

GATE 2022 (IIT Kharagpur)

1. Abbreviations

- B.A. – Bachelor of Arts
- B.Arch. – Bachelor of Architecture
- B.Com.– Bachelor of Commerce
- B.E. – Bachelor of Engineering
- B.Sc.–Bachelor of Science
- B.Tech. – Bachelor of Technology
- CBT – Computer Based Test
- EWS – Economically Weaker Section
- GATE – Graduate Aptitude Test in Engineering
- GoI – Government of India
- IB – Information Brochure
- ID – Identity Document
- IISc – Indian Institute of Science
- IIT – Indian Institute of Technology
- MCQ–Multiple Choice Questions
- M.E. – Master of Engineering
- MoE – Ministry of Education (erstwhile MHRD)
- M.Sc. – Master of Science
- MSQ–Multiple Select Questions
- M.Tech. – Master of Technology
- NAT–Numerical Answer Type

- NCB – National Coordination Board
- OBC-NCL– Other Backward Class- Non-Creamy Layer
- OI – Organising Institute
- Ph.D. – Doctor of Philosophy
- PSU – Public Sector Undertaking
- PwD – Person with Disability
- SC – Scheduled Caste
- ST – Scheduled Tribe

2. Highlights of GATE 2022

- Dates of examination: Saturday 5th, Sunday 6th, Saturday 12th, and Sunday 13th of February 2022. There are two sessions (forenoon and afternoon) each day.
- Fully Computer Based Test (CBT)
- Two NEW subject papers are introduced:
 - i. Geomatics Engineering (GE)
 - ii. Naval Architecture and Marine Engineering (NM)
- The total number of subject papers: 29.
- All Test Papers of GATE 2022 examinations will be entire of objective type. The pattern of questions will include some Multiple Choice Questions (MCQ), while the remaining questions may include Multiple Select Questions (MSQ) and/or Numerical Answer Type (NAT) questions.
- ONE or TWO subject papers allowed. TWO Paper combinations have to be chosen from the given list of combinations of papers. The final allotment of TWO papers will still be subject to the availability of infrastructure and dates.
- Eligibility criteria: A candidate who is currently studying in the 3rd or higher years of any undergraduate degree program OR has already completed any government-approved degree program in Engineering / Technology / Architecture / Science / Commerce / Arts is eligible to appear for GATE 2022 examination.

- There is NO age limit to appear for the GATE 2022 examination.
- Applications will be accepted ONLINE only through GATE 2022 website (<https://gate.iitkgp.ac.in>). Even if a candidate is appearing for TWO papers, the candidate should fill in ONLY ONE application form.
- GATE 2022 scorecard will remain valid for THREE years from the date of announcement of results.
- Depending on the COVID-19 situation, the schedule of the GATE 2022 examination may change.
- Details are available at the official website: <https://gate.iitkgp.ac.in>
- Organising Institute: Indian Institute of Technology Kharagpur (IITKGP).

3. Pattern of Examination

<u>Particulars</u>	<u>Details</u>
Examination Mode	Computer Based Test (CBT)
Duration	3 Hours
Number of Subjects (Papers)	29
Sections	General Aptitude (GA) + Candidate's Selected Subject
Type of Questions	(a) Multiple Choice Questions (MCQ)

	(b) Multiple Select Questions (MSQ) and/or Numerical Answer Type (NAT) Questions
Questions for testing these abilities	Recall Comprehension Application Analysis & Synthesis
Number of Questions	10 (GA) + 55 (subject) = 65 Questions
Distribution of Marks in all Papers EXCEPT papers AR, CY, EY, GG, MA, PH, XH, and XL	General Aptitude: 15 Marks + Engineering Mathematics: 13 Marks + Subject Questions: 72 Marks = Total: 100 Marks
Distribution of Marks in papers AR, CY, EY, GG, MA, PH, XH, and XL	General Aptitude: 15 Marks + Subject Questions: 85 Marks = Total: 100 Marks
Marking Scheme	Questions carry 1 mark and 2 marks
Negative Marking	For a wrong answer chosen in an MCQ, there will be a negative marking. For 1-mark

	MCQ, 1/3 mark will be deducted for a wrong answer. Likewise, for 2-mark MCQ, 2/3 mark will be deducted for a wrong answer
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<u>Paper Code</u>	<u>General Aptitude (GA) Marks</u>	<u>Subject Marks</u>	<u>Total Marks</u>	<u>Total Time (Minutes)</u>
AE, AG, BM, BT, CE, CH, CS, CY, EC, EE, ES, EY, IN, MA, ME, MN, MT, NM, PE,	15	85	100	180

PH, PI, TF, ST				
AR [Part A + Part B1 or B2 (B1: Archit ecture or B2: Planni ng)]	15	60 + 25	10 0	180
GE [Part A + Part B (Sectio n I or Sectio n II)	15	55 + 30	10 0	180
GG [Part A + Part B (Sectio n 1: Geolo gy or Sectio n 2: Geoph ysics)]	15	25 + 60	10 0	180
XE (Sectio n A +	15	15 + (2	10 0	180

Any TWO Section s)		x 35)		
XH (Section n B1 + Any ONE Section n)	15	25 + 60	10 0	180
XL (Section n P + Any TWO Section s)	15	25 + (2 x 30)	10 0	180

