

GATE 2013

Graduate Aptitude Test in Engineering Information Brochure



**Organizing Institute
Indian Institute of Technology Bombay**

1 Table of Contents

1	Introduction	4
1.1	Financial Assistance	4
1.2	Administration.....	4
2	What's New in GATE 2013?.....	6
2.1	Other Important points about GATE 2013	6
2.2	Important Dates related to GATE 2013	7
3	Pre Exam Related Information	8
3.1	Eligibility for GATE	9
3.2	GATE Papers.....	11
3.3	Examination Schedule	12
3.4	State-wise Exam Cities	13
3.5	How to Apply	16
3.5.1	GATE Online Applicant Interface	16
3.5.2	Filling in Application Online.....	17
3.5.3	Application Fee Payment Options	19
3.5.4	Mailing Documents to GATE Office	20
3.5.5	Photograph and Signature Requirements	22
3.6	Admit Card.....	26
4	Examination Related Information	27
4.1	Structure of GATE 2013	27
4.1.1	General Aptitude Questions.....	27
4.1.2	XE Paper	28
4.1.3	XL Paper.....	28
4.2	Duration and Exam Type.....	28
4.3	Pattern of Question Papers and Marking Scheme	29
4.3.1	Pattern of Question Papers	29

4.4	Marking Scheme.....	31
4.4.1	General Aptitude (GA) Questions	31
4.4.2	Question papers other than GG, XE and XL	31
4.4.3	GG (Geology and Geophysics) Paper.....	32
4.4.4	XE Paper (Engineering Sciences).....	32
4.4.5	XL Paper (Life Sciences)	32
4.5	GATE Syllabi.....	33
4.5.1	General Aptitude (GA): Common to All Papers Engineering	33
4.5.2	Aerospace Engineering (AE)	35
4.5.3	Agricultural Engineering (AG).....	37
4.5.4	Architecture and Planning (AR)	39
4.5.5	Biotechnology (BT)	41
4.5.6	Civil Engineering (CE).....	43
4.5.7	Chemical Engineering (CH)	45
4.5.8	Computer Science and Information Technology (CS).....	47
4.5.9	Chemistry (CY)	49
4.5.10	Electronics and Communication Engineering (EC)	51
4.5.11	Electrical Engineering (EE)	53
4.5.12	Geology and Geophysics (GG)	55
4.5.13	Instrumentation Engineering (IN).....	58
4.5.14	Mathematics (MA)	60
4.5.15	Mechanical Engineering (ME).....	62
4.5.16	Mining Engineering (MN)	64
4.5.17	Metallurgical Engineering (MT)	66
4.5.18	Physics (PH)	68
4.5.19	Production and Industrial Engineering (PI).....	69
4.5.20	Textile Engineering and Fibre Science (TF)	72
4.5.21	Engineering Sciences (XE).....	74

4.5.22	Life Sciences (XL)	79
5	Post-Exam Related Information	84
5.1	GATE Score	84
5.2	GATE 2013 Results.....	84
5.3	GATE Score Card	85
6	Frequently Asked Questions (FAQ).....	86
6.1	Application Process.....	86
6.2	Admit card.....	88
6.3	GATE 2013 Exam.....	89
7	Zonal Contacts.....	90
8	Appendix A	91
8.1	Authorities Empowered to Issue certificates (SC/ST).....	91
8.2	PD Category:.....	91
9	Appendix B: Qualifying Disciplines	92

1 Introduction

Graduate Aptitude Test in Engineering (GATE) is an all India examination that primarily tests a comprehensive understanding of various undergraduate subjects in Engineering and Technology. The GATE score of a candidate reflects a relative performance level in a particular paper in the exam across several years. The score is used for admissions to post-graduate engineering programmes (eg. M.E., M.Tech, direct Ph.D.) in Indian higher education institutes with financial assistance provided by MHRD and other Government agencies. The score may also be used by Public sector units for employment screening purposes.

1.1 Financial Assistance

A valid GATE score is essential for obtaining a financial assistance during Masters programmes and direct Doctoral programmes in Engineering/Technology/Architecture, and Doctoral programs in relevant branches of Science in an Institution supported by the MHRD or other Government assistantships. As per the directives of the MHRD, the following procedure is to be adopted for admission to the postgraduate programmes (Master and Doctoral) with MHRD scholarship/assistantship. The performance of the candidate in GATE will be considered for admission. If the candidate is to be selected through interview for postgraduate programmes, minimum 70% weightage is to be given to the performance in GATE. The remaining weightage (30% maximum) may be given to the candidate's academic record or performance in interview. The admitting institution could however prescribe minimum passing percentage of marks in the interview. Some colleges/institutes specify GATE qualification as the mandatory requirement even for admission without MHRD scholarship/assistantship.

