrugarh (Main)
Diphu (Main)
Goalpara (Main)
Guwahati (Amingaon; Bamunimaidan; Dispur; IIT Guwahati; Panbazar)
Jorhat (Main)

Kokrajhar (Main)

Nagaon (Main)
Sivasagar (Central Market)
Silchar (Park Road)
Tezpur (Near Padum Pukhuri)
Tinsukia (AT Road)

Bihar:

Barauni (Rajendra Road)
Begusarai (Begusarai)
Bettiah (Main)
Bhagalpur (Sonapatti)
Bihar Sharif (Main)
Darbhanga (Main)

Gaya (Main)

Hazipur (Main)
Katihar (Main)
Muzaffarpur (Main)
Patna (Anandpuri; Baily Road; Boring Road; Maurya Lok Complex; New Market; Kankarbagh; Patliputra Colony; Patna Main; Patna Secretariat; Rajendra Nagar; Sri Krishna Puri)
Purnea (Purnea Bazar)

Manipur:

Imphal (MG Road)

Meghalaya:

Shillong (Kachari Road)
Tura (Main)

Mizoram:

Aizawl (Solomon Cave)

Nagaland:

Dimapur (Main)

West Bengal:

Siliguri (Hill Cart Road)

IIT Kanpur Zone:

List of STATE BANK OF INDIA branches

Madhya Pradesh:

Bhopal (T.T. Nagar)
Gwalior (Jiwaji Chowk, Lashkar)
Jabalpur (Main Branch)

Uttarakhand:

Almora (The Mall)
Haldwani (Nainital Road)

Nainital (The Mall)

Pantnagar (University Campus)

Uttar Pradesh:

Agra (M.G. Road)
Allahabad (Kutcheri Road and MLNR Engg. College)
Amethi (Railway Station Road)

Azamgarh (Near Collectorate)

Ballia (Near Kutcheri)
Banda (Kutcheri Compound)
Etawah (Shastri Nagar)
Faizabad (Civil Lines)
Gonda (Malaviya Nagar)
Gorakhpur (Bank Road)
Hardoi (Station Road)

Jhansi (Civil Lines, Near Elite Crossing)

Kanpur (Mall Road and IIT Kanpur)
Lucknow (Moti Mahal Marg and Ashok Marg)
Raebareilly (Super Market)
Sitapur (Eye Hospital Road)
Sultanpur (Near Bus Stand)

IIT Kharagpur Zone:

List of **AXIS BANK** branches

Andaman & Nicobar Islands:

Port Blair (5,Middle Point)

Andhra Pradesh:

Vishakapatnam (Gajuwaka,Dwarka Nagar, Ramnagar,MVP Colony)

Chhattisgarh:

Bhilai (Supela Chowk)
Bilaspur (Rama Trade Centre, Seepat Road)
Raipur (Jeevan Bima Marg, Tagore Nagar, G.E.Road)

Jharkhand:

Bokaro (15/D/1 Western Avenue)
Dhanbad (Bank More, City Centre)
Hazaribagh (Opp.Civil Court)

Jamshedpur (Volta House, Sakchi)
Ramgarh (Narayani Complex)
Ranchi (Near Albert Ekka Chowk,Ashoknagar, Kutchary Road),

Orissa:

Angul (Shreeram Market Complex)
Balasore (Near Police Lines Square)
Berhampur (Near Sales Tax Square)
Bhubaneswar (Arch bishop House, Rasulgarh,Samantarapur, Chandrasekharpur, Kalpana Square,CRPF Square)
Cuttack (Badambadi, College Square, Bidanasi)
Rourkela (Mangal Kunj Kachery Road, Panposh Road)

Sambalpur (Ashok Talkies Road)

Sikkim:

Gangtok (M.G.Road)

Tripura:

Agartala (HG Basak Road)

West Bengal:

Asansol(Apurba Complex),
Baharampur(3/20 KK Banerjee Road),
Bankura (Nutan Chati)
Barasat (Navapally)
Barackpore (Barackpore Shopping Arcade)
Burdwan (23, GT Road)
Belur (G.T.Road, Bally)
Chandannagar (Burabazar Main

Road)