4. Introduction

Graduate Aptitude Test in Engineering (GATE) is a national examination conducted jointly by the Indian Institute of Science (IISc), Bangalore, and the seven Indian Institutes of Technology (at Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras, and Roorkee) on behalf of the National Coordination Board (NCB)-GATE, Department of Higher Education, Ministry of Education (MoE), Government of India. Qualifying in GATE is a mandatory requirement for seeking admission and/or financial assistance to (i) Master's programs and direct Doctoral programs in Engineering/Technology/Architecture and (ii) Doctoral programs in relevant branches of Arts and Science, in the institutions supported by the MoE and other Government agencies. Even in some colleges and institutions, which admit students without MoE scholarship/assistantship, the GATE qualification is mandatory. Further, many Public Sector Undertakings (PSUs) have been using the GATE score in their recruitment process. The information in this brochure is mainly categorized into Pre-Examination (Eligibility, Application Submission, Examination Centres, etc.), Examination (Pattern, Marks / Score, etc.), and PostExamination (Answers, Contests, Results, Scorecard, etc.) sections. Note: Candidates opting to appear in TWO subject

papers must have a primary choice of paper, which will be their default choice, and the second choice of paper, which has to be chosen from the allowed combinations given in Table 4.3. Combinations other than the listed ones are NOT allowed. Under unforeseen circumstances, GATE 2022 committee has the right to remove certain combinations listed in Table 4.3 at a later date. In such cases, the fee paid towards the second paper will be refunded to the candidates. Also, note that the examination centre for the candidate to appear for the second paper may be different (but in the same city) from that for the first paper due to the infrastructure and scheduling constraints. GATE committee is NOT liable for any legal obligations related to this issue. Disclaimer: GATE is NOT an admission ensuring examination. Qualifying in the GATE examination does NOT guarantee admission/scholarship. Admission to any institute is fully dependent on the admitting institute's criteria for educational qualification. Similarly, GATE qualification does not assure a Public Sector Undertaking (PSU) job, as it depends on the recruitment procedure of the concerned PSU. GATE committee is NOT liable for any legal obligations related to admission/job.

5. About GATE

Graduate Aptitude Test in Engineering (GATE) is a national examination on the comprehensive understanding of the candidates in various undergraduate subjects in Engineering / Technology / Architecture and post-graduate level subjects in Arts, Commerce, and Science. GATE 2022 will be conducted for 29 subjects (also referred to as “papers”) and it would be distributed over Saturday 5th, Sunday 6th, Saturday 12th, and Sunday 13th of February 2022. The GATE examination is conducted in different cities across India. The examination would be purely a Computer Based Test (CBT).

The GATE score would reflect the relative performance level of the candidate in a particular subject, which is quantified based on several years of examination data. Note that the GATE 2022 score is valid for THREE YEARS from the date of announcement of the results. No information on the GATE 2022 score will be available after this period.

- **Administration**

GATE is administered jointly by the Indian Institute of Science (IISc), Bangalore, and seven Indian Institutes of Technology (namely, IITs at Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras, and Roorkee). The GATE Committee, which comprises representatives from the administering institutes, is the sole authority for regulating the examination and for declaring the results. For administrative purposes, the examination cities in India are segregated into eight zones. The operations related to GATE, in each

of the eight zones, are managed by a Zonal GATE Office at the administering institute (IIT or IISc). One of the administering institutes is designated as the Organising Institute (OI), and it would be responsible for the end-to-end process, as well as, the overall coordination amongst the administering institutes for conducting the GATE Examination. The Organising Institute for GATE 2022 is the Indian Institute of Technology Kharagpur (IITKGP).

<u>Zone</u>	<u>Administering Institute</u>	<u>Zonal Websites</u>
Zone 1	Indian Institute of Science Bangalore	http://gate.iisc.ac.in/
Zone 2	Indian Institute of Technology Bombay	https://gate.iitb.ac.in/
Zone 3	Indian Institute of Technology Delhi	http://gate.iitd.ac.in/
Zone 4	Indian Institute of Technology Guwahati	http://iitg.ac.in/gate-jam
Zone 5	Indian Institute of Technology Kanpur	http://gate.iitk.ac.in/
Zone 6	Indian Institute of Technology Kharagpur	http://gate.iitkgp.ac.in/
Zone 7	Indian Institute of Technology Madras	http://gate.iitm.ac.in/
Zone 8	Indian Institute of Technology Roorkee	http://gate.iitr.ac.in/

- **Scholarship/Assistantship for Postgraduate Programs**

To avail of the financial assistance (scholarship/assistantship), the candidate must first secure admission to a program in one of the central government-supported institutes, by a procedure that could vary from institute to institute. Depending upon the norms adopted by a specific institute or department of the institute, the candidates may be admitted directly into a course based on their performance in GATE only; or based on their performance in GATE and an admission test/interview conducted by the department to which they have applied and/or the candidate's academic record. In the test/interview-based selection procedure, as per the MoE guidelines, a minimum of 70% weightage will be given to the performance in GATE and the remaining will be given

to the candidate's performance in test/interview and/or academic record. However, the admitting institutes could prescribe minimum passing marks in the test/interview. Candidates are advised to seek the complete details of the admission procedures and the availability of MoE scholarship/assistantship from the corresponding admitting institutions. The criteria for postgraduate admission with scholarship/assistantship could be different for different institutions. The management of the post-graduate scholarship/assistantship is also the responsibility of the admitting institution. Similarly, reservation of the seats for different categories will be as per the policies and norms of the admitting institution and the Government of India rules. The admitting institute may also specify the number of candidates who will be provided financial assistance (scholarship) if admission is secured. Qualification in GATE is also a minimum requirement to apply for various fellowships awarded by many Government organizations.

- **Use of GATE Score for Employment**

In the past, several Public Sector Undertakings (PSUs) have used the GATE score to shortlist candidates for employment. A few such organizations are Bharat Heavy Electricals Limited (BHEL), Gas Authority of India Limited (GAIL), Hindustan Aeronautics Limited (HAL), Indian Oil Corporation Limited (IOCL), National Thermal Power Corporation (NTPC), Nuclear Power Corporation of India Limited (NPCIL), Oil and Natural Gas Corporation (ONGC) and Power Grid Corporation of India (PGCI). Direct recruitment to Group A level posts in Central government, i.e., Senior Field Officer (Tele), Senior Research Officer (Crypto), and Senior Research Officer (S&T) in Cabinet Secretariat, Government of India, is now being carried out based on GATE score. The details of the scheme of recruitment are normally published in National Newspapers / Employment News / Rozgar Samachar by the concerned authority. Some other Government of India Organizations may also utilize GATE 2022 score for their recruitment purpose.

6. About GATE 2022

- IIT Kharagpur is the organising institute for GATE 2022.
- Information website for GATE 2022 is <https://gate.iitkgp.ac.in>
- GATE 2022 will be conducted on 29 subjects (also referred to as “papers”).
- Examination for all the 29 subjects (papers) will be conducted as ONLINE Computer Based Test(CBT).