To avail the financial assistance (scholarship), the candidate must first secure admission to a programme in these Institutes, by a procedure that could be different for each institute.

Qualification in GATE is also a minimum requirement to apply for various fellowships awarded by many Government organizations. Candidates are advised to seek details of admission procedures and availability of MHRD scholarship/assistantship from the concerned admitting institution. The criteria for postgraduate admission with scholarship/assistantship are different for different admitting institutions. The management of the postgraduate scholarship/assistantship is also the responsibility of the admitting institution. Similarly, reservation of seats under different categories is as per the policies and norms prevailing at the admitting institution and Government of India rules. GATE offices will not entertain any enquiry about admission, reservation of seats or award of scholarship/assistantship

Nevertheless, candidates with Master's degree in Engineering/Technology/Architecture may seek admission to relevant Doctoral programmes with scholarship/assistantship without appearing in the GATE examination.

1.2 Administration

GATE is administered and conducted jointly by the Indian Institute of Science and seven Indian Institutes of Technology on behalf of the National Coordination Board (NCB) – GATE, Department of Higher Education, Ministry of Human Resource Development (MHRD), Government of India.

The GATE Committee, which comprises of representatives from the administering institutes, is the sole authority for regulating the examination and declaring the results.

GATE is conducted through the constitution of eight zones. The zones and the corresponding administrative institutes are:

Zone-1: Indian Institute of Science, Bangalore

Zone-2: Indian Institute of Technology Bombay

Zone-3: Indian Institute of Technology Delhi

Zone-4: Indian Institute of Technology Guwahati

Zone-5: Indian Institute of Technology Kanpur

Zone-6: Indian Institute of Technology Kharagpur

Zone-7: Indian Institute of Technology Madras

Zone-8: Indian Institute of Technology Roorkee

The overall coordination and responsibility of conducting GATE 2013 lies with **Indian Institute of Technology Bombay**, and is designated as the **Organizing Institute** for GATE 2013.

Organization of the Brochure

The information in this brochure is mainly categorized into **Pre-Exam** (Eligibility, Application submission, Exam Centers etc.), **Examination** (Syllabus, Pattern, Scoring, Model Question Papers etc.) & **Post-Exam** (Answers, Results, Score Card etc.) sections.

2 What's New in GATE 2013?

1. 15 subject papers will be conducted by an ONLINE computer based test: AE, AG, AR, BT, CE, CH, CY, GG, MA, MN, MT, PH, TF, XE, and XL.
2. Female candidates are exempted from paying the application fee, as required by MHRD, Govt. of India.
3. All candidate related information and grievance redressal will be available in a single GATE Online Applicant Interface.
4. Soft copies of photograph and signature must be uploaded during online application (This is in addition to sending recent photograph of applicant with signed application).
5. A new formula will be used for calculating the GATE score.
6. Biometric information (Photograph and fingerprint) maybe captured on the day of the examination for randomly selected candidates.

2.1 Other Important points about GATE 2013

- 1 Application Process: For GATE 2013, candidates need to register and fill the application ONLINE only by accessing the zonal GATE websites of IISc and seven IITs. The application process is complete only when a print out of the filled ONLINE application with the candidate's signature and a good quality photo affixed in the appropriate place is received by the respective GATE office along with necessary documents, if any, on or before 8 October 2012. Please note that application forms are NOT available for sale anywhere.
- 2 Downloadable Admit Card: Admit cards are NOT sent by mail anymore. Admit cards can only be downloaded from the zonal GATE websites from 5th December 2012 onwards. Bring the admit card to the test center along with at least one original (not photocopied / scanned copy) and valid (not expired) photo identification.
- 3 Use of black ink ballpoint pen for Offline exams: Candidates should use only **black ink ballpoint pen** for darkening of the bubbles in the OMR sheet. Since bubbles darkened by the black ink ballpoint pen cannot be erased, candidates should darken the bubbles in the OMR sheet very carefully.
- 4 Numerical answer type questions in ONLINE papers: In the ONLINE papers, the question paper will consist of questions of multiple-choice type and questions of numerical answer type. For multiple choice type questions, each question will have four choices for the answer. For numerical answer type questions, each question will have a number as the answer. Each online paper will have 15 or more marks worth of questions requiring numerical answers where possible.
- 5 Pre-final year students: Pre-final year students are **NOT eligible** to write GATE 2013. For details, refer to Section 4.1 eligibility for GATE examination.