Durgapur (Sahid Khudiram Sarani, Benachity)

Howrah (Salkia)

Kalyani (B-9/276,CA)

Kharagpur (Malancha Road)

Kolkata (Airport Branch,Dunlop Bridge, Dumdum, Central Avenue, Ganesh Chandra Avenue, Kankurgachi, Lake Town, Electronic Complex, Salt Lake, Sarat Bose Road, Garia, Golpark, New Alipore, Prince Anwarshah, Rashbehari, Tollygunge, Manton, B.B.D.Bag)

Malda (KJ Sanyal Road)

Midnapore (Station Road)

Purulia (Ranchi Road)

IIT Madras Zone:

List of **INDIAN BANK** branches

Andhra Pradesh:

Amalapuram
Cuddapah
Guntur
Hyderabad (Main Branch, Narayanaguda, Secunderabad, Begum Bazar, Himayat Nagar, Sri Nagar Colony)
Kakinada
Kurnool
Mehaboob Nagar
Nellore

Tirupathi (Gandhi Road)
Vijayawada (Kaleswara Rao Market)
Warangal

Karnataka:

Bangalore (Kempegowda Road Jaya Nagar, Malleswaram)
Bijapur
Davangere
Gulbarga
Mangalore
Mysore (Ashoka Road)

Kerala:

Ernakulam (Shanmugam Road, MG Road)
Kannur
Kozhikode
Thiruvananthapuram (MG Road)
Thrissur

Puducherry:

Puducherry (Main Branch)

Tamil Nadu:

Chennai (Adyar, Anna Nagar, Royapuram, T. Nagar)
Coimbatore (R.S. Puram) Kanyakumari
Madurai (Main Branch)
Salem (Main Branch)
Trichy (Cantonment)
Tirunelveli (Town)
Vellore (Main Branch)

IIT Roorkee Zone:

List of **PUNJAB NATIONAL BANK** branches

Himachal Pradesh:

Mandi (Main Branch)
Palampur (Main Branch)
Shimla (The Mall)

Punjab:

Amritsar (Lawrence Road)
Bathinda (Bank Street)
Jalandhar (Civil Lines)
Ludhiana (Civil Lines)
Pathankot (Railway Road)
Patiala (The Mall)

Uttarakhand:

Dehradun (Astley Hall)
Hardwar (Ahmedpur)
Roorkee (IIT Campus)
Srinagar (Garhwal) (Main Branch)
Uttarkashi (Garhwal) (Main Branch)

Uttar Pradesh:

Bareilly (Shyam Ganj)
Bijnor (Main Branch)
Gautam Budh Nagar (Noida) (Plot No. 20, 21, Sector-18)
Ghaziabad (Navyug Market)

Meerut (Eastern Katchehri Road and Abu Lane)

Moradabad (Civil Lines)

Muzaffarnagar (Gaushala Nai Mandi, South Bhopa Road)

Saharanpur (Shaheed Ganj)

Varanasi (Nichi Bagh and S-9/471, Naibasti, Pandeypur).

Chandigarh:

(Sector 17-C and Sector 37-D)

Haryana:

Ambala (Tandura Bazar, Ambala City)
Hissar (Model Town)
Kurukshetra (Railway Road, Thanesar)
Panipat (G.T. Road)
Rohtak (Jhajjar Road)
Sonipat (Main Branch)
Yamuna Nagar (Saharanpur Road)

CONTACT DETAILS

Institute	Website	Email ID	IVRS	
			STD code	Number
IIT Bombay	http://www.jee.iitb.ac.in	jeeiitb@iitb.ac.in	022	2576 7062
IIT Delhi	http://jee.iitd.ac.in	jeechair@admin.iitd.ac.in	011	2658 1064 2658 2002
IIT Guwahati	http://www.iitg.ac.in/jee	jee@iitg.ernet.in	0361	269 2788
IIT Kanpur	http://www.jee.iitk.ac.in	jee@iitk.ac.in	0512	259 7236 679 7236
IIT Kharagpur	http://www.iitkgp.ernet.in/jee	jee@hiji.iitkgp.ernet.in	03222	27 8241
IIT Madras	http://jee.iitm.ac.in	jee@iitm.ac.in	044	2257 8223
IIT Roorkee	http://www.iitr.ac.in/jee	jeech@iitr.ernet.in	01332	27 9806

Mobile numbers for Short Message Service (SMS)

Application status can also be obtained through two SMS servers. Candidates may send SMS to either of the following numbers:

9434709991, 9434709992

by sending their application number (eight digits without the first character 'C') as message text (for example, write 10000001 for application number 'C10000001' and send to any of these numbers to know the status of the Application No. C10000001).