- The online examination papers will contain some questions of (i) Multiple Choice Question (MCQ) type, where only one option out of four options is correct. The remaining questions may be of (ii) Multiple Select Question (MSQ) type, where one or more than one options out of four options is/are correct, and/or (iii) Numerical Answers Type (NAT) where the answer must be keyed in by the candidate using a virtual keypad. The candidates will use ONLY an on-screen virtual calculator provided for the examination.
- A candidate can appear in ANYONE or UP TO TWO papers of the GATE examination. However, note that the combination of TWO papers in which a candidate can appear MUST be selected from the pre-defined list as given in Table 4.3. Even if a candidate is appearing for TWO papers, the candidate should fill in ONLY ONE application form.
- GATE 2022 examinations will be held during the forenoon and afternoon sessions on Saturday 5th, Sunday 6th, Saturday 12th, and Sunday 13th of February 2022.
- Examination for some of the papers in GATE 2022 may be held in multiple sessions. However, a candidate will be required to appear for the examination in ONLY one of the multiple sessions of the same paper.
- Exact details of the complete examination schedule will be notified later on the GATE 2022 website (<https://gate.iitkgp.ac.in>).
- GATE 2022 Important Dates:

Online Application Process Opens (https://gate.iitkgp.ac.in)	Monday	30th August 2021
Closing Date of REGULAR online registration/ application process	Friday	24th September 2021
End of Extended period for online Registration/application (with late fee)	Friday	1st October 2021
Last Date for change of Category, Paper, and Examination City (an additional fee will be applicable)	Friday	12th November 2021

Admit Card will be available for download	Monday	3rd January 2022
GATE 2022 Examination Forenoon: 9:00 AM to 12:00 Noon (Tentative) Afternoon: 2:30 PM to 5:30 PM (Tentative)	Saturday	5th February 2022
	Sunday	6th February 2022
	Sunday	12th February 2022
	Saturday	13th February 2022
Announcement of the Results in the Online Application Portal	Thursday	17th March 2022

- Candidates have to register and fill the application via ONLINE mode ONLY at GATE 2022 website.
- The entire process of filling up the application form and uploading certificates/documents etc. is in ONLINE mode only. The candidates should NOT send any hard copy of their application forms/documents etc. to IIT Kharagpur or any of the zonal GATE offices.
- The payment of application fees is through electronic mode. If a candidate wishes to appear for TWO papers, the fees to be paid by the candidate will be TWICE of that mentioned for a single paper.
- The Admit Cards for GATE 2022 would be available for download on the GATE 2022 website of IIT Kharagpur only. No printed copy of the Admit Cards will be posted to the candidates.
- The candidate has to appear at the GATE Examination Centre on the date and time specified in the Admit Card.
- No request for any changes in the Centre or Location or Date/Time specified in the Admit Card will be entertained. Similarly, this being an examination body with certain constraints, candidates needing very special or specific facilities for the examination may not be entertained (except scribe facility). Hence, candidates are requested to adhere to the facilities that are possible within the ambit and resources of the GATE Examination Body.
- Physical calculators, mobile phones, any other electronic/communication devices, wallets, books, papers, loose sheets, data or handbooks, tables, pen/pencil box/pouch, watches of any form, etc. are strictly prohibited in exam halls and candidates possessing these (even if not using) will be disqualified.

- Biometric information (such as photographs, Iris scans, and Fingerprints, etc.) for randomly selected candidates may be captured before the start or during the examination.
- In all matters concerning GATE 2022, the decision of the GATE 2022 Committee will be final and binding on all the applicants.
- Although GATE 2022 will be held at different test centres across the country, the Indian Institute of Technology Kharagpur, being the Organising Institute, bears the overall responsibility of conducting GATE 2022. In case of any claims or disputes arising concerning GATE 2022, it is hereby made clear that the High Court of Calcutta in Kolkata alone will have the exclusive jurisdiction to entertain and settle them.
- TWO new papers called “Geomatics Engineering (GE)” and “Naval Architecture and Marine Engineering (NM)” are being introduced in GATE 2022.
- For candidates appearing for Geology and Geophysics (GG) papers, separate scores and ranking will be provided based on their selection of sections.
- For candidates appearing for Humanities and Social Sciences (XH) papers, separate scores and ranking will be provided based on their selection of sections.
- For candidates appearing for Architecture and Planning (AR) and Geomatics Engineering (GE), papers, no separate score, and ranking will be provided based on their selection of sections.

7. Pre-Examination Related Information

- **Eligibility for GATE 2022**
 - Before starting the application process, the candidate must ensure that he/she meets the educational eligibility criteria of GATE 2022.
 - A candidate who is currently studying in the 3rd or higher years of any undergraduate degree program OR has already completed any government-approved degree program in Engineering / Technology / Architecture / Science / Commerce / Arts is eligible for appearing in the GATE 2022 exam.
 - Some of the Professional Societies/Institutions, which examine various fields of engineering, are as follows:
 - i. The Institution of Engineers (India) (IE)
 - ii. The Institution of Civil Engineers (ICE)
 - iii. The Institution of Electronics and Telecommunication Engineers (IETE)
 - iv. The Aeronautical Society of India (AeSI)

- v. The Indian Institute of Chemical Engineers, including Polymer and Environmental Group (IICChemE)
 - vi. The Indian Institute of Metals (IIM)
 - vii. The Indian Institute of Industrial Engineers (IIIE)
- However, the candidates who possess certification from any of the professional societies must ensure that those examinations conducted by the societies are approved by MoE/AICTE/UGC/UPSC as equivalent to B.E. / B.Tech. / B.Arch. / B.Planning, etc.
- Candidates who have obtained/are pursuing their qualifying degree from countries other than India must be currently in the 3rd or higher years or completed their Bachelor's degree (duration: at least 3 years) in Engineering / Technology / Science / Arts / Commerce.
- Eligibility Criteria

<u>Degree/ Program</u>	<u>Qualifying Degree/Examination</u>	<u>Description of Eligible Candidates</u>	<u>Expect ed Year of Compl etion</u>
B.E. / B.Tech. / B. Pharm.	Bachelor's degree in Engineering / Technology (4 years after 10+2 or 3 years after B.Sc. / Diploma in Engineering / Technology	Currently in the 3rd year or higher or already completed	2023
B. Arch.	Bachelor's degree of Architecture (5- year course) / Naval Architecture (4- year course) / Planning (4- year course)	Currently in the 3rd year or higher or already completed	2024 (for 5- year progra m), 2023 (for 4- year progra m)