2.2 Important Dates related to GATE 2013

GATE Online Applicant Interface (website) Opens	Saturday	1 September 2012 (00:00 Hrs)
Last date for Submission of Online Application (website closure)	Sunday	30 September 2012 (23:00 Hrs)
Last date for the receipt of printed version of ONLINE Application at the respective zonal GATE Office	Monday	8 October 2012
Last date for request of change of city	Tuesday	20 November 2012
Availability of admit card on Online Application Interface	Wednesday	5 December, 2012
GATE 2013 Online Examination for Papers: AR, CE, GG, MA, MT, PH and TF*	Sunday	20 January 2013 (09:00 Hrs to 12:00 Hrs)
GATE 2013 Online Examination Papers: AE, AG, BT, CH, CY, MN, XE and XL*	Sunday	20 January 2013 (14:00 Hrs to 17:00 Hrs)
GATE 2013 Offline Examination Papers: CS, ME and PI*	Sunday	10 February 2013 (09:00 Hrs to 12:00 Hrs)
GATE 2013 Offline Examination Papers: EC, EE and IN*	Sunday	10 February 2013 (14:00 Hrs to 17:00 Hrs)
Announcement of results on Online Applicant Interface	Friday	15 March 2013 (10:00 Hrs)

* Please see Section 3.2 for a complete list of GATE papers and their codes.

3 Pre Exam Related Information

Note to the Candidates: *Before* you start the application process, you must:

1. Ensure you are eligible for GATE 2013 (See Section 3.1)
2. Determine the GATE paper you wish to appear for (You can appear in only one paper for GATE 2013).
3. Choose at least two cities from the table of Cities given this Brochure that are convenient for you to write the exam. (See Section 3.4)

In addition, please note that:

1. The Application for appearing in GATE 2013 must be made online only.
2. Your choice of exam paper will determine the examination type (online/offline), date, and choice of available cities.

3.1 Eligibility for GATE

Only the following categories of candidates are eligible to appear for GATE 2013. Necessary supporting documents must be submitted ONLINE or by post during the submission of the application form for the exam. Please read this carefully and make sure that your year of qualification is not later than what is specified below.

Qualifying Degree (Short)	Qualifying Degree/Examination (Descriptive)	Description of Eligible Candidates	Year of qualification cannot be later than	Copies of Certificates to be submitted	
				Passed in the year 2012 or earlier	Expected to complete in 2013 or later
B.E./B.Tech/B.Arch	Bachelor's degree in Engineering/Technology/Architecture (4 years after 10+2/Post B.Sc./Post-Diploma)	4th year or Completed	2013	Degree Certificate / Provisional Certificate / Course Completion Certificate	Certificate from Principal
MSc./M.A./MCA equivalent	Master's degree in any branch of Science / Mathematics / Statistics / Computer Applications or equivalent	Final year or Completed	2013	Degree Certificate / Provisional Certificate / Course Completion Certificate (pertaining to Masters degree)	Certificate from Principal
Int. M.E./M.Tech or DD (after 10+2 or Diploma)	Integrated Master's degree programs or Dual Degree programs in Engineering / Technology (Five year programme)	4th/5th Year or Completed	2014	Degree Certificate / Provisional Certificate / Course Completion Certificate	Certificate from Principal
Int. M.E./M.Tech (Post BSc)	Post-BSc Integrated Master's degree programs in Engineering / Technology (Four year programme)	2nd/3rd/4th year or Completed	2015	Degree Certificate / Provisional Certificate / Course Completion Certificate	Certificate from Principal
Professional Society Examinations (equivalent to B.E./B.Tech/B.Arch)	B.E./B.Tech equivalent examinations, of Professional Societies, recognized by MHRD/UPSC/AICTE (e.g. AMIE by Institution of Engineers-India, AMICE by the Institute of Civil Engineers-India)	Completed section A or equivalent of such professional courses	NA	Professional Certificate/ Provisional Certificate/ Course Completion/ Membership Certificate issued by the Society or Institute	Copy of Marksheet for Section "A"

Certificate from Principal

Candidates who have to submit a certificate from their Principal, as determined from the above table, have to obtain a signature from their principal on a certificate that will be printed on the application PDF file provided after completion of online application submission.

