



राष्ट्रीय परीक्षा एजेंसी
National Testing Agency
Excellence in Assessment

JEE (MAIN) 2024


**Information
BULLETIN**



www.nta.ac.in
jeemain.nta.ac.in





NATIONAL TESTING AGENCY

Vision

The right candidates joining best institutions will give India her demographic dividend.

Mission

To improve equity and quality in education by administering research based valid, reliable, efficient, transparent, fair and international level assessments. The best subject matter experts, psychometricians and IT delivery and security professionals will ensure that the current gaps in existing assessment systems are properly identified and bridged.

Core Values

NTA will create a system which will promote teaching (by teachers), learning (by students) and assessment (by parents and institutions). NTA strongly believes in quality, efficiency, effectiveness, equity and security of assessments. To practice these values, NTA will constantly engage with its stakeholders, viz. students, parents, teachers, experts and partner institutions.



LIST OF ABBREVIATIONS

JEE (Main)	<i>Joint Entrance Examination (Main)</i>
AICTE	<i>All India Council of Technical Education</i>
JoSAA	<i>Joint Seat Allocation Authority</i>
CSAB	<i>Central Seat Allocation Board</i>
B.E.	<i>Bachelor of Engineering</i>
B.Tech.	<i>Bachelor of Technology</i>
B.Arch.	<i>Bachelor of Architecture</i>
B.Planning	<i>Bachelor of Planning</i>
CoA	<i>Council of Architecture</i>
MoE	<i>Ministry of Education</i>
NTA	<i>National Testing Agency</i>
GoI	<i>Government of India</i>
GST	<i>Goods & Service Tax</i>
IIT	<i>Indian Institute of Technology</i>
IIIT	<i>Indian Institute of Information Technology</i>
NIT	<i>National Institute of Technology</i>
DASA	<i>Direct Admission for Students Abroad</i>
CFTI	<i>Centrally Funded Technical Institute</i>
UFM	<i>Unfair Means</i>
CBT	<i>Computer Based Test</i>
NEP	<i>National Education Policy</i>
RPwD	<i>Rights of Persons with Disabilities</i>
QP	<i>Question Paper</i>
TPC	<i>Test Practice Centre</i>
FAQ	<i>Frequently Asked Questions</i>
QRS	<i>Query Redressal System</i>
EWS	<i>Economically Weaker Section</i>
OBC (NCL)	<i>Other Backward Class (Non-Creamy Layer)</i>
SC	<i>Scheduled Castes</i>
ST	<i>Scheduled Tribes</i>
OCI	<i>Overseas Citizen of India</i>



S. No.	Particulars	Page No.	
A.	Important Information and Dates at a Glance	4-10	
Chapter 1- Introduction			
1.1	About National Testing Agency (NTA)	11	
Chapter 2 – Joint Entrance Examination (Main) – 2024			
2.1	About JEE (Main)	12	
Chapter 3 - Examination Scheme			
3.1	Mode of Examination	13	
3.2	Choice of Medium of Question Papers (QP)	13	
3.3	Scheme of Examination	14	
3.4	Pattern of Examination	14-18	
3.5	Duration of Test	18	
3.6	Syllabus of Examination	19	
Chapter 4 - Eligibility and Qualifications			
4.1	Age Criteria	20	
4.2	List of Qualifying Examination (QE)	20	
4.3	Year of Appearance in Qualifying Examination (QE)	21	
4.4	State of Eligibility	21	
Chapter 5 – Reservation			
5.1	Reservation	22	
5.2 (a)	Guidelines for conducting written examination for Persons with Benchmark Disabilities above 40% vide letter dated 29 August 2018 from the Ministry of Social Justice and Empowerment	23	
5.2 (b)	Guidelines for conducting written examination for persons with specified disabilities covered under the definition of Section 2(s) of the RPwD Act, 2016 but not covered under the definition of Section 2(r) of the said Act, i.e. persons having less than 40% disability and having difficulty in writing	24	
5.3	State Government Policy for Disability	25	
Chapter 6 – Choice of Cities			26
Chapter 7 – Particulars to be Filled in the JEE (Main) – 2024 Online Application Form			27-30
Chapter 8 - Admit Card			31
Chapter 9 – Schedule of Examination			32
Chapter 10 – Important Instructions for the Candidates			33-34
Chapter 11 – Unfair Means Practices and Breach of Examination Rules			
11.1	Definition	35	
11.2	Punishment for Using Unfair Means Practices	36	
11.3	Cancellation of Result	36	
Chapter 12 – Display of Answer Key for Challenge			
12.1	Display of Answer Key Challenge	37	
12.2	Display of Recorded Responses	37	



Chapter 13 – JEE (Main) NTA Score for B.E./B.Tech. B.Arch. and B.Planning			
13.1		JEE (Main) NTA Score for B.E./B.Tech. B.Arch. and B.Planning	38
13.2		Compilation and Display of Result/NTA score of Paper 1(B.E./B.Tech.)	38
13.3		Compilation and Display of Result/NTA score of Paper 2A & 2B (B.Arch. & B.Planning.)	39
13.4		Re-evaluation/Re-checking of Result	40
13.5		Use of Scores of JEE (Main) – 2024 by Other Organizations	40
Chapter 14 – Admission			
14.1		Eligibility for Admission to NITs, IITs, and CFTIs participating through the Central Seat Allocation Board (CSAB)	41
14.2		Eligibility for Admission to Other Institutions	42
14.3		Seat Allocation Process and Admission Procedure	42
14.4		Eligibility Criteria for Appearing in JEE (Advanced) – 2024	43
Chapter 15 - National Test Abhyas			
Chapter 16 - Miscellaneous			
16.1		Query Redressal System (QRS)	45
16.2		Correspondence with NTA	45
16.3		Weeding Out Rules	45
16.4		Legal Jurisdiction	45
16.5		RTI	45
S. No.	Annexure No.	Particulars	Page No.
1.	I	Disability Certificate having disability less than 40%	47
2.	II	Letter of Undertaking for Using Own Scribe	48
S. No.	Appendix No.	Particulars	Page No.
1	I	List of Examination Cities for JEE (Main) – 2024	49-56
2	II	Procedure for Online Payment of Fees and Helpline for Payment-Related Queries	57-58
3	III	Computer Based Test (CBT) Guidelines	59-64
4	IV	NTA Test Practice Centres (TPCs)	65
5	V	Normalization Procedure based on Percentile Score	66-70
6	VI	Syllabus of JEE (Main) – 2024	71-91
7	VII	Replica of JEE (Main) – 2024 Application Form	92-109



IMPORTANT INFORMATION AT A GLANCE

(Please refer to Information Bulletin for details)

1. Important Dates :

EVENTS	DATES	
(a) Session-1: JEE (Main) - January 2024		
Online Submission of Application Form	01 November 2023 to 30 November 2023 (up to 09:00 P.M.)	
Last date for successful transaction of prescribed Application Fee	30 November 2023 (up to 11:50 P.M.)	
Announcement of the City of Examination	By the second week of January 2024	
Downloading Admit Cards from the NTA website	03 days before the actual date of the Examination	
Dates of Examination	Between 24 January and 01 February 2024	
Display of Question Paper attempted by the Candidate and Answer Keys for inviting challenges	To be displayed on the NTA website	
Declaration of Result	12 February 2024	
(b) Session-2: JEE (Main) - April 2024		
Online Submission of Application Form	02 February 2024 to 02 March 2024 (up to 09:00 P.M.)	
Last date for successful transaction of prescribed Application Fee	02 March 2024 (up to 11:50 P.M.)	
Announcement of the City of Examination	By the third week of March 2024	
Downloading Admit Cards from the NTA website	03 days before the actual date of the Examination	
Dates of Examination	Between 01 April and 15 April 2024	
Display of Question Paper attempted by the Candidate and Answer Keys for inviting challenges	To be displayed on the NTA website	
Declaration of Result	25 April 2024	
(c) Duration of Examination for each Session of JEE (Main) - 2024 :		
Paper 1 (B.E./B.Tech.) or Paper 2A (B.Arch.) or Paper 2B (B.Planning.)	03 Hours	
B.Arch. & B.Planning (both)	03 Hours 30 Minutes	
(d) Timing of Examination for each Session: JEE (Main) - 2024 :		
Duration of Examination	First Shift	Second Shift
For 3 Hours Paper	09.00 A.M. to 12.00 Noon (IST)	03.00 P.M. to 06.00 P.M. (IST)
For 3 Hours 30 Minutes Paper	09.00 A.M. to 12.30 P.M. (IST)	03.00 P.M. to 06.30 P.M. (IST)

**Fee Payable for JEE (Main) – 2024 for each session:****(Through Credit Card/Debit Card (except Master/Visa Card)/Net Banking/UPI):**

Fee payable for JEE (Main) – 2024 (through Credit Card /Debit Card (except Master/Visa Card) / Net-Banking/UPI)		Type of Candidate	Centres in India (Fee in ₹)	Centres Outside India (Fee in ₹)	
Paper 1: B.E./B. Tech or Paper 2A: B. Arch or Paper 2B: B.Planning	General	Male	1000	5000	
		Female	800	4000	
	Gen-EWS/ OBC (NCL)	Male	900	4500	
		Female	800	4000	
	SC/ST/PwD	Male	500	2500	
		Female	500	2500	
Third Gender			500	3000	
Paper 1: B.E./B. Tech & Paper 2A: B. Arch or Paper 1: B.E./B. Tech & Paper 2B: B. Planning or Paper 1: B.E./B.Tech, Paper 2A: B. Arch & Paper 2B: B.Planning or Paper 2A: B. Arch & Paper 2B: B.Planning	General/Gen- EWS/OBC (NCL)	Male	2000	10000	
		Female	1600	8000	
	SC/ST/PwD	Male	1000	5000	
		Female	1000	5000	
	Third Gender			1000	5000
	<i>Processing charges and Goods & Service Taxes (GST) are to be paid by the candidate, as applicable.</i>				

Candidates are requested to fill in the Application Form carefully. No corrections will be permitted once the Application Form is submitted.

Note: Multiple Application Forms submitted by a candidate will not be accepted and will lead to the cancellation of his/her result.

- (i) A candidate has the option to apply **for one Session or both Sessions (Session 1 and Session 2 of 2024) together** and pay the exam fee accordingly. In other words, if a candidate wishes to apply only for one Session, he/she has to pay the Examination Fee only for that Session during the current application period and will have the opportunity to apply again for Session 2 (April 2024).
- (ii) If a candidate wishes to apply for Session 2, the candidate can log in and pay the Examination Fee for Session 2 during that period.



- (iii) The application window for Session 2 will be re-opened as per the details available in the Information Bulletin and will also be notified separately through a Public Notice.
- (iv) The fee can be submitted only online through Net Banking, Credit Card, Debit Card, or UPI Services. Processing charges and GST as applicable are chargeable from the candidate (in addition to the examination fee) by the concerned Bank/Payment Gateway Integrator. For details/procedure, please see **Appendix-II**.
- (v) The Confirmation Page of the online Application Form for each session will be generated only after the successful payment of the fee by the Candidate. In case the Confirmation Page is not generated after payment of the fee, then the candidate may have to approach the concerned Bank/Payment Gateway (in the helpline numbers and email given in **Appendix-II**) to ensure the successful payment or to obtain the refund of duplicate /multiple payments.

Under no circumstances, candidates will be allowed to fill more than one Application Form. Strict action will be taken, even at a later stage, against such candidates who have filled more than one Application Form.

1. Candidates must read carefully the Instructions (including how to fill up the Application Form online) given in the Information Bulletin available on the NTA Website. Candidates not complying with the instructions shall be summarily disqualified.
2. Candidates can apply for **JEE (Main) – 2024 Session 1 and Session 2 through the “Online” mode only**. The Application Form **in any other mode will not be accepted**.
3. Submission of the Application Form could be made by the candidate online through the NTA website: [https:// jeemain.nta.ac.in/](https://jeemain.nta.ac.in/)
4. **Instructions for filling Online Application Form:**

- ❖ Download the Information Bulletin and Replica of the Application Form. Read these carefully to ensure your eligibility.
- ❖ **Follow the steps given below to Apply Online:**

Step 1: Registration Process :

Candidate needs to select any one of the following to register for JEE (Main):

- To log in/create a **Digi locker account through the NAD portal**. Or;
- To log in/create an **Academic Bank of Credits ID (ABC ID) through the ABC ID**. Or;
- To log in using an **Indian Indian Passport Number**. Or;
- To log in using a **Non-Indian Passport Number**. Or;
- To log in using a **PAN Card Number**. Or;
- To log in using an **Aadhaar Enrollment Number**.

- i. The candidates are advised to register through Digi Locker/ABC ID.**
- ii. Those candidates who do not wish to register through the Digi Locker / ABC ID, need to report early (one hour prior to the entry time) at the examination Centre on the day of the examination.**



Candidate needs to select options for Authentication at the Examination Centre.