SYLLABUS FOR APTITUDE TEST FOR B.Arch. PROGRAMMES

Freehand drawing:

Simple drawings 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.

Candidates are advised to bring geometry box sets, pencils, erasers and colour pencils or crayons for the Aptitude Test.

17. NAME OF ONE PARENT / GUARDIAN AS IN THE 10th CLASS CERTIFICATE (IN CAPITAL LETTERS)

The image shows a large grid of pink circles on a white background. At the top left, the name "SOTAN SINGH" is written in black capital letters. The grid contains several black dots, notably one at the top left, one in the middle-left column, and one in the bottom-left row. The rest of the grid is filled with pink circles.

18. PLACE OF 10th CLASS SCHOOLING

VILLAGE	<input type="radio"/>
TOWN	<input type="radio"/>
CITY	<input checked="" type="radio"/>
19. TYPE OF PREPARATION	
SELF	<input checked="" type="radio"/>
OTHER	<input type="radio"/>
20. BOARD OF	

**20. BOARD OF
QUALIFYING
EXAMINATION**

- CBSE
- STATE BOARD
- ICSE
- OTHER

21. OCCUPATION OF PARENT / GUARDIAN

AGRICULTURE	<input type="radio"/>	TEACHING / RESEARCH	<input type="radio"/>
BUSINESS	<input type="radio"/>	PUBLIC / GOVT. / SERVICE	<input checked="" type="radio"/>
MEDICAL	<input type="radio"/>	PRIVATE SERVICE	<input type="radio"/>
ENGINEERING	<input type="radio"/>	DEFENCE SERVICE	<input type="radio"/>
LAW PRACTICE	<input type="radio"/>	OTHER	<input type="radio"/>

22. PARENTS' EDUCATIONAL BACKGROUND

BOTH GRADUATES

ONLY ONE GRADUATE

NEITHER GRADUATE

23. TOTAL ANNUAL INCOME OF PARENT / GUARDIAN

- BELOW Rs. 1,00,000
- Rs. 1,00,000 - 4,50,000
- ABOVE Rs. 4,50,000

SOLD HERE

24. MOTHER TONGUE
(Refer Information Section)

0 5
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

**25. PINCODE OF
PERMANENT PLACE
OF RESIDENCE**

26. MOBILE NUMBER OF CANDIDATE

27. LANDLINE NO. WITH STD. CODE

28. DECLARATION BY THE CANDIDATE

I hereby declare that all the particulars stated in this application form are true to the best of my knowledge and belief. I have read IIT-JEE 2012 Information Brochure and I shall abide by the terms and conditions therein. I also certify that I have not appeared in JEE in 2010 or earlier and neither taken admission nor paid the registration fee at any of the IITs/ IT-BHU / ISM-Dhanbad. In the event of suppression or distortion of any fact regarding the eligibility criteria, nationality etc., in my application form, I understand that I will be denied the opportunity to appear in IIT-JEE 2012 and if already admitted, my admission / degree acquired is liable for cancellation. I also understand that the decision of the Joint Admission Board regarding my admission to IITs / IT-BHU / ISM-Dhanbad is final and I shall abide by the decision. Further, if admitted, I promise to abide by the rules and norms of discipline of the Institute I join.

Place : New Delhi

Date 11/12/2011

Name of Parent / Guardian : SOTAN SINGH

Dhaww

Signature of Candidate

Sohan Singh

Countersigned by Parent / Guardian

COURSES AVAILABLE IN ALL IITS, IT-BHU AND ISM DHANBAD

Applicants must note that:

- (a) the titles of the courses listed below may be changed,
- (b) some of the listed courses may be dropped or altered,
- (c) some new courses may be offered.