Candidates with backlogs

Candidates who have appeared in the final semester/year exam in 2012, but with a backlog (arrears/failed subjects) in any of the papers in their qualifying degree should submit

1. A copy of any one of the marks sheets of the final year, OR

-
2. A letter from the principal indicating that the student has a backlog from an earlier semester/year to be cleared, and therefore cannot produce a course completion certificate now. This certificate will also be present in the last portion of the PDF application form provided to you after you submit application online.

3.2 GATE Papers

GATE 2013 will be conducted in the following subjects (also referred to as “papers”). Candidates must familiarize with the paper code for the paper of their choice, as this knowledge will be required at the time of application form submission and appearing for the examination.

GATE Paper	Code	GATE Paper	Code
Aerospace Engineering	AE	Instrumentation Engineering	IN
Agricultural Engineering	AG	Mathematics	MA
Architecture and Planning	AR	Mechanical Engineering	ME
Biotechnology	BT	Mining Engineering	MN
Civil Engineering	CE	Metallurgical Engineering	MT
Chemical Engineering	CH	Physics	PH
Computer Science and Information Technology	CS	Production and Industrial Engineering	PI
Chemistry	CY	Textile Engineering and Fibre Science	TF
Electronics and Communication Engineering	EC	Engineering Sciences	XE*
Electrical Engineering	EE	Life Sciences	XL**
Geology and Geophysics	GG		
*XE Paper Sections	Code	**XL Paper Sections	Code
Engineering Mathematics (Compulsory)	A	Chemistry (Compulsory)	H
Fluid Mechanics	B	Biochemistry	I
Materials Science	C	Botany	J
Solid Mechanics	D	Microbiology	K
Thermodynamics	E	Zoology	L
Polymer Science and Engineering	F	Food Technology	M
Food Technology	G		

3.3 Examination Schedule

GATE Paper Codes	Examination Time	Examination Date (Day)	Examination Type
AR, CE, GG, MA, MT, PH, and TF	09:00 hrs–12:00 hrs	20 January 2013 (Sunday)	ONLINE
AE, AG, BT, CH, CY, MN, XE and XL	14:00 hrs–17:00 hrs		
CS, ME and PI	09:00 hrs–12:00 hrs	10 February 2013 (Sunday)	OFFLINE
EC, EE and IN	14:00 hrs–17:00 hrs		

ONLINE Examination: A computer based test (CBT) where the candidate will use a computer mouse to choose a correct answer or enter a numerical answer via a virtual keypad.

OFFLINE Examination: A paper based examination where the candidate will mark the correct answer out of four options in an Optical Response Sheet (ORS) by darkening the appropriate bubble with a pen.

3.4 State-wise Exam Cities

The centers for online exam papers are **different** from the centers for offline exam papers. Please consult the table below. First determine if the paper of your choice is to be conducted online or offline, and check for a city in the state of your choice. Also seen in the table is the Zonal Administration Institute Office (Either of the IITs or IISc). This Zonal office will be your point of contact for any enquiries regarding your exam center.¹

State	Exam Mode	City	Zonal GATE Office
Andhra Pradesh	Online	Ananthapur, Hyderabad, Kurnool, Secunderabad	IISc
		Kakinada, Vijayawada, Visakhapatnam	IITKGP
		Bapatla, Guntur, Kadapa, Nellore, Tirupati, Warangal	IITM
	Offline	Ananthapur, Hyderabad, Kurnool, Mahabubnagar, Secunderabad	IISc
		Bhimavaram, Eluru, Kakinada, Machilipatnam, Rajahmundry, Srikakulam, Tadepalligudem, Vijayawada, Visakhapatnam	IITKGP
		Bapatla, Chittoor, Gudur, Guntur, Kadapa, Karimnagar, Khammam, Kothagudem, Manchiryal, Nalgonda, Nellore, Ongole, Tenali, Tirupati, Warangal	IITM
Arunachal Pradesh	Online	---	
	Offline	Itanagar	IITG
Assam	Online	Guwahati, Jorhat, Silchar, Tezpur	IITG
	Offline	Guwahati, Jorhat, Silchar, Tezpur	IITG
Bihar	Online	Patna	IITG
	Offline	Bhagalpur, Patna	IITG
Chattisgarh	Online	Bilaspur, Raipur	IITKGP
	Offline	Bilaspur, Raipur	IITKGP
Delhi	Online	Delhi	IITD
	Offline	Delhi Central, Delhi East, Delhi North, Delhi South, Delhi West	IITD
Goa	Online	---	
	Offline	Goa	IITB
Gujarat	Online	Ahmedabad, Rajkot, Surat, Vadodara	IITB

¹ While we will make every effort to allocate you to a center in the city of your choice, please note that centers may be added or removed at the discretion of the GATE committee. In case a center in the city of your choice is not available, we will allot a center that is geographically closest to the city of your choice.