- Authenticate through an Aadhaar Card
- Authenticate through Valid Government ID with a Photograph

Please note that for authentication through non-Aadhaar options Candidate needs to reach the Exam Centre 1 hour earlier than other Candidates to get their Biometrics recorded at the Exam Centre.

Candidate must write his / her Full Name, the same as printed on the certificate/marksheet of Class 10 / equivalent Examination otherwise the form will be rejected.

The candidate should submit the required details while filling the Online Application Form and is also required to create a PASSWORD, choose Security Question, and enter his/her Answer.

After successful submission of the personal details, an Application number will be generated and it will be used to complete the remaining Steps of the Application Form and will also be required for all future reference/correspondence.

This application number will also be used/referred for both Sessions of JEE (Main) - 2024. For subsequent logins, the candidate will be able to login directly with the respective system-generated **Application Number** and created **Password**.

Step 2: Application Form:

The Candidates can log in with the system-generated Application Number and pre-created Password or **Digi locker ID / ABC ID** and their password for completing the Application Form including filling up personal details, applying for the Paper, choosing the Examination Cities, providing the details of Educational Qualifications, and uploading the images and documents (if any).

Upload Scanned Images of the Candidate's Photograph, Signature, and PwD Certificate/ UDID Card (Swawlamban Card) (wherever applicable):

- The recent photograph should be either in colour or black & white with 80% face (without mask) visible including ears against a white background.**
- The scanned **photograph and signature** should be in **JPG/JPEG format** (clearly legible).
- The size of the **scanned photograph** should be between **10 kb to 200 kb** (clearly legible).
- The size of the **scanned signature** should be between **4 kb to 30 kb** (clearly legible)
- The size of the scanned copy of the **PwD certificate** should be in pdf between **50 kb to 300 kb** (clearly legible)



[**Note:** The Candidate has to upload only his/her own photograph, signature, and certificate(s) as mentioned above (and not of anybody else) in a correct/proper manner, *as the facility for correction may not be given in the future.*]

In case, it is found at any time in the future that the Candidate has used/uploaded the photograph, signature, and certificate(s) of someone else in his/her Application Form/Admit Card, or *he/she has tampered his/her Admit Card/Result/Scorecard, these acts of the candidate shall be treated under Unfair Means (UFM) Practices and actions taken as detailed under the provisions of the Information Bulletin relating to Unfair Means Practices.*

Please check your photograph and signature before submission of the Application Form. In case the photograph or signature is blurred or not visible to identify the identity of the candidate then, the application will be rejected and no option for correction or revision will be permitted

Step 3: Fee Payment:

After completing **Step 1** and **Step 2**, the candidates have to pay the requisite examination fee. The fee can be only submitted online through Net Banking, Credit Card, Debit Card, and UPI. Processing charges and GST as applicable are chargeable to the candidate (in addition to the examination fee) by the concerned Bank.

The Confirmation Page of the online Application Form will be generated only after successful payment by the Candidate. In case the Confirmation Page is not generated after payment of fee, then the candidate may have to approach the concerned Bank (in the helpline number and e-mail given in the Information Bulletin) for ensuring the successful payment or for obtaining the refund of duplicate/multiple payments.

- ❖ Download, save, and print a copy of the Confirmation Page of the Application Form (which would be downloadable only after the successful remittance of the fee) for future reference.
- ❖ All **3 Steps** can be done together or at separate times. The submission of the Application of a candidate could be considered successful and his/her candidature would be confirmed only on the successful transaction/receipt of the prescribed application fee from him/her.
- 5. Candidates shall ensure that the information entered by them in their respective online Application Forms is correct.
- 6. **All candidates must ensure that they have provided the correct e-mail address and mobile number. A copy of the Confirmation Page and Final Score Card of JEE (Main) – 2024 will also be sent to the registered e-mail address of the Candidate as well as the Parent/Guardian.**
- 7. Information provided by the candidates in their respective online Application Forms, like, the name of the candidate, contact details, address details, category, PW status, educational qualification details, date of birth, choice of examination cities, etc. will be treated as final. **Any request for change in such particulars will not be considered by NTA under any circumstances.**
- 8. *NTA does not edit/modify/alter any information entered by the candidates after completion of the application process under any circumstances. Any request for change in information thereafter will not be entertained. Therefore, candidates are advised to exercise utmost caution before filling up the correct details in the Application Form.*



9. NTA disclaims any liability that may arise to a candidate(s) due to incorrect information provided by him/her in his/her online Application Form.
10. Candidates must ensure that their email address and mobile number to be registered in their online Application Form are their own, as relevant/important information/ communication will be sent by NTA through e-mail on the registered mail address and/or through SMS on the registered mobile number only. NTA shall not be responsible for any non-communication /miscommunication with a candidate in the email address or mobile number given by him/her other than his/her own. **Candidates are advised to visit the NTA Website and check their e-mails regularly for the latest updates.**
11. Candidates shall appear at their own cost at the Examination Centre on the date, shift, and time indicated on their Admit Cards issued by the NTA in due course through its website.

Note:

- i. *The final submission of the Online Application Form will remain incomplete if Step 3 is not complete. Such forms will stand rejected and no correspondence on this account will be entertained.*
- ii. *The entire application process for JEE (Main) - 2024 is online, including uploading scanned images/documents, payment of fees, and printing of Confirmation Page, Admit Card, etc. Therefore, candidates are not required to send/submit any document(s) including the Confirmation Page to NTA through Post/ Fax/WhatsApp/Email/by Hand.*
- iii. *NTA has facilitated all candidates with an additional platform of UMANG and DigiLocker to download their documents like Confirmation Page, Admit Card, Score Cards, etc. Instruction will be provided in subsequent phases. Candidates are advised to visit the NTA Website and check their e-mails regularly for the latest updates.*
- iv. *Usage of Data and Information: NTA/Government of India can use the data provided by the End Users (test taker in this case) for internal purpose(s) including training, research and development, analysis, and other permissible purposes (s). However, this information is not for use by any third party or private agency for any other use.*
- v. *Choice of examination cities displayed to the candidates will be based on the permanent and correspondence addresses filled during Online Application Form of JEE (Main) – 2024.*
- vi. ***Candidates are advised to fill only one Application Form and to take utmost care while filling out the mobile number and e-mail address. Candidates are also advised to use the mobile number and email address that are accessible to them. Only one mobile number and email address should be used for one Application Form.***
- vii. ***It is mandatory to provide the Mobile Number and e-mail of the Parent or Guardian during the submission of the online Application Form of JEE (Main) – 2024 as a copy of the Confirmation Page, The Final Score Card will also be sent to them.***



Brief Advisory:

Candidates are advised to carry only the following with them into the examination venue:

- i. Admit card along with Self Declaration (Undertaking) downloaded from the NTA Website (a clear printout on A4 size paper) duly filled in.**
- ii. A simple transparent Ball Point Pen.**
- iii. Additional photograph, to be pasted on the attendance sheet.**
- iv. Personal transparent water bottle.**
- v. Sugar tablets/fruits (like banana/apple/orange) in case the candidate is diabetic.**

Note:

1. All Candidates shall ensure that the information (like his/her name, mother's name, father's name, gender, date of birth, category, PwD status, mobile number, e-mail address, photograph, and signature, choice of cities for examination Centre, etc.) provided by them in their online Application Form is correct. **Candidates are advised to exercise the utmost care in filling up the correct details in the Online Application Form. Any request for change in the particulars and uploaded scanned images at any stage will not be considered by NTA under any circumstances. NTA will not entertain the corrections sent by the candidate through Post/Fax/WhatsApp/E-mail/by Hand.**
2. In case it is found at any time in the future that the Candidate has used/uploaded the photograph, signature, and certificate(s) of someone else in his/ her Application Form/Admit Card or he/she has tampered with his/her Admit Card/result, it would be treated as Unfair Means (UFM) Practices on his/her part and the actions will be taken under the provisions of Unfair Means Practices, as detailed in the Information Bulletin.
3. **Candidates are NOT allowed to carry Instruments, Geometry or Pencil box, Handbag, Purse, any kind of Paper/ Stationery/ Textual material (printed or written material), Eatables and Water (loose or packed), Mobile Phone/ Earphone/ Microphone/ Pager, Calculator, DocuPen, Slide Rules, Log Tables, Camera, Tape Recorder, Electronic Watches with facilities of calculator, any metallic item or electronic gadgets/ devices in the Examination Hall/Room.**
4. *Candidates are requested to retain a copy of the Confirmation Page, Admit Card, and Scorecard of the JEE (Main) – 2024 as the same will not be available after 31 July 2024.*



CHAPTER 1 INTRODUCTION

1.1 About National Testing Agency (NTA)

The Ministry of Education (MoE), Government of India (GoI) established the National Testing Agency (NTA) as an independent, autonomous, and self-sustained premier testing organization under the Societies Registration Act (1860) for conducting efficient, transparent, and international standardized tests in order to assess the competency of candidates for admission to premier higher education institutions with a mission to improve equity and quality in education by developing and administering research-based valid, reliable, efficient, transparent, fair and international level assessments.

NTA has created a system that is promoting teaching (by teachers), learning (by students), and assessment (by parents and institutions). NTA strongly believes in the quality, efficiency, effectiveness, equity, and security of assessments. To practice these values, NTA is constantly engaging with its stakeholders, viz. students, parents, teachers, experts, and partner institutions.

The objectives of NTA, *inter alia*, include:

1. To conduct efficient, transparent, and international standardized tests in order to assess the competency of candidates for admission.
2. To undertake research on educational, professional, and testing systems to identify gaps in the knowledge systems and take steps for bridging them.
3. To produce and disseminate information and research on education and professional development standards.

The Department of Higher Education, Ministry of Education, Government of India has entrusted the responsibility of conducting the **Joint Entrance Examination [JEE (Main)] to the NTA from 2019 onwards.**





CHAPTER-2

JOINT ENTRANCE EXAMINATION (MAIN) - 2024

2.1 About JEE (Main) - 2024

The Joint Entrance Examination, JEE (Main) comprises two papers. **Paper 1** is conducted for admission to Undergraduate Engineering Programs (**B.E/B.Tech.**) at NITs, IITs, other Centrally Funded Technical Institutions (CFTIs), and Institutions/Universities funded/recognized by participating State Governments. JEE (Main) is also an eligibility test for JEE (Advanced), which is conducted for admission to IITs. **Paper 2** is conducted for admission to **B. Arch and B. Planning** courses in the country.

The JEE (Main) - 2024 is being conducted in **02 (two) sessions** for admissions in the next academic session. The candidates will thus benefit in the following ways:

- This will give the candidates two opportunities to improve their scores in the examination if they are not able to give their best in the first attempt.
- In the first attempt, the students will get a first-hand experience of taking an examination and will know their mistakes which they can improve while attempting for the second time.
- This will reduce the chances of dropping a year and droppers would not have to waste an entire year.
- If anyone misses the examination due to reasons beyond control (such as the Board examination), then he/she will not have to wait for one entire year.
- A candidate need not appear in both Sessions. However, if a candidate appears in more than one Session then his/her best of the JEE (Main) - 2024 NTA Scores will be considered for preparation of the Merit List/ Ranking.

- 1. JEE (Main) - 2024 Session 1 for Paper 1 (B.E./B.Tech.) will be held between 24 January and 01 February 2024 and Session 2 will be held between 01 April and 15 April 2024. This is being done to ensure that the JEE (Main) - 2024 does not interfere with the Board examinations, which may be held at different times across the States/UTs. Paper 2A and Paper 2B (B. Arch and B. Planning) are also being held twice a year (January and April 2024).**
- 2. It has been decided to provide choices in one section of each subject of Paper 1 and Part-I of Paper 2A and 2B to cater to the decision of different Boards across the country regarding the reduction of the syllabus. However, the total number of questions to be attempted will remain the same (Physics – 25, Chemistry – 25, and Mathematics – 25), wherever applicable.**



CHAPTER 3

EXAMINATION SCHEME

3.1 Mode of Examination

JEE (Main) - 2024 is being conducted in the following modes:

- a) **Paper 1 (B.E. /B. Tech.)** in “Computer Based Test (CBT)” mode only.
- b) **Paper 2A (B. Arch):** Mathematics (Part-I) and Aptitude Test (Part-II) in “Computer Based Test (CBT)” mode only and Drawing Test (Part-III) in pen and paper (offline) mode, to be attempted on drawing sheet of A4 size.
- c) **Paper 2B (B. Planning):** Mathematics (Part-I), Aptitude Test (Part-II), and Planning-Based Questions (Part-III) in Computer-Based Test (CBT) mode only.

3.2 Choice of Medium of Question Papers

Medium of the Question Papers: Drawing from the National Education Policy (NEP), the JEE (Main) - 2024 is being conducted in English, Hindi, Assamese, Bengali, Gujarati, Kannada, Malayalam, Marathi, Odia, Punjabi, Tamil, Telugu, and Urdu.