B.Sc. (Research)/ B.S. B	Bachelor's degree in Science (PostDiploma/4 years after 10+2)	Currently in the 3rd year or higher or already completed	2023
Pharm. D. (after 10+2)	6 years degree program, consisting of internship or residency training, during third year onwards	Currently in the 3rd/4th/5th/6t h year or already completed	2025
M.B.B.S.	Degree holders of M.B.B.S. and those who are in the 5th/6th/7th semester or higher semester of such programme.	5 th, 6th, 7th, or higher semester or already completed	2023
M. Sc. / M.A. / MCA or equivalent	Master's degree in any branch of Arts/Science/ Mathematics/Statistics/ Computer Applications or equivalent	Currently in the first year or higher or already Completed	2023
Int. M.E./ M.Tech. (Post- B.Sc.)	Post-B.Sc Integrated Master's degree programs in Engineering/ Technology (4-year program)	Currently in the 1st / 2nd/3rd/4th year or already completed	2025
Int. M.E./ M.Tech. or Dual Degree (after Diploma or 10+2)	Integrated Master's degree program or Dual Degree program in Engineering/Technology (5-year program)	Currently in the 3rd /4th/5th year or already completed	2024

B.Sc. / B.A. / B.Com	Bachelor degree in any branch of Science / Arts / Commerce (3-year program)	Currently in the 3rd year or already completed	2022
Int. M.Sc. / Int. B.S. / M.S.	Integrated M.Sc. or 5-year integrated B.S.- M.S. program	Currently in the 3rd year or higher or already completed	2024
Professional Society Examinations (equivalent to B.E. / B.Tech. / B.Arch.)	B.E./B.Tech./B.Arch. equivalent examinations of Professional Societies, recognized by MoE/UPSC/AICTE (e.g. AMIE by Institution of EngineersIndia, AMICE by the Institute of Civil Engineers-India and so on)	Completed Section A or equivalent of such professional courses	NA

- **GATE 2022 Papers**

GATE 2022 will be conducted on 29 subjects (papers). A candidate is allowed to appear in ANYONE or UP TO TWO papers of the GATE examination. However, note that the combination of TWO papers in which a candidate can appear MUST be from the pre-defined list. Also note that for a paper running in multiple sessions, a candidate will be mapped to appear for the examination in one of the sessions ONLY.

- **GATE 2022 Papers and corresponding codes**

<u>GATE Paper</u>	<u>Code</u>	<u>Gate Paper</u>	<u>Code</u>
Aerospace Engineering	AE	Instrumentation Engineering	IN
Agricultural Engineering	AG	Mathematics	MA
Architecture and Planning	AR	Mechanical Engineering	ME

Bio-medical Engineering	BM	Mining Engineering	MN
Biotechnology	BT	Metallurgical Engineering	MT
Civil Engineering	CE	Naval Architecture and Marine Engineering	NE
Chemical Engineering	CH	Petroleum Engineering	PE
Computer Science and Information Technology	CS	Physics	PH
Chemistry	CY	Production and Industrial Engineering	PI
Electronics and Communication Engineering	EC	Statistics	ST
Electrical Engineering	EE	Textile Engineering and Fibre Science	TF
Environmental Science & Engineering	ES	Engineering Sciences	XE*
Ecology and Evolution	EY	Humanities & Social Sciences	XH**
Geomatics Engineering	GE	Life Sciences	XL***
Geology and Geophysics	GG		

<u>*XE Paper</u>	<u>C</u>	<u>**XH Paper</u>	<u>Co</u>	<u>***XL Paper</u>	<u>C</u>
<u>Sections</u>	<u>o</u>	<u>Sections</u>	<u>de</u>	<u>Sections</u>	<u>o</u>
	<u>d</u>				
	<u>e</u>				

					<u>d</u> <u>e</u>
Engineering Mathematics (Compulsory) (15 marks)	A	Reasoning and Comprehension (Compulsory) (25 marks)	B1	Chemistry (Compulsory) (25 marks)	P
Any TWO optional Sections (2x35 = 70 marks)		Any ONE optional Section (60 marks)		Any TWO optional Sections (2x30 = 60 marks)	
Fluid Mechanics	B	Economics	C1	Biochemistry	Q
Materials Science	C	English	C2	Botany	R
Solid Mechanics	D	Linguistics	C3	Microbiology	S
Thermodynamics	E	Philosophy	C4	Zoology	T
Polymer Science and Engineering	F	Psychology	C5	Food Technology	U
Food Technology	G	Sociology	C6		
Atmospheric and Oceanic Sciences	H				

- *XE (Engineering Sciences), **XH (Humanities & Social Sciences), ***XL (Life Sciences), papers are general and will be comprised of Sections listed in the above table.
- Note: Each subject/paper is of a total of 100 marks. General Aptitude (GA) section of 15 marks is common for all papers. Hence remaining 85 marks are for the respective subject/paper code.
- Note: CE, CS, EC, EE, and ME papers: Examination MAY be conducted in multiple sessions. However, a candidate is allowed to appear in only ONE specified / assigned session by the GATE committee.

- The syllabus for each of the papers is given on the GATE website <https://gate.iitkgp.ac.in>. Choosing the appropriate paper in the GATE application is the responsibility of the candidate. Some guidelines in this respect are suggested below.
- Candidates are expected to appear in the paper(s) appropriate to the discipline of their qualifying degree. However, candidates are free to choose anyone or the allowed set of two papers of the GATE 2022 examination as per their admission or employment plan while keeping in mind the eligibility criteria for the institutions in which they wish to seek admission/employment. For more details regarding the admission criteria in any particular institute, the candidate is advised to refer to the website of that institute.
- Candidates must familiarize themselves with the paper code as it is required both during application and examination. As the candidates are permitted to appear in ONE or UP TO TWO papers of the allowed combination of TWO papers of the GATE 2022, they should make their choice with due care.
- If a candidate makes more than one application for the same paper, he/she will be allowed to appear in any one session ONLY. One of the duplicate/triplicate applications will be considered and the remaining applications will be rejected without any refund of the application fee.