State	Exam Mode	City	Zonal GATE Office
	Offline	Ahmedabad, Mahesana, Rajkot, Surat, Vadodara	IITB
Haryana	Online	Faridabad, Gurgaon	IITD
		Hisar, Kurukshetra, Rohtak	IITR
	Offline	Faridabad, Gurgaon	IITD
		Hisar, Kurukshetra, Rohtak, Yamunanagar	IITR
Himachal Pradesh	Online	Hamirpur, Shimla	IITR
	Offline	Hamirpur, Shimla	IITR
Jammu & Kashmir	Online	Jammu	IITR
	Offline	Jammu	IITR
Jharkhand	Online	Dhanbad	IITG
		Jamshedpur, Ranchi	IITKGP
	Offline	Dhanbad	IITG
		Jamshedpur, Ranchi	IITKGP
Karnataka	Online	Belgaum, Bengaluru, Davangere, Hassan, Hubli, Mangalore, Manipal, Mysore, Surathkal	IISc
		Gulbarga	IITB
	Offline	Bagalkot, Belgaum, Bengaluru, Davangere, Hassan, Hubli, Mangalore, Manipal, Mysore, Surathkal	IISc
		Gulbarga	IITB
Kerala	Online	Kanjirappally, Kannur, Kollam, Kottayam, Kozhikode, Palakkad, Thrissur	IISc
		Ernakulam, Thiruvananthapuram	IITM
	Offline	Alappuzha (Aleppy), Chengannur, Kanjirappally, Kannur, Kollam, Kothamangalam, Kottayam, Kozhikode, Palakkad, Thrissur	IISc
		Ernakulam, Thiruvananthapuram,	IITM
Madhya Pradesh	Online	Indore, Ujjain	IITD
		Bhopal, Gwalior, Jabalpur	IITK
	Offline	Indore, Ujjain	IITD
		Bhopal, Gwalior, Jabalpur, Saugar (Sagar, MP)	IITK
Maharashtra	Online	Ahmednagar, Amravati, Aurangabad, Jalgaon, Kolhapur, Mumbai (Central Line), Mumbai (Western Line), Nagpur, Nanded, Nashik, Navi Mumbai, Pune (City), Pune (Pimpri Chinchwad), Sangli, Solapur, Thane	IITB
	Offline	Ahmednagar, Akola, Amravati, Aurangabad, Bhusawal, Gondia, Jalgaon, Kolhapur, Latur, Lonavala, Loni, Mumbai (Central Line), Mumbai (Western Line), Nagpur, Nanded, Nashik, Navi Mumbai, Pandharpur, Pune (City), Pune	IITB