S. No.	Language	Examination Centres
1.	English	All Examination Centres
2.	English and Hindi	All Examination Centres in India
3.	English and Assamese	Examination Centres in Assam
4.	English and Bengali	Examination Centres in West Bengal, Tripura, and Andaman & Nicobar Islands
5.	English and Gujarati	Examination Centres in Gujarat, Daman & Diu, Dadra & Nagar Haveli
6.	English and Kannada	Examination Centres in Karnataka
7.	English and Malayalam	Examination Centres in Kerala and Lakshadweep
8.	English and Marathi	Examination Centres in Maharashtra
9.	English and Odia	Examination Centres in Odisha
10.	English and Punjabi	Examination Centres in Punjab, Chandigarh, and Delhi/New Delhi (including Faridabad, Ghaziabad, Gurugram, Meerut, Noida/Greater Noida)
11.	English and Tamil	Examination Centres in Tamil Nadu, Puducherry, and Andaman & Nicobar Islands
12.	English and Telugu	Examination Centres in Andhra Pradesh and Telangana
13.	English and Urdu	All Examination Centres in India



The option of language for Question Paper should be exercised carefully while filling up the Application Form online and it cannot be changed at a later stage.

Please note that for the correctness of the questions in all the question papers, the English version will be taken as final.

Candidates while attempting the QP must choose the same medium as opted while registering in the Application form.

3.3 Scheme of Examination

Subject combinations for each paper, type of questions in each paper, and mode of examination are given in the table below:

PAPER	SUBJECTS	TYPE OF QUESTIONS	MODE OF EXAMINATION
Paper 1: B.E./B.Tech.	Mathematics, Physics and Chemistry	Objective Type - Multiple Choice Questions (MCQs) and Questions for which the answer is a numerical value, with equal weightage to Mathematics, Physics, and Chemistry	“Computer Based Test (CBT)” mode only
Paper 2A: B. Arch	Part-I: Mathematics	Objective Type - Multiple Choice Questions (MCQs) and Questions for which the answer is a numerical value	“Computer Based Test (CBT)” mode only
	Part-II: Aptitude Test	Objective Type - Multiple Choice Questions (MCQs)	
	Part-III: Drawing Test	Questions to test drawing aptitude	“Pen and Paper Based” (offline) mode to be attempted on a Drawing sheet of A4 size .
Paper 2B: B. Planning	Part-I: Mathematics	Objective Type - Multiple Choice Questions (MCQs) and Questions for which the answer is a numerical value	“Computer Based Test (CBT)” mode only
	Part-II: Aptitude Test	Objective Type - Multiple Choice Questions (MCQs)	
	Part-III: Planning-Based Questions	Objective Type - Multiple Choice Questions (MCQs)	

3.4 Pattern of Examination

Paper1: B.E./ B. Tech. in Computer Based Test (CBT) mode:					
1.	Subject-wise distribution of Questions, Total Number of Questions, and Marks	Subject	Section A	Section B	Marks
		Mathematics	20*	10*	100
		Physics	20*	10*	100
		Chemistry	20*	10*	100
		Total	90		300



<p><i>*Each Subject will have two sections. Section A will be of Multiple-Choice Questions (MCQs) and Section B will contain Questions whose answers are to be filled in as a numerical value. In Section B, candidates have to attempt any 05 (five) questions out of 10. There will be negative marking for both Section A and Section B. For each question in Section B, a candidate has to enter the correct integer value of the answer using the mouse and the on-screen virtual numeric keypad in the place designated to enter the answer. For Section B, the answer should be rounded off to the nearest integer.</i></p>				
2.	Marking Scheme for MCQs	Correct Answer or the Most Appropriate Answer	Four marks (+4)	
		Incorrect Answer	Minus one mark (-1)	
		Unanswered / Marked for Review	No mark (0)	
3.	Marking Scheme for questions for which the answer is a Numerical value	Correct Answer	Four marks (+4)	
		Incorrect Answer	Minus one mark (-1)	
		Unanswered / Marked for Review	No mark (0)	
4.	Method of determining merit	<p>Conversion of the raw score in Mathematics, Physics, and Chemistry, and the conversion of the total into NTA scores. Overall merit shall be prepared by merging NTA scores of all shifts of all days.</p>		
5.	Method of resolving ties	<p>Tie between candidates obtaining equal Total NTA scores in Paper 1: B.E./B.Tech will be resolved in the following manner in descending order:</p> <ol style="list-style-type: none"> 1. NTA score in Mathematics, followed by 2. NTA score in Physics, followed by 3. NTA score in Chemistry, followed by 4. Candidate with less proportion of a number of attempted incorrect answers and correct answers in all the subjects in the Test, followed by 5. Candidate with less proportion of a number of attempted incorrect answers and correct answers in Mathematics in the Test, followed by 6. Candidate with less proportion of a number of attempted incorrect answers and correct answers in Physics in the Test, followed by 7. Candidate with less proportion of a number of attempted incorrect answers and correct answers in Chemistry in the Test followed by 8. Older in Age followed by 9. Application Number in ascending order 		
<p>Paper 2A (B. Arch): Mathematics (Part-I) and Aptitude Test (Part-II) in Computer Based Test (CBT) mode only and Drawing Test (Part-III) in Pen and Paper Based (offline) mode, to be attempted on a drawing sheet of A4 size.</p>				
1.	Subject-wise distribution of Questions, Total	Subject	Number of Questions	Marks
		Part I: Mathematics	20* (Section A) and 10* (Section B)	



Number of Questions, and Marks	Part II: Aptitude Test	50	200
	Part III: Drawing Test	02	100
	Total	82	400
*20 questions will be MCQs and 05 (five) questions will have answers to be filled as a numerical value. There will be negative marking for both Section A and Section B. For each question in Section B, a candidate has to enter the correct integer value of the answer using the mouse and the on-screen virtual numeric keypad in the place designated to enter the answer. The answer should be rounded off to the nearest integer.			
2. Marking Scheme for MCQs	Correct Answer or the most appropriate Answer	Four marks (+4)	
	Incorrect Answer/Multiple Answer	Minus one mark (-1)	
	Unanswered /Marked for Review	No mark (0)	
3. (a) Marking Scheme for questions for which the answer is a Numerical value	Correct Answer or the most appropriate Answer	Four marks (+4)	
	Incorrect Answer	Minus one mark (-1)	
	Unanswered / Marked for Review	No mark (0)	
(b) Marking Scheme for Drawing Test (Part III)	Two questions are to be evaluated out of 100 marks.		
4. Method of determining merit	Conversion of the raw score in Mathematics, Aptitude Test, Drawing Test, and Total into NTA Scores. Overall merit shall be prepared by merging the NTA Scores of both shifts of all days.		
5. Method of resolving ties	<p>The tie between candidates obtaining equal Total NTA scores in Paper 2A: B. Arch will be resolved in the following manner:</p> <ol style="list-style-type: none"> 1. NTA score in Mathematics, followed by 2. NTA score in Aptitude Test, followed by 3. NTA score in Drawing Test, followed by 4. Candidate with less proportion of a number of attempted incorrect answers and correct answers in all the subjects in the Test, followed by 5. Candidate with less proportion of a number of attempted incorrect answers and correct answers in Mathematics (Part-I) in the Test, followed by 6. Candidate with less proportion of a number of attempted incorrect answers and correct answers in Aptitude Test (Part-II) in the Test followed by 7. Older in Age followed by 8. Application Number in ascending order 		
Paper 2B (B. Planning) Part-I: Mathematics, Part-II: Aptitude Test, and Part-III: Planning-Based Questions in Computer-Based Test (CBT) mode only			
1. Subject-wise distribution of Questions, Total	Subject	Number of Questions	Marks
	Part-I: Mathematics	20* (Section A) and 10* (Section B)	100



Number of Questions, and Marks	Part-II: Aptitude Test	50	200
	Part-III: Planning	25	100
	Total	105	400
<i>*20 questions will be MCQs and 05 (five) questions will have answers to be filled as a numerical value. There will be negative marking for both Section A and Section B. For each question in Section B, enter the correct integer value of the answer using the mouse and the on-screen virtual numeric keypad in the place designated to enter the answer. The answer should be rounded off to the nearest integer.</i>			
2. Marking Scheme for MCQs	Correct Answer or the most appropriate Answer	Four marks (+4)	
	Incorrect Answer/Multiple Answer	Minus one mark (-1)	
	Unanswered /Marked for Review	No mark (0)	
3. Marking Scheme for questions for which the answer is a Numerical value	Correct Answer or the most appropriate Answer	Four marks (+4)	
	Incorrect Answer	Minus one mark (-1)	
	Unanswered / Marked for Review	No mark (0)	
4. Method of determining merit	Conversion of the raw score in Mathematics, Aptitude Test, Planning Based Test, and Total into NTA Scores. Overall merit shall be prepared by merging NTA Scores of all shifts of all days.		
5. Method of resolving ties	Tie between candidates obtaining equal Total NTA scores in B. Planning will be resolved in the following manner: 1. NTA score in Mathematics, followed by 2. NTA score in Aptitude Test, followed by 3. NTA score in Planning Based Questions, followed by 4. Candidate with less proportion of a number of attempted incorrect answers and correct answers in all the subjects in the Test, followed by 5. Candidate with less proportion of a number of attempted incorrect answers and correct answers in Mathematics (Part-I) in the Test, followed by 6. Candidate with less proportion of a number of attempted incorrect answers and correct answers in Aptitude Test (Part-II) in the Test, followed by 7. Candidate with less proportion of a number of attempted incorrect answers and correct answers in Planning Based Questions (Part-III) in the Test followed by 8. Older in Age followed by 9. Application Number in ascending order		

Important Note:

- (a) **For Multiple Choice Questions:** To answer a question, the candidates need to choose one option corresponding to the correct answer or the most appropriate answer. However, if any anomaly or discrepancy is found after the process of challenges of the key verification, it shall be addressed in the following manner:



- (i) Correct answer or the most appropriate answer: Four marks (+4)
- (ii) Any incorrect option marked will be given minus one mark (-1).
- (iii) Unanswered/Marked for Review will be given no mark (0).
- (iv) If more than one option is found to be correct then Four marks (+4) will be awarded to only those who have marked any of the correct options.
- (v) If all options are found to be correct then Four marks (+4) will be awarded to all those who have attempted the question.
- (vi) If none of the options is found correct or a Question is found to be wrong or a **Question is dropped then full marks will be awarded to all candidates who have appeared irrespective of the fact whether the question has been attempted or not attempted by the candidate.**

(b) For Numerical Value Questions:

There will be negative marking for Section B. However, if any anomaly or discrepancy is found after the process of challenges of the key verification, it shall be addressed in the following manner:

- i. Correct Answer: Four marks (+4)
- ii. Incorrect Answer: Minus one mark (-1)
- iii. Unanswered/Marked for Review: No mark (0).
- iv. If a question is found to be incorrect or **the Question is dropped then Four marks (+4) will be awarded to all those who have attempted the question.** The reason could be due to human error or technical error.
- v. Candidates are advised to do the calculations with the constants given (if any) in the questions. The answer should be rounded off to the nearest integer.

3.5 Duration of Test

The total time duration for Paper 1 (B.E./B.Tech.) is given in the table below:

Paper	Subjects	Total Time Duration	
		For Non-PwD Candidates	*For PwD Candidates
Paper 1 (B.E./B.Tech.)	Physics, Chemistry, and Mathematics	03 hours	04 hours
*Note: - Compensatory time for PwD Candidates of 20 minutes for a one-hour examination			



Total time duration for Paper 2A (B. Arch), Paper 2B (B.Planning), and Paper 2A (B. Arch) & Paper 2B (B.Planning) both are given in the table below:

Paper	Subjects	Total Time Duration	
		For Non-PwD Candidates	*For PwD Candidates
Paper 2A (B.Arch) Only	Mathematics, Aptitude Test, and Drawing Test	03 hours	04 hours
Paper 2B (B.Planning) Only	Mathematics, Aptitude Test, and Planning Based Questions	03 hours	04 hours
Paper 2A (B.Arch) and Paper 2B (B.Planning) both	Mathematics, Aptitude Test, Drawing Test, and Planning Based Questions	03 hours 30 minutes	04 hours 10 minutes
*Note: - Compensatory time for PwD Candidates is 20 minutes for one-hour examination			

3.6 Syllabus of Examination

The details of the syllabus are given on the website: <https://jeemain.nta.ac.in/>

Moreover, to cater to the decision of different Boards across the country regarding the reduction in the syllabus, the NTA has decided to provide a choice in one Section of each Subject of Paper 1 and Part I of Paper 2A and 2B. However, the total number of questions to be attempted will remain the same (Physics -25, Chemistry – 25, and Mathematics – 25), wherever applicable.