• **Combination of TWO papers allowed to appear in GATE 2022**

<u>Code of The First (Primary) Paper</u>	<u>Codes of Papers Allowed as The Second Paper</u>	<u>Code of The First (Primary) Paper</u>	<u>Codes of Papers Allowed as The Second Paper</u>
AE	NM, XE	IN	EC, EE, PH
AG	ES, GE, XE, XL	MA	CS, GE, PH, ST
AR	CE	ME	AE, CH, NM, PI, XE
BM	BT, EC, IN, XL	MN	GE, GG, XE
BT	BM, XL	MT	PH, XE

CE	AE, AR, ES, GE, NM	NM	AE, CE, XE
CH	PE, XE	PE	CH, GG, XE
CS	EC, GE, MA, ST	PH	EC, GE, GG, IN, MA, MT, ST, XE
CY	XL	PI	ME, MT, XE
EC	IN, PH, EE, CS, GE	ST	MA, PH
EE	EC, IN	TF	XE
ES	AG, CE, GE	XE	AE, AG, CH, ME, MN, MT, PE, PI, TF, NM
EY	XL	XH	ST
GE	CE, GG, ES, MN	XL	BM, BT, CY, EY
GG	GE, MN, PE, PH		

Note: Candidates opting to appear in TWO subject papers must have a primary choice of paper, which will be their default choice, and the second choice of paper, which has to be chosen from the allowed combinations. Combinations other than the listed ones are NOT allowed. Under unforeseen circumstances, GATE 2022 committee has the right to remove certain combinations at a later date. In such a case, the fee paid towards the second paper will be refunded to the candidates. Also, note that the examination centre for a candidate to appear for the second paper may be different (but in the same city) from that for the first paper due to the infrastructure and scheduling constraints. GATE committee is NOT liable for any legal obligations related to this issue.

- **GATE 2022 Examination Cities**

Choice of Examination City: A candidate can choose THREE cities from the list of examination cities given in Table 4.4. All three choices must be from the same GATE 2022 zone.

If a candidate chooses a particular city (in a particular zone) as the first choice, then he/she will be able to choose the city of second and third choices ONLY from the same zone. Note that, because of the operational constraints, the GATE Committee reserves the right to add a new city or remove an existing one, and allot a city that may not be from any of the choices selected by the candidate.

- **Application Process**

Application for GATE 2022 must be submitted ONLINE website (<https://gate.iitkgp.ac.in>) by paying the necessary application fees. The photograph, signature, category certificate (SC / ST / PwD), and/or Dyslexia certificate, wherever applicable, must be uploaded during the online application. Candidates MUST enter the valid photo identity (ID) number specified in any one of the following IDs: Aadhaar-UID (preferable), Passport, PAN Card, Voter ID, and Driving License. The candidates who do not possess any of these identity cards may please procure any one of them before making the application. Candidate MUST produce the SAME original valid photo ID proof during the examination for verification purposes. In the absence of the SAME original valid photo ID proof, the candidate will NOT be allowed to appear for the GATE 2022 examination.

Note: "Candidates applying to GATE are required to apply online only. GATE applications in any other form are unauthorized and not sold".

- **Tentative List of Zone-Wise Examination Cities**

<u>Zone Number</u>	<u>Zonal GATE Office</u>	<u>Tentative List of Examination Cities/Towns*</u>
Zone-1	IISc Bangalore Bengaluru - 560 012 Website: http://gate.iisc.ac.in	Ananthapuramu (AP), Angamaly (KL), Bagalkot (KA), Ballari (Bellary KA), Belagavi (Belgaum KA), Bengaluru North (KA), Bengaluru South (KA), Bidar (KA),

		Chikkamagaluru (KA), Davanagere (KA), Hassan (KA), Hubballi (Hubli KA), Hyderabad (TS), Kalaburagi (Gulbarga KA), Kannur (KL), Kasaragod (KL), Kolar (KA), Kozhikode (KL), Kurnool (AP), Malappuram (KL), Mangaluru (KA), Manipal (KA), Mysuru (Mysore KA), Palakkad (KL), Payyanur (KL), Port Blair (AN), Shivamogga (Shimoga KA), Thrissur (KL), Tumakuru (KA), Vatakara (KL) - (30 Cities).
Zone-2	IIT Bombay, Powai, Mumbai - 400 076 Website: https://gate.iitb.ac.in/	Ahmedabad (GJ), Ahmednagar (MH), Akola (MH), Amravati (MH), Anand (GJ), Aurangabad (MH), Baramati (MH), Bhavnagar (GJ), Bhuj (GJ), Dhule (MH), Gandhinagar (GJ), Goa (GA), Jalgaon (MH), Kolhapur (MH), Mehsana (GJ), Mumbai-Navi Mumbai-Thane (MH), Nagpur (MH), Nanded (MH), Nashik

		(MH), Pune (MH), Panvel-Raigad (MH), Rajkot (GJ), Ratnagiri (MH), Sangamner-Loni-Shirdi (MH), Sangli (MH), Satara (MH), Solapur (MH), Surat (GJ), Vadodara (GJ), Vasai-Palghar (MH) - (30 Cities).
Zone-3	IIT Delhi, Hauz Khas, New Delhi - 110 016 Website: http://gate.iitd.ac.in	Ajmer (RJ), Alwar (RJ), Bikaner (RJ), Faridabad (HR), Greater NOIDA (UP), Gurugram (HR), Hisar (HR), Indore (MP), Jaipur (RJ), Jammu-Samba (JK), Jodhpur (RJ), Kota (RJ), Mathura (UP), New Delhi (DL), Sikar (RJ), Sonapat (HR), Srinagar (JK), Udaipur (RJ), Ujjain (MP) - (19 Cities).
Zone-4	IIT Guwahati Guwahati - 781 039 Website: http://iitg.ac.in/gate-jam/	Agartala (TR), Aizawl (MZ), Asansol-Durgapur (WB), Bokaro Steel City (JH), Burdwan (WB), Dhanbad (JH), Dibrugarh (AS), Dimapur-Kohima (NL), Gangtok (SK), Guwahati (AS), Imphal (MN), Itanagar (AR),