State	Exam Mode	City	Zonal GATE Office
		(Pimpri Chinchwad), Sangli, Satara, Shegaon, Solapur, Thane, Wardha	
Manipur	Online	Imphal	IITG
	Offline	Imphal	IITG
Orissa	Online	Bhubaneswar, Cuttack, Rourkela, Sambalpur	IITKGP
	Offline	Balasore, Berhampur, Bhubaneswar, Cuttack, Rourkela, Sambalpur	IITKGP
Puducherry	Online	Puducherry	IITM
	Offline	Puducherry	IITM
Punjab	Online	Amritsar, Bathinda, Chandigarh, Jalandhar, Patiala	IITR
	Offline	Amritsar, Bathinda, Chandigarh, Jalandhar, Ludhiana, Patiala	IITR
Rajasthan	Online	Ajmer, Bikaner, Jaipur, Jodhpur, Kota, Udaipur	IITD
	Offline	Ajmer, Alwar, Bikaner, Jaipur, Jodhpur, Kota, Sikar, Udaipur	IITD
Sikkim	Online	---	
	Offline	Gangtok	IITG
Tamil Nadu	Online	Chennai, Chidambaram, Coimbatore, Madurai, Salem, Thanjavur, Tiruchirapalli, Tirunelveli, Vellore	IITM
	Offline	Chennai North, Chennai South, Chidambaram, Coimbatore, Dindigul, Madurai, Nagercoil, Salem, Thanjavur, Tiruchirapalli, Tirunelveli, Vellore	IITM
Tripura	Online	Agartala	IITG
	Offline	Agartala	IITG
Uttar Pradesh	Online	Agra, Aligarh, Allahabad, Bareilly, Kanpur, Lucknow, Varanasi	IITK
		Ghaziabad, Meerut, Muzaffarnagar, Noida	IITR
	Offline	Mathura	IITD
		Agra, Aligarh, Allahabad, Bareilly, Gorakhpur, Jhansi, Kanpur, Lucknow, Sultanpur, Varanasi	IITK
		Bijnor, Ghaziabad, Meerut, Muzaffarnagar, Noida	IITR
Uttarakhand	Online	Dehradun, Haldwani, Roorkee	IITR
	Offline	Dehradun, Haldwani, Haridwar, Roorkee, Srinagar	IITR
West Bengal	Online	Asansol, Durgapur, Kalyani, Siliguri	IITG
		Kharagpur, Greater Kolkata (North), Greater Kolkata (South)	IITKGP
	Offline	Asansol, Durgapur, Kalyani, Siliguri	IITG
		Kharagpur, Kolkata	IITKGP

3.5 How to Apply

All candidates **have to apply ONLINE**. Details of the application fee and the steps in the application process are given below. The application fee is non-refundable.

Category	Application Fee
General/OBC-NC (Male Candidates)	₹1200/-
SC / ST / PD* (Male Candidates)	₹ 600/-
Female Candidates	₹ 0 (Exempted)

* PD: Person with a Physical Disability

3.5.1 GATE Online Applicant Interface

An online interface is provided for most of your interaction with the GATE office. This interface can be accessed using url: <http://gateapp.iitb.ac.in> With this interface you can

1. Apply for the examination online
2. Upload photograph, signature, and supporting documents.
3. Make application fee payment through netbanking.
4. Check the status of your application form: Received, Under Scrutiny, Rejected after Scrutiny failed, Accepted after Successful Scrutiny, Admit Card Ready for Download, etc.
5. Contact the GATE office in case of any queries/problems (Grievance Redressal).
6. Download Admit Card.
7. View your answers, marks and GATE score.

The login to this interface is through your chosen email address and a password. Keep this information safe and do not disclose the email id and password to anyone.

3.5.2 Filling in Application Online

1. GATE Online Application Interface (website) can be accessed from the GATE website.
2. You must first register yourself, by providing a valid email address. Choose this carefully to be the one you check frequently, as all communications to you from the GATE offices will be sent to this address (DO NOT USE ANYBODY ELSE'S EMAIL ADDRESS. ONLY ONE PERSON CAN REGISTER WITH ONE EMAIL ADDRESS).
3. Upon registration, an email will be sent with a link and an one time password (OTP). You must click on the link and enter the password. You will be required to change the password after the first login. Choose a password that is not easily guessable (should not be like: your name, DOB, 12345, asdf, etc.), so as to ensure that the data you provide is not accessible to any person other than yourself.
4. Next you will see an application form to be filled in. Keep the following information ready:
 1. Personal information
 2. Communication Address (Important: PIN Code)
 3. Eligibility Degree Details (College address, PIN Code of College)
 4. GATE paper, Choice of GATE examination cities (See Section 3.2 and 3.4)
 5. High quality image of your photograph conforming to the requirements (see Section 3.5.5 for details on the quality of the photograph and signature)
 6. Good quality image of your signature (in .jpeg format) conforming to requirements similar to photograph
 7. Optional: PDF files of supporting documents (Eligibility & Category Certificates) (max file size: per file 0.5 MB See section 3.5.2.1). Please see Section 3.1 for the Eligibility Criteria and documents).
 8. Optional: Your Netbanking details to make the application fee payment (only for Male candidates).
5. Fill in the necessary data in the online application form following instructions given there. Upload the soft copies of photo and signature (mandatory).
6. Optional: You may upload pdf files of supporting documents conforming to the eligibility (except principal's certificate) and category requirements given below in section Supporting Documents
7. You will have to select one of the payment options (details given in Section 3.5.3) while filling the online form.
8. The GATE Online Applicant Interface allows you to enter data, "Save" partially filled form, "Logout", and resume filling in by logging in again.
9. Before you make the payment, you will be shown a "Preview" of your application, where you have to carefully check for any errors.
10. Once you submit the application with payment, no further changes to the application can be made by the candidate.