(Refer to Appendix-VI for details).



CHAPTER 4

ELIGIBILITY AND QUALIFICATIONS

4.1 Age Criteria

For appearing in the JEE (Main) - 2024, there is no age limit for the candidates. The candidates who have passed the class 12/equivalent examination in **2022, 2023, or appearing in 2024** irrespective of their age can appear in JEE (Main) - 2024 examination. However, the candidates may be required to fulfill the age criteria of the Institute(s) to which they are desirous of taking admission.

4.2 List of Qualifying Examinations (QE)

- i. The **final examination of the 10+2 system**, conducted by any recognized Central/ State Board, such as the 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 Defense Academy
- iv. **Senior Secondary School Examination** conducted by the National Institute of Open Schooling with a minimum of **five** subjects.
- v. Any Public School/ Board/ University examination in India or any foreign country is recognized as **equivalent to the 10+2 system** by the **Association of Indian Universities (AIU)**.
- vi. **Higher Secondary Certificate Vocational Examination.**
- vii. **A Diploma recognized by AICTE or a State board** of technical education of at least 3 years duration.
- viii. **General Certificate Education (GCE)** examination (London/Cambridge/Sri Lanka) at the **Advanced (A) level.**
- ix. **High School Certificate Examination of the Cambridge University or International Baccalaureate Diploma of the International Baccalaureate Office, Geneva.**
- x. Candidates who have completed the Class 12 (or equivalent) examination outside India or from a Board not specified above should produce a certificate from the **Association of Indian Universities (AIU)** to the effect that the examination they have passed is equivalent to the Class 12 Examination.
- xi. In case the Class 12 Examination is not a public examination, the candidate must have passed at least one public (Board or Pre-University) examination earlier.



4.3 Year of Appearance in Qualifying Examination

Only those candidates who have passed the Class 12/equivalent examination in **2022, 2023, or those who are appearing in the Class 12/equivalent examination in 2024**, are eligible to appear in JEE (Main) - 2024.

Candidates who passed the Class 12/equivalent examination in 2021 or before as well as those who will appear in such examination in 2024 or later are not eligible to appear in JEE (Main) - 2024.

4.4 State of Eligibility

State code of eligibility means the code of the State from where the candidate has passed the Class 12 (or equivalent) qualifying examination by virtue of which the candidate becomes eligible to appear in JEE (Main) - 2024. It is important to note that the State code of eligibility does NOT depend upon the native place or the place of residence of the candidate. For example, if a candidate appears for the Class 12 (or equivalent) qualifying examination from an Institution situated in New Delhi and is a resident of Noida, Uttar Pradesh, then the candidate's State code of eligibility will be Delhi and **NOT** Uttar Pradesh.

If a candidate has passed the Class 12 (or equivalent) qualifying examination from one State but appeared for improvement from another State, the candidate's State code of eligibility will be from where the candidate first passed the Class 12 (or equivalent) examination and NOT the State from where the candidate has appeared for improvement.

Candidates passed/appearing for Class 12 from NIOS should select the State of Eligibility according to the State in which the study Centre is located.

For Indian nationals passing the Class 12 (or equivalent) examination from Nepal/Bhutan, the State code of eligibility will be determined based on a permanent address in India as given in the passport of the candidate.

The State code of eligibility for OCI passing the Class 12 (or equivalent) examination in India is at par with Indian nationals. However, OCI passing the Class 12 (or equivalent) examination from an institution abroad are eligible for Other State quota seats or All India quota seats (but NOT for Home State quota seats) in all NITs, IITs, and Other-CFTIs.



CHAPTER 5

RESERVATIONS

5.1 Indian nationals belonging to certain categories are admitted under the seats reserved for them in accordance with the rules prescribed by the Government of India. The categories and the extent of reservation are as follows:

- General category belonging to **Economically Weaker Section (GEN- EWS) – 10%** of seats in every course. The benefit of reservation will be given only to those General category candidates who satisfy the conditions given in the **OM No. 20013/01/2018-BC-II dated 17 January 2019**, issued by the Ministry of Social Justice and Empowerment. The criteria for **GEN-EWS** will be as per the prevailing norms and/or notifications of the Government of India.
- Other Backward Classes belonging to the **Non-Creamy Layer (OBC- NCL) – 27%** of seats in every course.
 - i. OBCs should be listed in the current updated central list of OBCs (<http://www.ncbc.ac.in>).
 - ii. OBCs present in the State list but **not** covered in the central list of OBCs (as per the list in <http://www.ncbc.ac.in>) are **NOT** eligible to claim the reservation.
 - iii. The criteria for OBC-NCL will be as per the notification of the Government of India.
 - iv. Candidates belonging to the creamy layer of OBC are **NOT** entitled to reservation. Such candidates are treated as belonging to the general (GEN), i.e. unreserved category, and they will be eligible only for the OPEN seats – the seats for which all candidates are eligible.
- **Scheduled Caste (SC) – 15%** of seats in every course.
- **Scheduled Tribe (ST) – 7.5%** of seats in every course.
- **Persons with Disability (PwD) – 5%** seats in each of the GENERAL, GEN-EWS, OBC-NCL, SC, and ST category seats.
 - i. Candidates with at least 40% impairment irrespective of the type of disability shall be eligible for the benefits of the PwD category.
 - ii. Leprosy-cured candidates who are otherwise fit to pursue the courses are also included in this category.
 - iii. Candidates with less than 40% disability, but difficulty in writing, as prescribed by the Competent authority, are also included in this category.



5.2 (a) Guidelines for conducting written examination for Persons with Benchmark Disabilities above 40% vide letter dated 29 August 2018 from Ministry of Social Justice and Empowerment

Provisions relating to Persons with Disability (PwD):

As per Section 2(t) of the RPwD Act, “**Persons with Disability (PwD)**” means a person with long-term physical, mental, intellectual, or sensory impairment which, in interaction with barriers, hinders his full and effective participation in society equally with others.

According to Section 2(r) of the RPwD Act, 2016, “**persons with benchmark disabilities**” means a **person with not less than forty percent (40%) of a specified disability** where specified disability has not been defined in measurable terms and includes a person with disability where specified disability has been defined in measurable terms, as certified by the certifying authority.

Facilities for PwD candidates to appear in the exam

As per the guidelines issued by the Department of Empowerment of Persons with Disabilities (Divyangjan) under the Ministry of Social Justice and Empowerment issued from time to time on the subject: “Written Examination for Persons with Benchmark Disabilities”, for the candidate with one of the benchmark disabilities [as defined in Section 2(r) of RPwD Act, 2016], holding a Disability Certificate in the prescribed format in the Rights of Person with Disabilities Rules, 2017 (link: https://upload.indiacode.ac.in/showfile?actid=AC_CEN_25_54_00002_201649_15178073_28299&type=rule&filename=Rules_notified_15.06.pdf).

- a. *The facility of a Scribe*, in case he/she has a **physical limitation and a scribe is essential to write the examination on his/her behalf**, being so certified in the aforesaid format by a CMO/Civil Surgeon/ Medical Superintendent of a Government Health Care Institution.
- b. *Compensatory time* of **one hour** for examination of **three hours** duration, whether such candidate uses the facility of Scribe or not.

Services of a Scribe

As per the office memorandum of the Ministry of Social Justice and Empowerment (Reference: F.No. 34-02/2015-DD-III dated August 29, 2018), the PwD candidates who are visually impaired OR have a disability in the upper limbs OR have lost fingers/hands thereby preventing them from properly operating the Computer Based Test platform may avail the services of a scribe (*amanuensis*).

The scribe will help the Candidate in reading the questions and/or keying in the answers as per the directions of the Candidate. A scribe will **NEITHER** explain the questions **NOR** suggest any solutions.



PwD candidates who desire to avail the services of a scribe need to opt for this during the online registration of JEE (Main) – 2024. Annexure V

*It is to be noted that the Scribe will be provided by the **National Testing Agency (NTA)** if requested.*

If it is found at any stage that a candidate has availed the services of a scribe and/or availed the compensatory time but does not possess the extent of disability that warrants the use of a scribe and/or grant of compensatory time, the candidate will be excluded from the process of evaluation, ranking, counselling, and admission. In case such a candidate has already been admitted to any Institution, the admission of the candidate will be cancelled.

The NTA does not guarantee any change in the category or sub-category (PwD status) after the submission of the Online Application Form, and in any case, no change will be entertained by NTA after the declaration of NTA Score for JEE (Main) - 2024. The category/sub-category (PwD status) entered in the JEE (Main) Database by the candidate will be used for the JEE (Advanced). Therefore, the candidates are advised to fill in the category/sub-category column very carefully.

Note:

1. The minimum degree of disability should be **40% (Benchmark Disability)** in order to be eligible for availing reservation for persons with specified disability.
2. The extent of “specified disability” in a person shall be assessed in accordance with the “Guidelines for the purpose of assessing the extent of specified disability in a person included under the **Rights of Persons with Disabilities Act, 2016 (49 of 2016)**” notified in the Gazette of India by the Ministry of Social Justice and Empowerment [Department of Empowerment of Persons with Disabilities (Divyangjan)] on 4 January 2018.
3. No change in the category will be entertained after the last date specified by NTA for JEE (Main) - 2024 Registration.

Candidates must note that the benefit of reservation will be given to them subject to verification of documents. If it is discovered at any stage that a candidate has used a false/fake/incorrect document, or has furnished false, incorrect, or incomplete information, in order to avail the benefit of reservation, then such a candidate shall be excluded from all admission processes. In case such a candidate has already been given admission, the admission shall stand cancelled.

5.2 (b) Guidelines for conducting written examination for persons with specified disabilities covered under the definition of Section 2(s) of the RPwD Act, 2016 but not covered under the definition of Section 2(r) of the said Act, i.e. persons having less than 40% disability and having difficulty in writing



- I. These guidelines may be called Guidelines for conducting written examinations for persons with specified disabilities covered under the definition of Section 2(s) of the RPwD Act, 2016 but not covered under the definition of Section 2(r) of the said Act, i.e. persons having less than 40% disability and having difficulty in writing.
- II. The facility of scribe and/or compensatory time shall be granted solely to those having difficulty in writing subject to the production of a certificate to the effect that the person concerned has limitation to write and that scribe is essential to write the examination on his/her behalf from the competent medical authority of a Government healthcare institution as per proforma at **Annexure-IV**.
- III. The medical authority for the purpose of certification as mentioned in point (II) above should be a multi-member authority comprising the following:-
 - i. Chief Medical officer/Civil Surgeon/Chief District Medical Officer.....Chairperson
 - ii. Orthopaedic/PMR specialist
 - iii. Neurologist, if available*
 - iv. Clinical Psychologist/Rehabilitation Psychologist/ Psychiatrist/Special Educator
 - v. Occupational therapist, if available*
 - vi. Any other expert based on the condition of the candidate may be nominated by the Chairperson. (* the Chief Medical Officer/Civil Surgeon/Chief District Medical Officer may make full efforts for inclusion of neurologists, occupational therapists from the nearest District or the Medical College/Institute if the same is not available in the District)"
- IV. Compensatory time of not less than 20 minutes per hour of the examination should be allowed for persons who are eligible for getting a scribe. In case the duration of the examination is less than an hour, then the duration of the compensatory time should be allowed on a pro-rata basis. Compensatory time should not be less than 5 minutes and should be in the multiple of 5.

- Physical Disability certificate (Unique Disability Identification (UDID) issued by the notified medical authority needs to be uploaded in the Online Application Form of JEE (Main) – 2024.

5.3 In the case of the Institutes run/aided/recognized by State Governments, the reservation policy of the respective State Governments shall be applicable.

Notes:

1. The benefit of reservation for admission to NITs/IITs and CFTIs shall be given only to those classes/castes/tribes which are in the respective Central List published by the Government of India from time to time.
2. *The benefit of reservation will be given only to those castes and tribes that are mentioned in the respective central list of corresponding states published by the Government of India (websites: <http://socialjustice.nic.in> and <https://ncst.nic.in>).*



CHAPTER 6

CHOICE OF CITIES

The Cities where the JEE (Main) – 2024 Session 1 will be conducted are given in **Appendix I**. While applying, candidates have to **select any four cities of their choice**. Efforts will be made to allot the city of examination to the candidates in order of choice opted by them in their online Application Form. **However, due to administrative/logistic reasons, a different city can be allotted.**

In case, there are very few candidates from a City, the NTA reserves the right to merge one, two, or more cities.

The decision of the NTA regarding the allotment of the City/Centre shall be final. No further correspondence or request shall be entertained in such a case.

While filling up the Online Application Form, candidates should select **four Convenient Cities** from **Appendix I** as their Choice of Cities for the exam Centre in order of their priority.

Choice of Centre Cities will be limited to the **State of Permanent Address or State of Present Address only**.