Therefore the list may not be considered as the final. Exact list will be made available at the time of counselling.

Programme	IIT Bombay	IIT Delhi	IIT Guwahati	IIT Kanpur	IIT Kharagpur	IIT Madras	IIT Roorkee	IT-BHU Varanasi	ISM Dhanbad
B.Tech. 4 Years									
1 Aerospace Engineering									
2 Agricultural & Food Engineering	•			•	•	•			
3 Biological Sciences and Bioengineering				•					
4 Biotechnology			•				•		
5 Biotechnology & Biochemical Engineering					•				
6 Ceramic Engineering								•	
7 Chemical Engineering	•	•	•	•	•	•	•	•	•
8 Chemical Science and Technology			•						
9 Civil Engineering	•	•	•	•	•	•	•	•	•
10 Computer Science & Engineering	•	•	•	•	•	•	•	•	•
11 Electrical Engineering	•	•		•	•	•	•	•	•
12 Electrical Engineering (Power)		•							
13 Electronics Engineering								•	
14 Electronics & Communication Engineering			•				•		•
15 Electronics & Electrical Communication Engineering					•				
16 Electronics & Electrical Engineering				•					
17 Engineering Physics	•	•	•				•		
18 Environmental Engineering									•
19 Industrial Engineering					•				
20 Instrumentation Engineering						•			
21 Manufacturing Science and Engineering					•				
22 Materials Science and Engineering					•				
23 Metallurgical & Materials Engineering						•	•	•	
24 Mathematics and Computing			•						
25 Mechanical Engineering	•	•	•	•	•	•	•	•	•
26 Metallurgical Engineering								•	
27 Metallurgical Engineering & Materials Science	•								
28 Mineral Engineering									•
29 Mining Engineering					•			•	•
30 Mining Machinery Engineering									•
31 Naval Architecture & Ocean Engineering						•			
32 Ocean Engineering & Naval Architecture						•			
33 Petroleum Engineering									•
34 Production and Industrial Engineering	•						•		
35 Pulp & Paper Engineering							•		
36 Textile Technology		•							
Four-year B.S. Courses									
37 Chemistry				•					
38 Economics					•				
39 Mathematics and Scientific Computing				•					
40 Physics					•				
B. Pharm. 4 Years									
41 Pharmaceutics								•	

B. Des. 4 years								
42 Design				•				
B. Arch. 5 years								
43 Architecture				•		•		
M. Pharm. Dual Degree 5 years								
44 Pharmaceutics							•	
M.Sc. Integrated 5 years								
45 Applied Geology					•			
46 Applied Mathematics						•		
47 Applied Physics								•
48 Chemistry	•				•		•	•
49 Economics					•			
50 Exploration Geophysics					•			
51 Mathematics and Computing					•			•
52 Physics					•		•	
BS & MS Dual Degree 5 years								
53 Biological Sciences						•		
54 Physics						•		
M.Sc. Tech. Integrated 5 years								
55 Applied Geology								•
56 Applied Geophysics								•
M.Tech. Integrated 5 year								
57 Geological Technology							•	
58 Geophysical Technology							•	
59 Engineering Physics								•
60 Industrial Chemistry								•
61 Mathematics & Computing		•						•
62 Polymer Science and Technology							•	
B.Tech./M.Tech. Dual Degree 5 Years								
63 Aerospace Engineering					•	•		
64 Aerospace Engineering with M.Tech. in Applied Mechanics with specializations in Biomedical Engineering						•		
65 Agricultural and Food Engineering with M.Tech in any of the listed specializations					•			
66 Biochemical Engineering								•
67 Biochemical Engineering & Biotechnology		•						
68 Bioengineering with M.Tech. in Biomedical Technology								•
69 Biological Engineering						•		
70 Biotechnology & Biochemical Engineering				•				
71 Ceramic Engineering								•
72 Chemical Engineering	•	•			•	•		
73 Chemical Engineering with M. Tech. in Hydrocarbon Engineering							•	
74 Civil Engineering with M. Tech. in Applied Mechanics in any of the listed specialization						•		
75 Civil Engineering with M. Tech. in Infrastructural Civil Engineering						•		
76 Civil Engineering with M. Tech. in Structural Engineering								•
77 Civil Engineering with M. Tech. in any of the listed specialization					•	•		
78 Computer Science & Engineering		•			•	•		•
79 Computer Science & Engineering with M. Tech. in Information Technology							•	
80 Electrical Engineering with M. Tech. in Applied Mechanics with specialization in Biomedical Engineering							•	
81 Electrical Engineering with M. Tech. in Communications and Signal Processing	•							
82 Electrical Engineering with M. Tech. in Communication Engineering							•	
83 Electrical Engineering with M. Tech. in Information & Communication Technology		•						
84 Electrical Engineering with M. Tech. in Microelectronics	•							
85 Electrical Engineering with M. Tech. in Microelectronics & VLSI Design						•		
86 Electrical Engineering with M. Tech. in any of the listed specializations					•			