11. Candidates who have selected online payment option will follow the instructions given below for online net banking in payment section and complete payment process. Those who have selected challan payment option will directly proceed to the next step.
12. You will then see a link to “Print Application Form”. You have to download a PDF file from this link and print it. It will contain four pages as mentioned below
 1. Page 1: Instructions and Address slip where you need to send hard copy
 2. Page 2-3: Two copies of application form with bottom part showing certificate to be signed by principal (if need be)
 3. Page 4: Optional page for candidates who select “bank challan” mode of payment. This page will contain 3 copies of challan to be processed with bank

3.5.2.1 Supporting Documents

Applicants have an option to upload supporting documents online. Please make sure that the max file size permitted to upload per file is 0.5 MB. For scanning the documents please use the following setting

1. Resolution: 200 dpi
2. Color mode: 256 colors
3. File format: PDF or JPEG

3.5.2.1.1 Eligibility Documents

Eligibility criteria and necessary supporting documents can be found from the Eligibility table for GATE as given in Section 3.1.

3.5.2.1.2 SC/ST/PD Certificate

Only male applicants who claim to be in any of the category SC/ST/PD have to produce valid documentary evidence (details given in Section 8.1), to qualify for the reduced fee. applicants need not provide any SC/ST certificate, as the fee is exempted, as required by MHRD, Govt. of India..

However, if any female applicant requests a scribe to assist writing the exam, a PD certificate has to be provided.

Candidates who claim to be in any of the above categories have to submit photocopies of valid documents along with the application for evidence. Sources of valid evidence are given in Appendix A.

3.5.3 Application Fee Payment Options

Non-refundable application fee is charged only for male candidates. candidates are exempted from the payment of application fee, as required by MHRD, Govt. of India. All charges given below are in Indian Rupees.

Candidate Category	Mode	Application Fee	Bank Charges	Total to be Paid
Male General/OBC-NC	Online Netbanking	1200	10	1210
	Canara Bank Challan	1200	20	1220
	SBI Challan	1200	25	1225
Male SC/ST/PD	Online Netbanking	600	10	610
	Canara Bank Challan	600	20	620
	SBI Challan	600	25	625
Female	No Application Fee, as required by MHRD, Govt. of India.			

3.5.3.1 Online Net banking Payment Details

1. From the GATE Online Application Interface, you will be redirected to a bank you choose.
2. You will have to login with your bank's Net banking (or Internet Banking) user ID and password.
3. The fee amount and bank charges will be shown to you, and you have to confirm that the payment is for GATE 2013.
4. Once you confirm, you will be redirected back to the GATE Online Application Interface.
5. If you have some difficulty (due to internet connection or power failure), and you are not sure if you have made the payment, please login back to GATE Online Application Interface and check the status of the payment. You can also check the status in your bank.
6. In case the fee amount has been debited from your bank account but not reached GATE, then the money will be credited back to your account within three working days.
7. In such a case, you may initiate a fresh payment from the GATE Online Interface, even without waiting for the money to be credited back to your account, so that your application is submitted to GATE office on time. You may also switch to offline Challan payments if need be.

3.5.3.2 Offline Challan Payment Details

1. If you had chosen offline payment option while filling in the form, you will be provided with a copy of the challan in triplicate (PDF file) with your details filled in (see 13.C). You have to print it out on an A4 paper, and have to fill in a few more details such as date and signature.
2. You have to **wait for at least 48 hours after generation of application pdf online and only then take filled challan to the bank for payment of fees.**

3. You may take the challan to any Canara Bank or SBI and make application fees payment. You do not need to have an account in that branch.
4. The bank teller will verify the details printed on the challan with the data available at the bank and then accept the payment. Note that **your payment will NOT be accepted if you go to bank earlier than 48 hrs** as mentioned in 2 above. This is because it will take some time after application pdf generation online to reflect the data in respective bank's system.
5. The bank will retain one copy and give you back the remaining copies: one of which you have to send along with the printed application form and the other is for your reference.