For convenience, the candidates may select their own city or neighbouring cities in their State of Residence only and not for far away cities in other States. **NTA** will not be responsible for any inconvenience due to the incorrect selection of cities by the candidates.

In case, the number of candidates opting for a city as a Centre with a regional language is less than a certain minimum, candidates may be allotted a Centre in another city irrespective of the city opted by the candidates for appearing in the examination.

Though every effort will be made to allot a Centre in one of the cities selected by the candidate, the NTA reserves the right to allot a Centre in a city other than the candidate's choice.

Allotment of Centres will be done mostly in one of the preferred cities of the candidates and there will be no human intervention.

Note: All efforts will be made by NTA to consider the comfort and convenience of candidates, including PwD Candidates while allotting Centres.



CHAPTER 7

PARTICULARS TO BE FILLED IN THE ONLINE APPLICATION FORM

The Columns to be filled in the Online Application Form of JEE (Main) – 2024 are as follows. All labels for the particulars will be bilingual. All candidates shall fill up the information as given below:

S. No.	Page	Section	Fields	Remarks
1.	Registration Form	Login and Identification	Log in and identify through Digilocker	Candidates need to select any one
2.			Create a Digilocker Account login and identify through Digilocker	
3.			Log in and identify through ABC ID	
4.			Create ABC ID and login and identify through ABC ID	
5.			Login using Indian Passport Number	
6.			Login using PAN Card Number	
7.			Login using the Aadhaar Enrolment Number	
8.			Login using Non-Indian Passport	
9.		Authentication at the Exam Centre	Authenticate at the Exam Centre through Aadhaar	Candidates need to select any one
10.			Authenticate at the Exam Centre through a valid Government ID with a Photograph	
11.		Personal Details	Candidate Name	
12.			Father / Guardian Name	
13.			Mother / Guardian Name	
14.			Candidate's Date of Birth	
15.			Gender	
16.			Identity Type	
17.			Identification Number	
18.		Present Address	Address	
19.			Locality	Optional
20.			City/Town/Village	
21.			Country	From Drop Down
22.			State	From Drop Down
23.			District	From Drop Down
24.			Pincode	
25.			Email Address	
26.			Confirm Email Address	
27.			Parent / Guardian Email Address	
28.			Mobile Number	
29.			Confirm Mobile Number	
30.			Parent /Guardian Mobile Number	
31.			Emergency Contact no	
32.		Permanent Address	Address	



S. No.	Page	Section	Fields	Remarks	
33.			Locality	Optional	
34.			City/Town/Village		
35.			Country	From Drop Down	
36.			State	From Drop Down	
37.			District	From Drop Down	
38.			Pincode		
39.		Choose Password	Password		
40.			Confirm Password		
41.			Security Question		
42.			Security Answer		
43.		Security Pin	Security Pin	to be entered as displayed on the screen	
44.		Application Form	Personal Details	Candidate Name	
45.				Candidate's Date of Birth	
46.				Gender	
47.	Father Name				
48.	Mother Name				
49.	Nationality				
50.	State/ UT from where 12th/ Equivalent Passed/ Appearing				
51.	Category				
52.	If you are a PwD candidate, do you have a benchmark disability (40% or more)?				
53.	Type of Disability			only visible if PwD is yes	
54.	Do you need a scribe (as per the criteria given in the Information Bulletin)			only visible if PwD is yes	
55.	Are you Diabetic?				
56.	Place of residence (Rural or Urban)				
57.	Annual Family Income			From Drop Down	
58.	Mode of Preparation		From Drop Down		
59.	Medium of Schooling in Qualifying Examination				
60.	Exam and Center Details		Applying for	All permissible combinations of Paper 1 and Paper 2 (From Drop Down)	
61.			Session(s) of Exam Applying For		
62.		Question Paper Medium	From Drop Down		
63.		Exam State - City Choice 1	From Drop Down		
64.		Exam State - City Choice 2	From Drop Down		
65.		Exam State - City Choice 3	From Drop Down		
66.		Exam State - City Choice 4	From Drop Down		
67.		Pass Status			



S. No.	Page	Section	Fields	Remarks
68.		Qualification Details (for class 10th or equivalent)	Year of Passing/Appearing	
69.			Qualifying Exam	10th or Equivalent (pre-filled)
70.			Place of schooling (Rural or Urban)	
71.			Type of School/College	From Drop Down
72.			Qualifying Examination State of School/College	From Drop Down
73.			Qualifying Examination District of School/College	From Drop Down
74.			School Board	From Drop Down
75.			Result Mode	From Drop Down
76.			Maximum Grade Point	visible if the result mode selected is CGPA
77.			CGPA Obtained	
78.			CGPA	visible if the result mode selected is the percentage
79.			Total Marks	
80.			Obtained Marks	
81.			Marks(%)	
82.			Roll Number	
83.			School/College Name Address	School name should be as per mentioned in the Class 10 Marksheet
84.		School/College Pincode		
85.		Qualification Details (for class 12th or equivalent)	Pass Status	
86.			Year of Passing/Appearing	
87.			Qualifying Exam	12th or equivalent (pre-filled)
88.			Place of schooling (Rural or Urban)	
89.			Type of School/College	From Drop Down
90.			Qualifying Examination State	From Drop Down
91.			Qualifying Examination District	From Drop Down
92.			School Board	From Drop Down
93.			Result Mode	From Drop Down
94.			Maximum Grade Point	visible if the result mode selected is CGPA
95.			CGPA Obtained	
96.			CGPA	visible if the result mode selected is the percentage
97.			Total Marks	
98.			Obtained Marks	
99.			Marks(%)	
100.			Roll Number	
101.		School/College Name address	School name should be as per mentioned in the Class 12 Marksheet	
102.		School/College Pincode		
103.		Additional Details	Are you a Twin	
104.			Name of other Brother/Sister as per Class X Certificate	only visible if 'Are you a Twin' is yes



S. No.	Page	Section	Fields	Remarks
105		Parents Income Details	Roll Number of Class 10th or its equivalent of the Twin	only visible if 'Are you a Twin' is yes
106			Father Qualification	Mandatory
107			Father Occupation	Mandatory
108			Mother Qualification	Mandatory
109			Mother Occupation	Mandatory
110			Guardian Qualification	Mandatory
111			Guardian Occupation	Mandatory
112	Document upload	Upload images	Candidate's photograph	The size of the scanned photograph should be between 10 kb to 200 kb
113			Candidate's signature	The size of the scanned signature should be between 4 kb to 30 kb
114			PwD certificate (if applicable)	The size of the scanned copy of the PwD certificate should be in pdf between 50 kb to 300 kb



CHAPTER 8 ADMIT CARD

e-Admit Card

The e-Admit Card will be issued provisionally to the candidates through the NTA website: <https://jeemain.nta.ac.in/>, subject to the fulfillment of the eligibility conditions and receipt of the prescribed application fee by NTA.

The candidate has to download the Admit Card from the NTA website. The candidate will appear in the examination at the given Centre on the date and shift/timing as indicated in his/her e-Admit Card.

No candidate will be allowed to appear at the examination Centre, on the date and shift/time other than that allotted to him/her in his/her Admit Card.

In case a candidate is unable to download his/her Admit Card from the website, he/she should approach the NTA Help Line Number: **011-40759000 between 10.00 A.M. to 05.00 P.M.**

The candidates are advised to read the instructions on the Admit Card carefully and strictly follow them during the examination.

In case of any discrepancy in the particulars of the candidate or his/her photograph and signature shown in the e-Admit Card and Confirmation Page, the candidate may immediately **approach the NTA Help Line from 10:00 A.M. to 05:00 P.M. In such a case, the candidate would appear in the examination with the already downloaded Admit Card. However, NTA will take necessary action to make corrections in the record later.**

Note:

- a. *The Candidates may please note that Admit Cards will not be sent by post.*
- b. *In no case, the duplicate Admit Card for Joint Entrance Examination (Main) - 2024 would be issued at the Examination Centres.*
- c. *The candidates must not mutilate the Admit Card or change any entry made therein.*
- d. *Candidates are advised to preserve their Admit Cards in good condition for future reference.*
- e. *No Admit Card shall be issued to the candidates whose applications are found to be incomplete for any reasons (including indistinct/ doubtful photographs/unsigned Applications) or who do not fulfill the eligibility criteria for the examination.*
- f. *Issue of Admit Cards, however, shall not necessarily mean acceptance of eligibility which shall be further scrutinized at subsequent stages of the admission process.*



CHAPTER 9

SCHEDULE OF EXAMINATION

Schedule of Examination

Dates of Examination	<p style="text-align: center;"><i>Session 1: between 24 January and 01 February, 2024</i> <i>Session 2: between 01 April, 2024 and 15 April, 2024</i></p> <p>(Exact date, shift, and city of examination for Paper 1: B.E./B. Tech and Paper 2A: B. Arch and Paper 2B: B. Planning will be made available to the Candidates on their Admit Cards)</p>		
Mode of Examination	Paper 1: B.E./B.Tech	“Computer Based Test (CBT)” mode only	
	Paper 2A: B.Arch.	Part-I: Mathematics and Part-II: Aptitude Test in Computer Based Test (CBT) mode only	
		Part-III: Drawing Test in “Pen and Paper” (offline) mode, to be attempted on the Drawing sheet of A4 size.	
Paper 2B: B. Planning	Part-I: Mathematics Part-II: Aptitude Test, and Part-III: Planning Based MCQs in “Computer Based Test (CBT)” mode only		
Timing of Examination	Duration of Examination	First Shift	Second Shift
	For 3 Hours	09.00 A.M. to 12.00 Noon (IST)	03.00 P.M. to 06.00 P.M. (IST)
	For 3 Hours 30 Minutes	09.00 A.M. to 12.30 P.M. (IST)	03.00 P.M. to 06.30 P.M. (IST)
Entry in the Examination Centre/Hall/Room, frisking, biometric registration/ record of manual attendance by Invigilator, document verification/cross-checking of Admit Card, signature, and photo match to be completed by Invigilator, etc.	07.00 A.M.. to 08.30 A.M.		01.00 P.M. to 02.30 P.M.
Instructions by the Invigilator(s)	08.30 A.M. to 08.50 A.M.		02.30 P.M. to 02.50 P.M.
Candidates log in to read instructions	08.50 A.M.		02.50 P.M.
Test Commences	09.00 A.M.		03.00 P.M.

Note: The duration of examination for both B.Arch. and B.Planning is $3\frac{1}{2}$ hrs.



CHAPTER 10

IMPORTANT INSTRUCTIONS FOR THE CANDIDATES

1. Candidates are advised to report at the Examination Center well on time i.e. **02 hours** before the commencement of the examination.
2. Candidates should take their seats immediately after the opening of the Examination Hall. If the candidates do not report on time due to any reason i.e. traffic jam, train/bus delay, etc, they are likely to miss some of the important instructions to be announced in the Examination Rooms/Halls. The NTA shall not be responsible for any delay.
3. The candidate must show, on-demand, the Admit Card downloaded/printed from the NTA website for admission in the examination room/hall. The Test Centre Staff on duty is authorized to verify the identity of candidates and may take steps to verify and confirm the identity credentials. Candidates are requested to extend their full cooperation. Candidates who do not possess valid Admit Cards and authorized Photo IDs shall not be permitted to take the examination under any circumstances by the Centre Superintendent.
4. A seat indicating Roll Number will be allotted to each candidate. Candidates should find and sit in their allocated seats only. In case a candidate ventures to change his/her seat and does not sit on the seat allotted to him/her could face cancellation of candidature. No plea would be entertained in this regard.
5. The candidate should ensure that the Question Paper available on the computer is as per his/her opted subject indicated in the Admit Card. In case, the subject of the Question Paper is other than his/her opted subject, the same may be brought to the notice of the Invigilator concerned.
6. The candidates may approach the Centre Superintendent/Invigilator in the room for any technical assistance, first aid emergency, or any other information during the course of the examination.

For any queries or issues regarding the Computer Based Test, the candidates may contact on Helpline Numbers available on the Joint Entrance Examination (Main) website.

7. In case a candidate, by furnishing false information, appears in more than one shift/date, his candidature will be cancelled and his result will not be declared.
8. For those who are unable to appear on the scheduled date of the test for any reason, a re-test shall not be held by the NTA under any circumstances.

Note: Candidates shall appear at their own cost at the Centre on the Date and Shift as indicated in their Admit Card issued by the NTA. Under no circumstances the choice of cities for the Centre and shift provided in the Admit Card shall be changed.



Candidates **MUST** bring the following documents on the day of examination at the test centre. Candidates who will not bring these will not be allowed to sit for the examination.