87	Electrical Engineering with M.Tech. in Power Electronics							•	•	
88	Electrical Engineering with M. Tech. in Power Systems and Power Electronics							•		
89	Electronics & Communication Engineering with M. Tech. in Wireless Communication							•	•	
90	Electronics & Electrical Communication Engineering with M. Tech. in any of the listed specializations							•		
91	Energy Engineering with M.Tech in Energy Systems Engineering	•								
92	Engineering Design with M. Tech. in Automotive Engineering							•		
93	Engineering Design with M.Tech in Biomedical Design							•		
94	Engineering Product Design and Manufacturing with M.Tech in Design and Quality Engineering							•		
95	Engineering Physics with M.Tech in Engineering Physics with specialization in Nano Science	•						•		
96	Industrial Engineering with M. Tech. in Industrial Engineering and Management							•		
97	Manufacturing Science & Engineering with M. Tech. in Industrial Engineering & Management							•		
98	Material Science & Technology								•	
99	Mechanical Engineering								•	
100	Mechanical Engineering with M. Tech. in Computer Aided Design & Automation	•								
101	Mechanical Engineering with M. Tech. in Computer Integrated Manufacturing	•								
102	Mechanical Engineering with M. Tech. In Thermal Engineering							•		
103	Mechanical Engineering with M. Tech. in Intelligent Manufacturing							•		
104	Mechanical Engineering with M. Tech. in Product Design							•		
105	Mechanical Engineering with M. Tech. in any of the listed specialization							•		
106	Metallurgical Engineering									•
107	Metallurgical Engineering & Materials Science with M. Tech. in Ceramics & Composites	•								
108	Metallurgical Engineering & Materials Science with M. Tech. in Metallurgical Process Engineering	•								
109	Metallurgical & Materials Engineering							•		
110	Metallurgical & Materials Engineering with M. Tech. in Metallurgical & Materials Engineering							•		
111	Mineral Engineering with M.Tech. in Mineral Engineering									•
112	Mineral Engineering with MBA									•
113	Mining Engineering							•		•
114	Mining Engineering with M.Tech. in Mining Engineering									•
115	Mining Engineering with MBA									•
116	Mining Engineering with M.Tech. in Safety Engineering and Disaster Management in Mines							•		
117	Naval Architecture & Ocean Engineering							•		
118	Naval Architecture Engineering with M.Tech. in Applied Mechanics in any of the listed specializations							•		
119	Ocean Engineering & Naval Architecture							•		
120	Petroleum Engineering with M.Tech. in Petroleum Management									•
121	Process Engineering with MBA								•	

Programme B.Tech. 4 Years

Programme		IIT Bhubaneswar	IIT Gandhinagar	IIT Hyderabad	IIT Indore	IIT Mandi	IIT Patna	IIT Ropar	IIT Rajasthan
1	Chemical Engineering		•	•					
2	Civil Engineering	•		•					
3	Computer Science and Engineering			•	•	•	•	•	•
4	Electrical Engineering	•	•	•	•	•	•	•	•
5	Engineering Science			•					
6	Mechanical Engineering	•	•	•	•	•	•	•	•
7	Systems Science								•

PROCEDURE FOR RANKING AND TIE-BREAK

Rank Lists

Rank lists, as given below, will be prepared based on the aggregate marks obtained in IIT-JEE 2012.