3.5.4 Mailing Documents to GATE Office

The printed application form along with the documents must be mailed by **speed post** to the Zonal office, as mentioned in the printed address slip that comes along with the PDF file of the application form. Before mailing, the following procedures need to be completed

3.5.4.1 Before Mailing

1. Out of the printed pages, keep one copy of application form (page 2) for your reference and process the other copy as follows
 1. Paste a color photograph of yourself in the space provided, and sign the application in the box provided. This **photograph and signature should EXACTLY match the one in the photograph file uploaded** electronically to the GATE Online Interface; your application is liable to be rejected otherwise.
 2. Do not pin, sign, or attest the photograph
 3. You must sign in the box provided
 4. In case principal's certificate happens to be proof of your eligibility, Submit the whole page (**without cutting it**) to your College principal's office. Bottom portion of the form contains the part that your college principal has to certify. Once you obtain principal's signature and stamp this is ready to go in application packet to be sent.
2. If you had paid the application fee by challan, bank would have returned you stamped GATE copy of challan. Keep it ready to go in application packet to be sent.
3. You will also find half page of instruction and half page address slip. Cut this address slip, which contains the address of the Zonal office (along with application bar code), where the application form needs to be mailed.
4. Make sure you are ready with the following CHECK LIST:
 1. The **signed** application form (with **photograph** affixed) with, **Principal's certificate** if that is proof of your eligibility to appear in GATE 2013.
 2. Other **eligibility documents** to appear for GATE 2013 (degree certificate) in case pdf files of these are **NOT uploaded** to online interface.
 3. **Category certificate** for claiming discounted application fee in case pdf files of these are **NOT uploaded** to online interface.
 4. **PD certificate** if you require a scribe assistance

5. GATE copy of **Challan duly stamped** by the bank after payment of fees (you need not submit challan in case of payment by net banking)

3.5.4.2 Mailing

1. Use A4 sized envelope and put application form along with other documents mentioned in the CHECK LIST above.
2. **Do not fold** the application form and **DO NOT STAPLE** or pin the documents.
3. **Do not fill address by hand**, as the address slip provided contains a barcode necessary for processing your application. Note that barcodes on these address slips are different for each candidate. **DO NOT** use someone else's address slip for your application.
4. Secure the address slip firmly to the envelope using good glue or with additional transparent sticky tape (cello-tape)
5. Send the packet by **Speed Post (preferably)** or by Registered Post to the address mentioned. **The application packet should REACH the respective GATE offices on or before Monday, 8 October 2012.** Alternatively it can also be handed over personally to the respective Zonal GATE Office on or before Monday, 8th October 2012. (Note: Applications **reaching** respective offices later than 8th October 12 **may not be considered** even if they are post marked 8th October, 2012 or earlier)
6. If you had uploaded the supporting documents online, you should post only the application form page (with principal's certification if applicable). There is no need to post the paper copies of other documents.

Current status of your application will be updated after receipt and scrutinizing of your application by respective GATE offices. This status can be checked anytime by logging onto your GATE Online Applicant Interface.

3.5.5 Photograph and Signature Requirements

The GATE 2013 Online Applicant Interface requires that copies of your photograph and signature be uploaded as an electronic file at the time of submitting your application. Uploading photographs or signatures that do not meet specifications can result in disqualification of the application without any refund of the fee.

3.5.5.1 Photograph Requirements

Please pay attention to upload good quality photographs. Poor quality of photographs submitted will lead to rejection of your GATE application, without any refund of the application fees. The GATE Score card will be printed with the photograph you submit.

1. The photograph must be in color and must be taken in a professional studio. Photographs taken using a Mobile phone and other self-composed portraits are NOT acceptable.
2. Photograph must be taken in a White or a very light background.
3. The photograph must have been taken after 1 June 2012.
4. Face should occupy about 50% of the area in the photograph, and with a full-face view looking into the camera directly.
5. The main features of the face must not be covered by hair of the head, any cloth or any shadow. Forehead, both eyes, nose, cheeks, lip, and chin should be clearly visible.
6. If you normally wear spectacles, glare on glasses is not acceptable in your photo. Glare can be avoided with a slight downward tilt of the glasses for the photo shoot.
7. You must not wear spectacles with dark or tinted glasses, only clear glasses are permitted.
8. Ask your photo studio to provide the image in a JPEG format and also on a standard 4.5 cm x 3.5cm print
9. Maximum pixel resolution for JPEG: 640×480 (0.3 Mega pixel) (Ask your studio to reduce it to this resolution if it is higher)
10. Minimum pixel resolution for JPEG: 320 x 240.
11. For your own benefit it may be prudent not to intentionally change your facial features or hair style as in the photograph until the day of the exam.