- a. *Print copy of Admit Card along with Self Declaration (Undertaking) downloaded from the NTA Website (a clear printout on A4 size paper) duly filled in.*
- b. *One passport size photograph (same as uploaded on the Online Application Form) for pasting on the specific space in the Attendance Sheet at Centre during the examination.*
- c. *Any one of the authorized photo IDs (must be original, valid, and non-expired) – School Identity Card/ PAN card/ Driving License/ Voter ID/ Passport/ Aadhaar Card (With photograph)/E-Aadhaar with photograph/ Ration Card with photograph/ Class 12 Board Admit Card with photograph/ Bank Passbook with Photograph.*
- d. *PwD certificate issued by the authorized medical officer, if claiming the relaxation under PwD category*
or
PwD Certificate regarding physical limitation in an examination to write as per Annexures given in Information Bulletin, if claiming the relaxation under PwD category.
- e. *A simple transparent Ball Point Pen.*

ROUGH WORK

All calculations/writing work is to be done only in the Rough Sheet provided at the Test Centre in the Examination Room/Hall and on completion of the test, candidates must hand over the Rough Sheets to the Invigilator on duty in the Room/Hall.



CHAPTER 11

UNFAIR MEANS PRACTICES AND BREACH OF EXAMINATION RULES

11.1 Definition

Unfair Means practice is an activity that allows a candidate to gain an unfair advantage over other candidates. It includes, but is not limited to:

- a) Being in possession of any item or article which has been prohibited or can be used for unfair practices including any stationery item, communication device, accessories, eatable items, ornaments, or any other material or information relevant or not relevant to the examination in the paper concerned;
- b) Using someone to write an examination (impersonation) or preparing material for copying;
- c) Breaching examination rules or any direction issued by NTA in connection with the JEE (Main) - 2024 examination from time to time;
- d) Assisting other candidates to engage in malpractices, giving or receiving assistance of any kind directly or indirectly or attempting to do so;
- e) Contacting or communicating or trying to do so with any person, other than the Examination Staff, during the examination time in the Examination Centre;
- f) Threatening any of the officials connected with the conduct of the examination or threatening any of the candidates;
- g) Using or attempting to use any other undesirable method or means in connection with the examination;
- h) Manipulation and fabrication of online documents viz. Admit Card, Rank Letter, Self-Declaration, etc.;
- i) Forceful entry in /exit from Examination Centre/Hall;
- j) Use or attempted use of any electronic device after entering the Examination Centre;
- k) Affixing/uploading of wrong/morphed photographs/signatures on the Application Form/Admit Card/Proforma;
- l) Creating obstacles in the smooth and fair conduct of the examination.
- m) Not attempting the question paper for long time intervals.
- n) Fidgeting and looking here and there.
- o) In possession of bits of paper etc.
- p) Any other malpractices declared as Unfair Means by the NTA.



- q) *Any candidate with more than one Application Number (more than one SCORE CARDS) will be treated as UFM, even if found at a later stage, and strict action will be taken against that Candidate.*

11.2 Punishment for using unfair Means practices

During the course of, before, or after the examination if a candidate indulges in any of the above or similar practices, he/she shall be deemed to have used unfair practices and booked under the UNFAIR MEANS (U.F.M.) case. **The candidate may be debarred for 3 years in the future and shall also be liable for criminal action and /or any other action as deemed fit.**

11.3 Cancellation of Result

The result of **JEE (Main) - 2024** of the candidate(s) who indulge in Unfair means Practices will be cancelled and will not be declared. Similarly, the result of those candidates who appear from the Centre other than the one allotted to them or allow another candidate/person to write the examination on his behalf will be cancelled. No plea will be entertained in this regard.



CHAPTER 12

DISPLAY OF ANSWER KEY FOR CHALLENGE

12.1 Display of Answer Key for Challenges

1. The NTA will display the Provisional Answer Key of the questions on the NTA website: <https://jeemain.nta.ac.in/>, with a Public Notice, issued to this effect on the said website, to provide an opportunity to the candidates to challenge the Provisional Answer Keys with a non-refundable online payment of ₹ 200/- per question challenged as processing charges. The provisional Answer Keys are likely to be displayed for two to three days.
2. Only paid challenges made during the stipulated time through the key challenge link will be considered. Challenges without justification/evidence and those filed on any other medium other than the prescribed link will not be considered.
3. The NTA decision on the challenges shall be final and no further communication will be entertained. NTA will not inform the Candidates individually about the outcome of the challenges made.
4. The subject experts will examine all the challenges received and then a final answer key will be displayed and declared.
5. **The result will be compiled based on the final answer key declared. No grievance with regard to answer key(s) after the declaration of result/NTA Score of JEE (Main) - 2024 will be entertained.**

12.2 Display of Question Paper attempted and Recorded Responses

The NTA will display the recorded responses and Question Papers attempted by the candidates on the NTA website <https://jeemain.nta.ac.in/> prior to the declaration of the result/NTA Score. The recorded responses are likely to be displayed for two to three days.



CHAPTER 13

JEE (MAIN) NTA SCORE FOR B.E./B.TECH, B.ARCH, AND B.PLANNING

13.1 JEE (Main) NTA Score for B.E./B.Tech, B.Arch, and B.Planning

- Evaluation of multiple-choice questions of B.E./B.Tech, B.Arch, and B.Planning will be carried out using final answer keys and the raw (actual) marks obtained by a candidate will be considered further for computation of the result of JEE (Main) - 2024.
- For multi-shift papers, raw (actual) marks obtained by the candidates in different shifts/sessions will be converted to NTA Score.
- The detailed procedure for the compilation of the NTA Score is available on the NTA Website and also in the Appendix-V of the Information Bulletin.**

13.2 Compilation and display of Result of Paper-1 (B.E./B.Tech.) of JEE (Main) - 2024:

a) **Compilation and display of NTA Score for Session 1 of Paper-1 (B.E. /B.Tech.):**

Since Session 1 of JEE (Main) - 2024 B.E./B.Tech will be conducted in multi-shifts, and NTA scores will be calculated corresponding to the raw (actual) marks obtained by a candidate. The calculated NTA scores for all the shifts will be declared on the NTA website(s). This will comprise the NTA scores for each of the three subjects (Mathematics, Physics, and Chemistry) and the total in B.E./B.Tech of Session 1 of Paper 1 of JEE (Main) – 2024.

b) **Compilation of NTA Score for Session 2 of Paper 1 (B.E. /B.Tech.):**

Similarly, Session 2 of JEE (Main) - 2024 B.E./B.Tech will be conducted in multi-shifts, and NTA scores will be calculated corresponding to the raw (actual) marks obtained by a candidate. The calculated NTA scores for all the shifts will comprise the two NTA scores for each of the three subjects (Mathematics, Physics, and Chemistry) and the total in B.E./B.Tech of Session 2 of Paper 1 of JEE (Main) – 2024.

c) **Compilation and display of results including overall Merit List/Ranking of Paper 1 (B.E. /B.Tech.):**

The NTA scores for each of the candidates in Total in B.E./B.Tech for Session 1 as well as for Session 2 of JEE (Main) - 2024 will be merged for the compilation of results and preparation of the overall Merit List/Ranking. **The best of the two NTA Scores (Total) will be considered for further processing for those candidates who appeared in both sessions.**

In case of a tie, i.e. when two or more candidates obtain equal Total NTA Score in JEE (Main)-2024, the inter-se merit of such candidates shall be determined as per “**Method of resolving ties**” given in Chapter 3 for Paper 1.[3.4 (5)]

The NTA scores and rank of B.E./B. Tech of JEE (Main) – 2024 for all candidates who appeared in Session 1 as well as in Session 2 for JEE (Main) - 2024 will be declared on the NTA website(s). This shall comprise the NTA scores obtained by the candidate in Session 1, NTA scores obtained in Session 2, and NTA scores for those who appeared in both sessions (**best of the two Total NTA**



scores) along with the status of those who qualify for appearing in JEE (Advanced) – 2024 provided and subject to other conditions of eligibility being met. The rank shall comprise the **All India rank** and the **All India category rank**.

13.3 Compilation and display of Result of Paper 2A (B. Arch) or Paper-2B (B. Planning) of JEE (Main)-2024:

a) Compilation and display of NTA Score for Session 1 of Paper 2A (B. Arch) or Paper 2B (B. Planning):

Since Session 1 of JEE (Main) - 2024 Paper-2A (B. Arch) or Paper-2B (B. Planning) will be conducted in multi-shifts, NTA scores will be calculated corresponding to the raw (actual) marks obtained by a candidate. The calculated NTA scores for all the shifts will be declared on the NTA website(s). This will comprise the NTA scores for each of the three parts (Mathematics, Aptitude Test, and Drawing Test or Planning Based Test) and the total in Paper 2A (B. Arch) or Paper 2B (B. Planning) of Session 1 of JEE (Main) – 2024.

b) Compilation of NTA Score for Session 2 of Paper 2A (B. Arch) or Paper 2B (B. Planning):

Similarly, Session 2 of JEE (Main) - 2024 Paper 2A (B. Arch) or Paper 2B (B. Planning) will be conducted in multi-shifts, and NTA scores will be calculated corresponding to the raw (actual) marks obtained by a candidate. The calculated NTA scores for all the shifts will comprise the NTA scores for each of the three parts (Mathematics, Aptitude Test, and Drawing Test or Planning Based Test) and the total in Paper 2A (B. Arch) or Paper 2B (B. Planning) of Session 2 of JEE (Main) – 2024.

c) Compilation and display of results including overall Merit List/ Ranking of Paper 2A (B. Arch) or Paper 2B (B. Planning):

The NTA scores for each of the candidates in Total in Paper 2A (B. Arch) or Paper 2B (B. Planning) for Session 1 as well as for Session 2 of JEE (Main)-2024 will be merged for compilation of results and preparation of overall Merit List/Ranking. The best of the two NTA Scores (Total) will be considered for further processing for those candidates who appeared in both sessions.

In case of a tie, i.e. when two or more candidates obtain equal Total NTA Score in JEE(Main)-2024, inter-se merit of such candidates shall be determined as per “**Method of resolving ties**” given in Chapter- 3 for Paper-2A (B. Arch) or Paper-2B (B. Planning). [3.4 (5) Part 2].

The NTA scores and rank of Paper-2A (B. Arch) or Paper-2B (B. Planning) of JEE (Main) – 2024 for all candidates who appeared in Session 1 as well as in Session 2 for JEE (Main) - 2024 will be declared on the NTA website(s). This shall comprise the NTA scores obtained by the candidate in Session 1, NTA scores obtained in Session 2, and NTA scores for those who appeared in both sessions (best of the two Total NTA scores). The rank shall comprise the **All India rank** and **All India category rank**.

A copy of the Final Scorecard of JEE (Main) – 2024 will be sent to the registered e-mail address of the Candidates.



Note:

- 1 The All India Rank shall be compiled and declared after conduct of Session 2 of JEE (Main) - 2024 Examination.
- 2 No Score/Rank Card will be dispatched to the candidates and the candidates are advised to download their Score/Rank Cards from the JEE (Main) website: www.nta.ac.in/, <https://jeemain.nta.ac.in/> only.
- 3 There shall be no provision for re-valuation/re-checking of the Score. No correspondence in this regard shall be entertained.
- 4 Only the All India Rank (AIR) is used for admissions through Central Seat Allocation Board (CSAB)/Joint Seat Allocation Authority (JoSAA) to NITs/ IITs/ CFTIs/ SFIs/ Others.
- 5 All participating Institutions that do not use the Centralized Seat Allocation Process will prepare their own ranking based on the performance in JEE (Main) - 2024 and other criteria as decided by them.
- 6 The National Testing Agency (NTA) is an examination conducting body and not an admission giving authority. Therefore, NTA does not collect the information regarding the total number of seats available in the institutions, or the eligibility and reservation criteria followed by the institutions.

13.4. Re-Evaluation/Re-Checking of Result

There shall be no re-evaluation/re-checking of the result. No correspondence in this regard shall be entertained.

13.5. Use of Scores of JEE (Main) – 2024 by Other Organizations

The merit list/scores/result of **JEE (Main) – 2024** may be utilized by other Entities of Central/State Governments with their eligibility criteria/norms/applicable regulations/guidelines/rules.

For the academic year 2024-25, admissions under MEA (Welfare) quota seats shall be based on the Joint Entrance Examination (Main).

Dr. APJ Abdul Kalam Technical University (AKTU), Lucknow, and Madan Mohan Malviya University of Science and Technology, Gorakhpur will also use the score sheet of JEE (Main) – 2024 for admission to the B.Tech./M.Tech. (Integrated)/B.Arch. Courses in its affiliated colleges across the State.

From the **Academic year 2024-25, the Government of Goa has approved that admissions to Engineering Degree Courses in the State Engineering Colleges in Goa State will also be done based on JEE (Main).**



CHAPTER 14

ADMISSION

Admission to NITs, IITs, CFTIs, SFIs, State Engineering Colleges in the Participating States, and Other Participating Institutions.