		Jorhat (AS), Kalyani (WB), Muzaffarpur (BR), Patna (BR), Purnea (BR), Shillong (ML), Silchar (AS), Siliguri (WB), Tezpur (AS) - (21 Cities).
Zone-5	IIT Kanpur Kanpur - 208 016 Website: http://gate.iitk.ac.in	Agra (UP), Aligarh (UP), Allahabad (UP), Bareilly (UP), Bhopal (MP), Gorakhpur (UP), Gwalior (MP), Jabalpur (MP), Jhansi (UP), Kanpur (UP), Lucknow (UP), Sagar (MP), Satna (MP), Varanasi (UP) - (14 Cities).
Zone-6	IIT Kharagpur Kharagpur - 721 302 Website: http://gate.iitkgp.ac.in	Baharampur- Murshidabad (WB), Balasore (OD), Berhampur (OD), Bhilai (CH), Bhubaneswar (OD), Bilaspur (CH), Cuttack (OD), Dhenkanal (OD), Eluru (AP), Hazaribag (JH), Hooghly (WB), Jamshedpur (JH), Kakinada (AP), Kharagpur (WB), Kolkata (WB), Machilipatnam (AP), Raipur (CH), Rajamahendravaram (Rajahmundry AP),

		Ranchi (JH), Rourkela (OD), Sambalpur (OD), Srikakulam (AP), Tadepalligudem (AP), Vijayawada (AP), Visakhapatnam (AP), Vizianagaram (AP) - (26 Cities).
Zone-7	IIT Madras Chennai - 600 036 Website: http://gate.iitm.ac.in	Alappuzha (KL), Aluva- Ernakulam (KL), Attingal (KL), Chengannur (KL), Chennai South (TN), Chennai West (TN), Chirala (AP), Chittoor (AP), Coimbatore (TN), Cuddalore (TN), Dindigul (TN), Gudur (AP), Guntur (AP), Idukki (KL), Kadapa (AP), Kanjirapally (KL), Kanyakumari- Nagercoil (TN), Karimnagar (TS), Khammam (TS), Kodad (TS), Kollam (KL), Kothamangalam (KL), Kottayam (KL), Madurai (TN), Muvattupuzha (KL), Namakkal (TN), Nellore (AP), Ongole (AP), Puducherry (PY), Salem (TN), Thanjavur (TN), Thiruvananthapuram

		(KL), Thoothukudi (TN), Tiruchirapalli (TN), Tirunelveli (TN), Tirupati (AP), Vellore (TN), Villupuram (TN), Virudhunagar (TN), Warangal (TS) - (40 Cities).
Zone-8	IIT Roorkee Roorkee – 247 667 Website: https://gate.iitr.ac.in	Ambala (HR), Amritsar (PB), Bathinda (PB), Dehradun (UK), Ghaziabad (UP), Haldwani (UK), Hamirpur-Una (HP), Jalandhar (PB), Karnal (HR), Kurukshetra (HR), Ludhiana (PB), Meerut (UP), Mohali-Chandigarh (PB), Moradabad (UP), Muzaffarnagar (UP), NOIDA (UP), Panipat (HR), Pathankot (PB), Patiala-Sangrur (PB), Roorkee (UK), Shimla-Solan (HP), Yamunanagar (HR) - (22 Cities).

This is a tentative list of examination cities, and any changes will be updated on the website: <https://gate.iitkgp.ac.in>

- **GATE 2022 Application Fee**

The application fee is NEITHER refundable) NOR transferable. Payments have to be made online by using either net banking/debit card/credit card/wallet. As per the

prevailing norms, additional online transaction charges or bank charges may be applicable. These charges will be specified on the payment portal.

<u>For Examination Centres in India</u>	<u>Regular Period (30th August to 24th Sept. 2021) (Rupees)</u>	<u>During the Extended Period (25th Sep. to 1st Oct. 2021) (Rupees)</u>
Female candidates (per paper)	750	1250
SC / ST / PwD* category candidates (per paper)	750	1250
All other candidates (per paper)	1500	2000

Note: The application fee mentioned above DOES NOT INCLUDE service charges, processing fees, and any other charges that the banks may levy.

*PwD means Persons with Disability.

- **GATE Online Application Process**

GATE 2022 (<https://gate.iitkgp.ac.in>) provides an online interface to the candidate for interacting with the GATE administration. With this interface, a candidate can:

- i. Apply for the examination
- ii. Upload photograph, signature, and other documents and category certificate (SC / ST / PwD) and/or Dyslexic certificate as applicable
- iii. Pay the application fee through any of the electronic payment modes
- iv. Check the Status of the application form: Received, Under scrutiny, Accepted, Defect status, Status after rectification, Rejected with valid reasons, Admit Card ready for download, etc
- v. Download Admit Card
- vi. View your answers, marks, and GATE score
- vii. Download GATE scorecard

Registration: A candidate must first register by providing Full Name (as per the valid photo ID, which candidate MUST bring in original while appearing for GATE 2022 examination at the examination centre), a valid e-mail address, mobile number, and by choosing a password. All communications from the GATE Offices will be sent to this e-mail address (ONLY ONE PERSON CAN REGISTER WITH ONE e-mail ADDRESS) and/or mobile number. Give the

personal mobile number and e-mail address, because most of the communication will be through e-mail and/or SMS.

Enrolment ID: Each registered candidate will be provided with an Enrolment ID. Upon registration, an e-mail containing the Enrolment ID will be sent to the candidate. This Enrolment ID will be the reference ID for all future communication until the examination gets over.

Password: The candidate has to choose a password during Enrolment. This password must be remembered along with the Enrolment ID to login into your account. It is strongly recommended to choose a password that cannot be guessed easily (it should not be the candidate's name, date of birth, or some easily identifiable string of numbers or letters like 12345 or abcd). The length of the password should be 8-15 characters. Keep your password information safe, secure, and confidential.

- **Filling in GATE 2022 Application**

After due registration, GATE 2022 application must be filled and submitted ONLINE only.