- A common rank list made up of candidates who score at least 10% in each subject and 35% in aggregate will be prepared.
- Separate rank lists will be prepared corresponding to OBC (NCL), SC and ST categories.
 - Candidates of OBC (NCL) category must score at least 9% in each subject and 31.5% in aggregate in order to be in the OBC rank list.
 - Candidates of SC and ST categories must score at least 5% in each subject and 17.5% in aggregate in order to be in their respective rank lists.

PD Rank Lists

- A common rank list will be prepared for PD candidates. To be in the PD rank list, candidates must score at least 5% in each subject and 17.5% in aggregate.
- Separate PD rank lists will be prepared corresponding to the OBC (NCL), SC and ST categories. To be in these rank lists, candidates must score at least 5% in each subject and 17.5% in aggregate.

Preparatory Course Rank Lists

Separate rank lists will be prepared for preparatory course if the number of SC/ST/PD candidates in the respective rank lists is less than 1.4 times the number of seats available in the respective categories. To be in these rank lists, candidate must score at least 2.5% in each subject and 8.75% in aggregate.

For the purpose of ranking, a candidate shall be considered in all the categories in which he /she qualifies.

There will be no separate waiting list of candidates.

Tie-break

The tie-break criterion, in the various rank lists, adopted for awarding ranks to the candidates who have scored the same aggregate marks is as follows:

Subject-wise average marks will be calculated for each rank list. Among the candidates having the same aggregate marks, a candidate will be ranked higher, if he/she has scored higher marks in the subject with the lowest average marks calculated as above. If there is a tie after this procedure, then the marks obtained by the tied candidates in the subject with the second-lowest average marks will be considered, and the above procedure will be repeated. Candidates tied even after this procedure will be given the same rank.

Note: Obtaining a rank in IIT-JEE 2012 does not guarantee admission to any of the courses available in IITs, IT-BHU and ISM Dhanbad.

IMPORTANT DATES

Start of Online Application Process	Monday	October 31, 2011
Closing of Online Application Process	Saturday	December 10, 2011
Start of Offline OMR Application Forms Sale at Bank Branches	Friday	November 11, 2011
Close of Offline OMR Application Forms Sale	Monday	December 05, 2011
Last Date for Receiving Completed IIT-JEE 2012 Application Form	Thursday	December 15, 2011
IIT-JEE 2012 Examination Day	Sunday	April 08, 2012
Declaration of Results	Friday	May 18, 2012
Online Filling of CHOICES (Open to Qualified Candidates only)	Saturday to Sunday	May 19-June 10, 2012
Last Date for Receiving Category Certificates	Friday	June 01, 2012
Architecture Aptitude Test	Sunday	June 03, 2012
Last Date for Receiving Admission Form and Medical Certificate at Zonal IITs.	Friday	June 08, 2012
Web Release of First Course Allotment	Thursday	June 14, 2012
Web Release of Second Course Allotment	Monday	June 25, 2012
Web Release of Third Course Allotment	Friday	July 06, 2012

ADDRESSES FOR SENDING THE COMPLETED APPLICATION FORM

Completed Application Form should be sent to the zone where the applicant wishes to appear for IIT-JEE 2012.

Zone	Address	Phone	FAX
IIT Bombay	Chairman, JEE 2012, IIT Bombay, Powai, Mumbai 400 076	(022) 25764063	(022) 25720305
IIT Delhi	Chairman, JEE 2012, IIT Delhi, Hauz Khas, New Delhi 110 016	(011) 26591785	(011) 26581067
IIT Guwahati	Chairman, JEE 2012, IIT Guwahati, Guwahati 781 039	(0361) 2692795	(0361) 2582180
IIT Kanpur	Chairman, JEE 2012, IIT Kanpur, Kanpur 208 016	(0512) 2597335	(0512) 2590103
IIT Kharagpur	Chairman, JEE 2012, IIT Kharagpur, Kharagpur 721 302	(03222) 282102	(03222) 278242
IIT Madras	Chairman, JEE 2012, IIT Madras, Chennai 600 036	(044) 22578220	(044) 22578224
IIT Roorkee	Chairman, JEE 2012, IIT Roorkee, Roorkee 247 667	(01332) 284272	(01332) 285346