14.1 Eligibility for Admission to NITs, IITs, and CFTIs participating through the Central Seat Allocation Board (CSAB):

For the candidates who qualify for admission in the NITs, IITs and such other CFTIs whose admissions are based on the JEE (Main) ranks, they should have secured at least **75% marks in the Class 12 examination or be in the top 20 percentile in Class 12 examination conducted by respective Boards**. For SC / ST candidates, the qualifying marks should be 65% in the Class 12 examination

The candidate is also required to pass in each of the subjects of Class 12 / qualifying examination.

The Admission to **NITs, IITs, and CFTIs** will be based on the announced qualifying Percentile by the individual Institutes.

For eligibility regarding details, candidates may refer to the website <https://csab.ac.in/>.

The eligibility criteria decided by the Council of Architecture for admission to B.Arch. course other than NITs, IITs, and CFTIs:

“No candidate shall be admitted to architecture course unless he has passed an examination at the end of the 10+2 scheme of examination with at least 50 percent. aggregate marks in Physics, Chemistry, and Mathematics and also at least 50 percent marks in aggregate of the 10+2 level examination or passed the 10+3 Diploma Examination with Mathematics as a compulsory subject with at least 50 percent. marks in aggregate.”

For **B. Planning**, the candidates should have passed the qualifying examination with **50 % marks in Mathematics** and **50% marks** in aggregate of the qualifying examination.

Subject combinations required in the qualifying examination for admission to B.E./B.Tech, B. Arch, and B. Planning Courses in NITs, IITs, and other CFTIs shall be as under.

Course	Required Criteria based on Class 12/ Equivalent qualifying Examination
B.E./B.Tech.	Passed qualifying examination with Physics and Mathematics as compulsory subjects along with one of the Chemistry/Biotechnology/Biology/ Technical Vocational subjects.



B.Arch.	No candidate shall be admitted to an architecture course unless he has passed an examination at the end of the 10+2 scheme of examination with at least 50 percent. aggregate marks in Physics, Chemistry, and Mathematics and also at least 50 percent marks in aggregate of the 10+2 level examination or passed the 10+3 Diploma Examination with Mathematics as a compulsory subject with at least 50 percent. marks in aggregate.
B.Planning	Passed qualifying examination with Mathematics

The Admission Policy, as announced by the Competent Authority of the admitting institutes shall be followed at the time of admission. The Candidates are advised to satisfy themselves about their Eligibility for Admission from the respective websites of admitting authorities.

14.2 Eligibility for Admission to Other Institutions

The above-mentioned policy could also be adopted by other Technical Institutions participating in counseling through JoSAA/CSAB. In case a State opts to admit students to the engineering Colleges affiliated with State Universities, the State may prepare a separate rank list based on criteria decided by them.

For all admission-related procedures/queries, the candidates are advised to refer to the website of JoSAA, Central Seat Allocation Board (CSAB), or the concerned State Government/Institute after the declaration of result/ranks of JEE (Main) - 2024.

The letters / e-mails / grievances / queries / RTI applications / Court cases pertaining to admission related matters/procedures will not be entertained by NTA. The same may be addressed to the concerned Counseling/Authorities/Admitting Institutions.

14.3 Seat Allocation Process and Admission Procedure

Candidates shall be offered admission based on their choices and All India Ranks of JEE (Main) - 2024 through a Seat Allocation Process to be announced later by CSAB/JoSAA. The authentication/verification of relevant documents in support of identification, date of birth, qualifying examination, State of eligibility, category, and disability (if any) of the qualifying candidates would be done at the time of the Seat Allocation/ admission process. On failing to produce any of the authentic documents, the candidate may not be considered for admission.

Gen-EWS, SC, ST, OBC, and PwD candidates will be required to produce the original certificate as per prescribed formats issued by the competent authority at the time of the Seat Allocation/admission process failing which they will not be considered for admission.



14.4 Eligibility Criteria for Indian Nationals Appearing in JEE (Advanced) - 2024

(Please refer to the JEE (Advanced) website <https://jeeadv.ac.in/> for the latest information)

All the candidates must simultaneously fulfill each one of the following to appear for JEE (Advanced) - 2024.

Performance in JEE (Main) - 2024:

Candidates should be among the top 2,50,000 successful candidates (including all categories) in B.E./B.Tech. Paper of JEE (Main) - 2024.

Number of Attempts:

A candidate can attempt JEE (Advanced) a maximum of two times in two consecutive years.



CHAPTER 15

NATIONAL TEST ABHYAS

15.1 National Test Abhyas

The National Testing Agency (NTA), India's premier autonomous testing organization for conducting entrance examinations for admission in higher education institutions, launched a mobile app called the “**National Test Abhyas**” - to enable candidates to take mock tests for various competitive exams such as JEE (Main), NEET (UG), UGC-NET, and other exams under the NTA's purview. The app had been launched to facilitate candidates' access to high-quality mock tests in the safety and comfort of their homes since NTA's Test-Practice Centers (TPCs) were closed during the ongoing COVID-19 pandemic.

With this facility for the candidates, India has taken the lead in restoring a semblance of normalcy in one more crucial area – education – even as we tackle these unprecedented times that have led to significant changes in life around the world.

Candidates across the country can use the App to access high-quality tests, free of cost, in a bid to be fully prepared for the upcoming JEE (Main), NEET (UG), and other competitive exams. The tests can be easily downloaded and taken offline, thus accommodating candidates with low bandwidth internet connections.

The app works on Android-based and iOS smartphones and tablets and can be downloaded from Google Play Store or App Store. Once candidates download the app, they simply need to sign-up or register with some basic details, create a free account, and then start accessing mock tests free of cost for their selected examination(s).

In addition to that NTA has developed an extensive support system at <http://nta.ac.in/abhyas/help>.

The National Test Abhyas is available on the website: <https://www.nta.ac.in/Abhyas> and Play Store: <https://play.google.com/store/apps/details?id=com.abhyas.nta.com>



CHAPTER 16

MISCELLANEOUS

16.1 Query Redressal System (QRS)

National Testing Agency (NTA) has established a Query Redressal System (QRS), an online web-enabled system developed by NTA. QRS is the platform based on web technology that primarily aims to enable the submission of queries/grievances by the Registered Candidate(s) of the JEE (Main)-2024 Examination with (a 24x7) facility for speedy and favorable redressal of the queries/grievances. A Unique Registration Number will be generated for tracking the status of the queries/grievances.

The Registered Candidate(s) are advised to use the online facility for a speedy response.

16.2 Correspondence with NTA

All the correspondence should preferably be addressed by e-mail. The email query shall be addressed only if it is not anonymous and contains the name, postal address, and contact number of the sender. An email containing vague or general queries and other queries as contained in the Information Bulletin shall not be entertained. Queries shall not be entertained from a person claiming to be representatives, associates, or officiates of the applicant candidate. The following information shall not be revealed by phone or email:

- a. Internal documentation/status.
- b. The internal decision-making process of NTA. Any claim/counterclaim thereof.
- c. Dates and venue of internal meetings or name of the staff/officers dealing with it.
- d. Any information which cannot be revealed in the opinion of NTA.

16.3 Weeding Out Rules

The record of Joint Entrance Examination JEE (Main) - 2024 will be preserved up to **90 days from the date of declaration of result.**

16.4 Legal Jurisdiction

All disputes pertaining to the conduct of the JEE (Main) – 2024 Examination including Results shall fall within the jurisdiction of Delhi/New Delhi only. Further, any grievance/representation arising out of the Result shall be entertained only when raised within 30 days from the declaration of the result. Further, the copy of the Legal Notice or Writ Petition/Petition/Appeal/Reply may be served to NTA only through: legal@nta.ac.in

16.5 RTI

Information uploaded on the website shall not be provided to the candidate or any other person under R.T.I. Act, 2005. The information uploaded on the website shall remain for a specific period only. Therefore, the candidates are advised to download the uploaded information and keep it with them for the future. In due course of examination or in the midway of process, neither any application under the Right to Information Act, 2005 shall be entertained nor information will be provided.



Annexures



Annexure-I
Form-PwD (IV)

Disability Certificate

Certificate for persons with a disability under the RPwD Act, 2016 having less than 40% disability

Recent PP size
attested photograph
(showing face only)
of the person with
disability

This is to certify that, we have examined Mr/Ms/Mrs (name of the candidate), S/o /D/o , a resident of(Vill/PO/PS/District/State), aged yrs, a person with (nature of disability/condition), and to state that he/she has a limitation which hampers his/her writing capability owing to his/her above condition. He/she requires the support of a scribe for writing the examination.

- The above candidate uses aids and an assistive devices such as prosthetics & orthotics, and hearing aids (name to be specified) which is /are essential for the candidate to appear at the examination with the assistance of a scribe.
- This certificate is issued only for the purpose of appearing in written examinations conducted by recruitment agencies as well as academic institutions and is valid upto _____ (it is valid for a maximum period of six months or less as may be certified by the medical authority)

Signature of medical authority

(Signature & Name)	(Signature & Name)	Signature & Name)	(Signature & Name)	(Signature & Name)
Orthopedic / PMR specialist	Clinical Psychologist/ Rehabilitation Psychologist/Psychiatrist / Special Educator	Neurologist (if available)	Occupational therapist (if available)	Other Expert, as nominated by the Chairperson (if any)
(Signature & Name)				
Chief Medical Officer/Civil Surgeon/Chief District Medical Officer.....Chairperson				

Name of Government Hospital/Health Care Centre with Seal

Place:

Date:



Annexure-II

Letter of Undertaking for Using Own Scribe

I _____, a candidate with _____ (name of the disability) appearing for the _____ (name of the examination) bearing Application No. _____ at _____ (name of the centre) in the District _____, _____ (name of the State). My qualification is _____.

I do hereby state that _____ (name of the scribe) will provide the service of scribe/reader/lab assistant for the undersigned for taking the aforesaid examination.

I do hereby undertake that his qualification is _____. In case, subsequently, it is found that his qualification is not as declared by the undersigned and is beyond my qualification, I shall forfeit my right to the admission and claims relating thereto.

(Signature of the candidate with disability)

Place:

Date:



Photograph of Scribe

(Self-Attested Photograph)

Name of Scribe	ID of the Scribe	ID Number

**Appendix - I****List of Examination Cities for JEE (Main) - 2024**

JEE (Main) - 2024 will be conducted in the following Cities, provided there are sufficient numbers of candidates in the City:

State-wise/UT-wise list of Cities in India:

State / Country	City	City Code
Andaman and Nicobar Island	Port Blair	AN01
Andhra Pradesh	Amalapuram	AP35
Andhra Pradesh	Anantapur	AP01
Andhra Pradesh	Bobbili	AP36
Andhra Pradesh	Chirala	AP04
Andhra Pradesh	Chittoor	AP05
Andhra Pradesh	Eluru	AP06
Andhra Pradesh	Gooty	AP37
Andhra Pradesh	Gudlavalleru	AP38
Andhra Pradesh	Guntur	AP07
Andhra Pradesh	Kadapa	AP08
Andhra Pradesh	Kakinada	AP09
Andhra Pradesh	Kurnool	AP10
Andhra Pradesh	Madanapalle	AP39
Andhra Pradesh	Markapur	AP40
Andhra Pradesh	Nandyal	AP29
Andhra Pradesh	Nellore	AP11
Andhra Pradesh	Ongole	AP12
Andhra Pradesh	Papum Pare	AL02
Andhra Pradesh	Proddatur	AP21
Andhra Pradesh	Puttaparthi	AP41
Andhra Pradesh	Puttur AP	AP42
Andhra Pradesh	Rajahmundry	AP13
Andhra Pradesh	Srikakulam	AP14
Andhra Pradesh	Tadpatri	AP43
Andhra Pradesh	Tirupathi	AP16
Andhra Pradesh	Tiruvuru	AP44
Andhra Pradesh	Vijayawada	AP17
Andhra Pradesh	Visakhapatnam	AP18
Andhra Pradesh	Vizianagaram	AP19
Arunachal Pradesh	Itanagar/Naharlagun	AL01
Assam	Dibrugarh	AM06
Assam	Guwahati	AM02
Assam	Jorhat	AM03
Assam	Lakhimpur AS	AM07
Assam	Silchar (Assam)	AM04