Candidates are discouraged from making applications through a third person. If someone else (friend or Internet café person) is filling the application on behalf of the candidate, the candidate must ensure that the data submitted are correct. Based on the earlier experience, submission through a third person is highly discouraged to ensure an error-free application.

- i. **Data Requirement for Filling the Application Form:** The following data will be required while filling the online application form:
 - Personal information (name, date of birth, personal mobile number, parents' name, parents' mobile number, etc.). Please note that the name of the candidate in the application form must be the same as that in the valid photo ID, which the candidate MUST produce in original while appearing for GATE 2022 examination at the centre. GATE 2022 scorecard will be issued as per the name entered in the application form. Prefix/title such as Mr/Shri/Dr/Mrs/Smt/Prof/Capt/Maj/Lt/Col., etc. MUST NOT be used before a name.
 - Address for Communication (including PIN code)
 - Eligibility degree details
 - College name and address with PIN code
 - GATE paper(s) (subject)

- Choice(s) of GATE examination cities
- A high-quality image of the candidate's photograph conforming to the requirements specified
- Good quality image of candidate's signature conforming to the requirements specified
- Scanned copy of valid photo Identity Document (ID) (The same ID, in original, MUST be carried to the examination hall)
- Scanned copy of Category (SC / ST) certificate (if applicable) in pdf format
- Scanned copy of PwD Certificate (if applicable) in pdf format
- Scanned copy of Dyslexic Certificate (if applicable) in pdf format
- Net-banking / debit card/credit card / wallet details for fee payment

ii. **Application Filling:** The GATE 2022 website allows you to enter the data, save a partially filled form, log out, and resume filling the form by logging in again. The online application process is self-explanatory and user-friendly. Additional help information required in filling various fields in the will also be made available

Before proceeding to payment, the candidate is advised to view the filled-in application form by clicking the "Save and View Application" button. Please check carefully for any errors in the data entered in the application form. Once the candidate clicks the "Submit and Proceed to Payment" button, NO further changes to the application can be made.

iii. **Declaration:** Before submitting the online application form, a candidate MUST read and accept the following declaration statement:

I confirm that I fulfill the eligibility criteria to appear for the Graduate Aptitude Test in Engineering (GATE 2022) examination and I, myself have filled up the entire online application form. I have fully understood every point in the form and fill up the details accordingly. I agree to strictly comply with the code of conduct for the GATE 2022 examination as detailed in Appendix B of the Information Brochure. I confirm that the information provided by me in this form is correct in all respect. I also confirm that I am NOT filling more than ONE form for myself.

If any of the information provided by me is found to be incorrect at a later time, my candidature for GATE 2022 will be cancelled. This cancellation of my candidature can happen either before, during, or after the examination, including the time after generation of my GATE 2022 scorecard, if any. I also

understand that GATE is NOT an admission ensuring examination, and qualifying in the GATE examination does NOT guarantee admission/scholarship/job. GATE 2022 committee is NOT liable for any legal obligations related to admission/job. I shall be liable for legal action for providing any type of false information. GATE 2022 committee's decision will be final and legally binding on me.

- iv. **Problems in Login:** In case of forgotten user ID or password, follow the instructions on the GATE 2022 website to retrieve them

- **Identity Proof**

Candidates have to specify ANY ONE of the following valid photo Identity Documents (IDs) during the online application process and enter the document number specified: Aadhaar-UID (preferable), Passport, PAN Card, Voter ID, or Driving License. On the examination day, the candidate must bring the original ID proof along with the GATE 2022 Admit Card. Candidates will NOT be permitted to take the examination, in case the admit card and the same valid original photo identification document are NOT presented at the examination. For international candidates, ONLY a valid Passport / Government issued ID / Driving License will be accepted as the recognized identification document.

8. GATE 2022 Examination Related Information

GATE 2022 examination will be conducted for 29 papers (subjects). A candidate can appear for one or two of the 29 GATE papers. The examination for all the papers will be conducted in an ONLINE Computer Based Test (CBT) mode where the candidates will be shown the questions on a computer screen.

A Virtual Scientific Calculator will be available on the computer screen during the examination. Candidates have to use the same during the examination. Personal calculators, any type of watches, wallets, mobile phones, or any electronic / communication devices are NOT allowed inside the examination hall. Candidates must NOT bring any charts/tables/papers into the examination hall. GATE officials will NOT be responsible for the safe-keep of the candidates' personal belongings.

A scribble pad will be provided to the candidates for rough work. The candidates have to write their name and registration number on the scribble pad before they start using it. The candidate can possess ONLY one scribble pad at any point in time. Before taking the second scribble pad, if required, the first scribble pad MUST be returned to the invigilator. The scribble pad in the candidate's possession must be returned to the invigilator at the end of the examination.

Syllabus for each of the papers previous years GATE (model) question papers and mock examination links along with a virtual scientific calculator will be available on GATE 2022 website: <https://gate.iitkgp.ac.in/>

- **Examination Duration**

All the papers of the GATE 2022 examination will be of 3 hours duration and they consist of 65 questions for a total of 100 marks. Since the examination is an ONLINE computer-based test (CBT), at the end of the stipulated time (3-hours), the computer screen will automatically close the examination inhibiting any further action.

Candidates will be permitted to occupy their allotted seats 40 minutes before the scheduled start of the examination. Candidates can log in and start reading the instructions 20 minutes before the start of the examination. The late login time (if any) recorded by the computer system MUST NOT be beyond 30 minutes from the actual starting time of the examination. Under NO circumstances, will a candidate be permitted to login after 30 minutes from the actual examination starting time. Candidates will NOT be permitted to leave the examination hall before the end of the examination.

- **GATE 2022 Question Papers**

- **Pattern of Questions**

GATE 2022 may contain questions of THREE different types in all the papers:

- 1) **Multiple Choice Questions (MCQ)** carry 1 or 2 marks each, in all the papers and sections. These questions are objective, and each will have a choice of four answers, out of which ONLY ONE choice is correct.

Negative Marking for Wrong Answers: For a wrong answer chosen in an MCQ, there will be a negative marking. For 1-mark MCQ, 1/3 mark will be deducted for a wrong answer. Likewise, for 2-mark MCQ, 2/3 mark will be deducted for a wrong answer.

- 2) **Multiple Select Questions (MSQ)** carrying 1 or 2 marks each in all the papers and sections. These questions are objective, and each will have a choice of four answers, out of which ONE or MORE than ONE choice(s) is/are correct.

Note: There is NO negative marking for a wrong answer in MSQ questions. However, there is NO partial credit for choosing partially correct combinations of choices or any single wrong choice.

- 3) **Numerical Answer Type (NAT)** Questions carry 1 or 2 marks each in most of the papers and sections. For these questions, the answer is a signed real number, which needs to be entered by the candidate using the virtual numeric keypad on the monitor (the keyboard of the computer will be

disabled). No choices will be shown for these types of questions. The answer can be a number such as 10 or -10 (an integer only). The answer may be in decimals as well, for example, 10.1 (one decimal) or 10.01 (two decimals), or -10.001 (three decimals). These questions will be mentioned with, up to which decimal places, the candidates need to present the answer. Also, for some NAT-type problems an appropriate range will be considered while evaluating these questions so that the candidate is not unduly penalized due to the usual round-off errors. Candidates are advised to do the rounding off at the end of the calculation (not in between steps). Wherever required and possible, it is better to give NAT answers up to a maximum of three decimal places.

➤ **Marks Distribution**

In all the papers, there will be a total of 65 questions carrying 100 marks, out of which 10 questions carrying a total of 15 marks will be on General Aptitude (GA), which is intended to test typically the Language and Analytical Skills.

In the papers bearing the codes AE, AG, BM, BT, CE, CH, CS, EC, EE, ES, GE, IN, ME, MN, MT, NM, PE, PI, TF, and XE, the General Aptitude section will carry 15% of the total marks and the remaining 85% of the total marks is devoted to the subject of the paper out of which 15% will be Engineering Mathematics.

In the papers bearing the codes AR, CY, EY, GG, MA, PH, ST, XH, and XL, the General Aptitude section will carry 15% of the total marks, and the remaining 85% of the total marks is devoted to the subject of the paper.

➤ **Design of Questions**

The questions in a paper may be designed to test the following abilities:

- i. **Recall:** These are based on facts, principles, formulae, or laws in the discipline of the paper. The candidate is expected to be able to obtain the answer either from his/her memory of the subject or at most from a one-line computation.
- ii. **Comprehension:** These questions will test the candidate's understanding of the basics of his/her field, by requiring him/her to draw simple conclusions from fundamental ideas.
- iii. **Application:** In these questions, the candidate is expected to apply his/her knowledge either through computation or by logical reasoning.
- iv. **Analysis and Synthesis:** In these questions, the candidate is presented with data, diagrams, images, etc. that require analysis before a question can be answered. A Synthesis question might require the candidate to compare two or more pieces of information. Questions in this category could, for example,

involve candidates in recognizing unstated assumptions or separating useful information from irrelevant information.

9. Post-Examination Related Information

Post examination events are as follows:

- i. After the GATE 2022 examinations, candidates' responses will be available in their account on GATE 2022 website, which can be downloaded.
- ii. Answer keys for various GATE 2022 papers will be displayed on the GATE 2022 website.
- iii. Candidates may submit their contests on the answer keys provided for a very limited period against a payment.
- iv. Evaluation of examination papers will be finalized and GATE results (Score) will be announced.
- v. Qualified candidates can download scorecards from their accounts at GATE 2022 website.

• GATE Score

After the evaluation of the answers, the actual (raw) marks obtained by a candidate will be considered for computing the GATE Score. For multi-session papers (subjects), raw marks obtained by the candidates in different sessions will be converted to Normalized marks for that particular subject. Thus, raw marks (for single session papers) or normalized marks (for multi-session papers) will be used for computing the GATE Score, based on the qualifying marks.

• GATE 2022 Results

GATE 2022 results will be announced on 17th March 2022 and will be available on the GATE 2022 Website. GATE 2022 score is valid for THREE YEARS from the date of announcement of the results. No information on the GATE 2022 score will be available after this period.

• GATE 2022 Scorecard

After the declaration of results, GATE 2022 Scorecards of the qualified candidates can be downloaded free of cost between 21st March 2022 to 31st May 2022 from the GATE 2022 website. It is highly recommended that a softcopy of the scorecard is safely stored by the candidate for all future uses.

In case, GATE-qualified candidates require a soft copy of their GATE Scorecard after 31st May 2022 and till 31st December 2022, they MUST pay a fee of 500 (Rupees five

hundred only) for obtaining the same. From 1st January 2023 onwards, NO scorecard will be issued by the GATE authority for GATE 2022 qualified candidates. There is NO provision for the issue of hard copies of the GATE Scorecard.

10. Contact Information

GATE 2022 is jointly administered and conducted by the Indian Institute of Science (IISc) Bangalore and seven Indian Institutes of Technology (IITs) at Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras, Roorkee.

- **GATE Zonal Offices**

<u>Zone Number</u>	<u>Contact Address</u>	<u>Phone Number</u>	<u>Email ID</u>
Zone 1	Chairperson, GATE Indian Institute of Science, Bangalore, Bengaluru 560012	080-22932392 080-23601227	gate@gate.iisc.ac.in
Zone 2	Chairperson, GATE Indian Institute of Technology Bombay, Powai, Mumbai 400076	022-25767068	gateoffice@iitb.ac.in
Zone 3	Chairperson, GATE Indian Institute of Technology Delhi, Hauz Khas, New Delhi 110016	011-26591749	gate@admin.iitd.ac.in
Zone 4	Chairperson, GATE Indian	0361-2582751 0361-2582755	gate@iitg.ac.in

	Institute of Technology		
Zone 5	Chairperson, GATE Indian Institute of Technology Kanpur, Kanpur 208016	0512-2597412	gate@iitk.ac.in
Zone 6	Organising Chairperson, GATE Indian Institute of Technology Kharagpur, Kharagpur 721302	03222-282091 03222-282095	gateonline@adm.iitkgp.ac.in
Zone 7	Chairperson, GATE Indian Institute of Technology Madras, Chennai 600036	044-22578200	gate@iitm.ac.in
Zone 8	Chairperson, GATE Indian Institute of Technology Roorkee, Roorkee 247667	01332-284531	gate@iitr.ac.in