State / Country	City	City Code
Assam	Tezpur	AM05
Bihar	Arrah	BR09
Bihar	Aurangabad(Bihar)	BR01
Bihar	Bhagalpur	BR02
Bihar	Darbhanga	BR04
Bihar	Gaya	BR05
Bihar	Muzaffarpur	BR06
Bihar	Patna	BR07
Bihar	Purnea	BR08
Bihar	Rohtas	BR41
Bihar	Samastipur	BR12
Chhattisgarh	Bhilai Nagar/Durg	CG01
Chhattisgarh	Bilaspur(Chhattisgarh)	CG02
Chhattisgarh	Raipur	CG03
Chhattisgarh	Jagdalpur	CG04
Chhattisgarh	Ambikapur	CG05
Dadra and Nagar Haveli	Silvassa	DN01
Delhi/New Delhi	Delhi/New Delhi	DL01
Goa	Panaji	GO03
Gujarat	Ahmedabad	GJ01
Gujarat	Gandhinagar	GJ32
Gujarat	Anand	GJ02
Gujarat	Himatnagar	GJ14
Gujarat	Jamnagar	GJ06
Gujarat	Mehsana	GJ31
Gujarat	Rajkot	GJ10
Gujarat	Surat	GJ11
Gujarat	Vadodara	GJ12
Gujarat	Valsad/Vapi	GJ13
Haryana	Faridabad	HR03
Haryana	Ambala	HR01
Haryana	Hisar	HR10
Himachal Pradesh	Bilaspur (Himachal Pradesh)	HP15
Himachal Pradesh	Hamirpur (Himachal Pradesh)	HP03
Himachal Pradesh	Kangra	HP16
Himachal Pradesh	Kullu	HP10
Himachal Pradesh	Mandi	HP08
Himachal Pradesh	Shimla	HP06
Himachal Pradesh	Solan	HP17
Himachal Pradesh	Una	HP09
Jammu and Kashmir	Anantnag	JK05
Jammu and Kashmir	Baramulla	JK01
Jammu and Kashmir	Budgam	JK11



State / Country	City	City Code
Jammu and Kashmir	Jammu	JK02
Jammu and Kashmir	Pulwama	JK06
Jammu and Kashmir	Samba	JK12
Jammu and Kashmir	Srinagar(J & K)	JK04
Jharkhand	Bokaro	JH01
Jharkhand	Dhanbad	JH02
Jharkhand	Hazaribagh	JH05
Jharkhand	Jamshedpur	JH03
Jharkhand	Ranchi	JH04
Karnataka	Bagalkot	KK19
Karnataka	Ballari	KK03
Karnataka	Belagavi(Belgaum)	KK02
Karnataka	Bengaluru	KK04
Karnataka	Bengaluru- Urban	KK20
Karnataka	Chikaballapur	KK22
Karnataka	Chikmagalur	KK23
Karnataka	Davangere	KK06
Karnataka	Dharwad	KK10
Karnataka	Gulbarga/Kalaburgi	KK08
Karnataka	Hassan	KK09
Karnataka	Hubli	KK27
Karnataka	Kolar	KK30
Karnataka	Mandya	KK18
Karnataka	Mangaluru(Mangalore)	KK12
Karnataka	Mysuru(Mysore)	KK14
Karnataka	Shivamoga(Shimoga)	KK15
Karnataka	Tumakuru	KK16
Karnataka	Udupi/Manipal	KK17
Kerala	Alappuzha/Chengannur	KL01
Kerala	Ernakulam/Moovattupuzha	KL04
Kerala	Angamaly	KL20
Kerala	Idukki	KL05
Kerala	Kannur	KL07
Kerala	Kasaragod	KL08
Kerala	Kollam	KL09
Kerala	Kottayam	KL11
Kerala	Kozhikode/Calicut	KL12
Kerala	Malappuram	KL13
Kerala	Palakkad	KL15
Kerala	Pathanamthitta	KL16
Kerala	Thiruvananthapuram	KL17
Kerala	Thrissur	KL18
Kerala	Wayanad	KL19



State / Country	City	City Code
Ladakh	Kargil	LL02
Ladakh	Leh	LL01
Lakshadweep	Kavaratti	LD01
Madhya Pradesh	Balaghat	MP01
Madhya Pradesh	Bhopal	MP03
Madhya Pradesh	Gwalior	MP06
Madhya Pradesh	Indore	MP07
Madhya Pradesh	Jabalpur	MP08
Madhya Pradesh	Khandwa	MP29
Madhya Pradesh	Sagar	MP12
Madhya Pradesh	Satna	MP13
Madhya Pradesh	Ujjain	MP15
Maharashtra	Ahmednagar	MR01
Maharashtra	Akola	MR02
Maharashtra	Amravati	MR03
Maharashtra	Aurangabad (Maharashtra)	MR04
Maharashtra	Beed	MR30
Maharashtra	Bhandara	MR31
Maharashtra	Buldhana	MR32
Maharashtra	Chandrapur	MR09
Maharashtra	Dhule	MR10
Maharashtra	Gondia	MR35
Maharashtra	Jalgaon	MR13
Maharashtra	Kolhapur	MR14
Maharashtra	Latur	MR15
Maharashtra	Mumbai/Navi Mumbai	MR16
Maharashtra	Nagpur	MR17
Maharashtra	Nanded	MR18
Maharashtra	Nandurbar	MR36
Maharashtra	Nashik	MR19
Maharashtra	Parbhani	MR38
Maharashtra	Pune	MR22
Maharashtra	Raigad	MR23
Maharashtra	Ratnagiri	MR24
Maharashtra	Sangli	MR25
Maharashtra	Satara	MR26
Maharashtra	Sindhudurg	MR39
Maharashtra	Solapur	MR27
Maharashtra	Thane	MR28
Maharashtra	Wardha	MR29
Maharashtra	Yavatmal	MR34
Manipur	Imphal	MN01
Meghalaya	Shillong	MG01



State / Country	City	City Code
Meghalaya	Tura	MG02
Mizoram	Aizawl	MZ01
Nagaland	Dimapur	NL01
Nagaland	Kohima	NL02
Odisha	Angul	OR10
Odisha	Balangir	OR20
Odisha	Balasore (Baleswar)	OR02
Odisha	Baragarh	OR21
Odisha	Baripada/Mayurbanj	OR12
Odisha	Berhampur / Ganjam	OR03
Odisha	Bhadrak	OR11
Odisha	Bhawanipatna	OR30
Odisha	Bhubaneswar	OR04
Odisha	Cuttack	OR05
Odisha	Dhenkanal	OR06
Odisha	Jagatsinghpur	OR17
Odisha	Jajpur	OR13
Odisha	Jeypore (Odisha)	OR19
Odisha	Jharsuguda	OR22
Odisha	Kendrapara	OR14
Odisha	Nuapada	OR31
Odisha	Paralakhemundi (Gajapati)	OR24
Odisha	Phulbani (Kandhamal)	OR25
Odisha	Puri	OR16
Odisha	Rayagada	OR26
Odisha	Rourkela	OR08
Odisha	Sambalpur	OR09
Puducherry	Puducherry	PO01
Punjab	Amritsar	PB01
Punjab	Bhatinda	PB02
Punjab	Chandigarh	CH01
Punjab	Jalandhar	PB04
Punjab	Ludhiana	PB05
Punjab	Moga	PB20
Punjab	Pathankot	PB07
Punjab	Patiala/Fatehgarh Sahib	PB08
Punjab	Sahibzada Ajit Singh Nagar	PB12
Rajasthan	Ajmer	RJ01
Rajasthan	Alwar	RJ02
Rajasthan	Bhilwara	RJ12
Rajasthan	Bikaner	RJ05
Rajasthan	Dausa	RJ17
Rajasthan	Hanumangarh	RJ23



State / Country	City	City Code
Rajasthan	Jaipur	RJ06
Rajasthan	Jodhpur	RJ07
Rajasthan	Kota	RJ08
Rajasthan	Sikar	RJ09
Rajasthan	Sriganganagar	RJ10
Rajasthan	Udaipur	RJ11
Sikkim	Gangtok	SM01
Tamil Nadu	Chennai	TN01
Tamil Nadu	Coimbatore	TN02
Tamil Nadu	Cuddalore	TN03
Tamil Nadu	Coonoor	TN36
Tamil Nadu	Dharmapuri	TN26
Tamil Nadu	Dindigul	TN27
Tamil Nadu	Erode	TN28
Tamil Nadu	Kanchipuram	TN05
Tamil Nadu	Kanyakumari/Nagercoil	TN06
Tamil Nadu	Karur	TN29
Tamil Nadu	Krishnagiri	TN21
Tamil Nadu	Kallakurichi	TN37
Tamil Nadu	Madurai	TN08
Tamil Nadu	Nagapattinam	TN30
Tamil Nadu	Namakkal	TN10
Tamil Nadu	Pudukkottai	TN31
Tamil Nadu	Ramanathapuram	TN32
Tamil Nadu	Salem	TN11
Tamil Nadu	Sivaganga	TN33
Tamil Nadu	Thanjavur	TN12
Tamil Nadu	Thoothukudi	TN13
Tamil Nadu	Tiruchirappalli	TN14
Tamil Nadu	Tirunelveli	TN15
Tamil Nadu	Tiruppur	TN22
Tamil Nadu	Tiruvannamalai	TN35
Tamil Nadu	Vellore	TN18
Tamil Nadu	Viluppuram	TN23
Tamil Nadu	Virudhunagar	TN20
Telangana	Hyderabad/Secunderabad	TL01
Telangana	Karimnagar	TL02
Telangana	Khammam	TL03
Telangana	Kothagudem	TL17
Telangana	Mahbubnagar	TL04
Telangana	Nalgonda	TL05
Telangana	Nizamabad	TL08
Telangana	Siddipet	TL11



State / Country	City	City Code
Telangana	Suryapet	TL09
Telangana	Warangal	TL07
Tripura	Agartala	TA01
Uttar Pradesh	Ghaziabad	UP07
Uttar Pradesh	Meerut	UP14
Uttar Pradesh	Noida/Greater Noida	UP09
Uttar Pradesh	Agra	UP01
Uttar Pradesh	Aligarh	UP02
Uttar Pradesh	Allahabad/Prayagraj	UP03
Uttar Pradesh	Ambedkar Nagar	UP25
Uttar Pradesh	Azamgarh	UP19
Uttar Pradesh	Ballia	UP20
Uttar Pradesh	Bareilly	UP04
Uttar Pradesh	Bijnor	UP21
Uttar Pradesh	Bulandshahr	UP29
Uttar Pradesh	Basti	UP59GJ32
Uttar Pradesh	Chandauli	UP41
Uttar Pradesh	Faizabad	UP06
Uttar Pradesh	Firozabad	UP22
Uttar Pradesh	Ghazipur	UP23
Uttar Pradesh	Gorakhpur	UP08
Uttar Pradesh	Jhansi	UP10
Uttar Pradesh	Kanpur	UP11
Uttar Pradesh	Lucknow	UP12
Uttar Pradesh	Mathura	UP13
Uttar Pradesh	Mau	UP35
Uttar Pradesh	Moradabad	UP15
Uttar Pradesh	Muzaffarnagar	UP16
Uttar Pradesh	Rampur	UP58
Uttar Pradesh	Saharanpur	UP38
Uttar Pradesh	Sitapur	UP17
Uttar Pradesh	Sultanpur	UP40
Uttar Pradesh	Varanasi	UP18
Uttar Pradesh	Pratapgarh	UP43
Uttarakhand	Almora	UK09
Uttarakhand	Dehradun	UK01
Uttarakhand	Haldwani	UK02
Uttarakhand	Pauri Garhwal	UK08
Uttarakhand	Roorkee	UK06
West Bengal	Asansol	WB01
West Bengal	Bankura	WB16
West Bengal	Burdwan(Bardhaman)	WB02
West Bengal	Durgapur	WB04



State / Country	City	City Code
West Bengal	Hooghly	WB06
West Bengal	Howrah	WB07
West Bengal	Kalyani	WB08
West Bengal	Kolkata	WB10
West Bengal	Siliguri	WB11
West Bengal	Suri	WB22
Bahrain	Manama	ZZ01
Sri Lanka	Colombo	ZZ02
Qatar	Doha	ZZ03
UAE	Dubai	ZZ04
Nepal	Kathmandu	ZZ05
Oman	Muscat	ZZ06
Saudi Arabia	Riyadh	ZZ07
UAE	Sharjah	ZZ08
Singapore	Singapore	ZZ09
Kuwait	Kuwait City	ZZ10
Malaysia	Kuala Lumpur	ZZ11
Nigeria	Lagos/Abuja	ZZ12
Indonesia	Jakarta	ZZ13
Australia	Canberra	ZZ14
Austria	Vienna	ZZ15
Brazil	Brasilia	ZZ16
Canada	Ottawa	ZZ17
Hong Kong	Hong Kong	ZZ19
Mauritius	Port Luis	ZZ20
Russia	Moscow	ZZ21
South Africa	Cape Town	ZZ22
Thailand	Bangkok	ZZ23
USA	Washington D.C.	ZZ24
Vietnam	Hanoi	ZZ25

Note:

1. NTA reserves the right to change any of the above-mentioned cities that may have been opted by any candidate in his/ her online Application Form, at a later stage due to logistic reasons and may allot another city to him/her from his/ her choices of cities, given in the online Application Form.
2. Choice of examination cities displayed to the candidates will be based on the permanent and correspondence addresses filled during the Online Application Form of **JEE (Main) – 2024**.



Appendix –II

Procedure for Online Payment of Fees and Helpline for Payment-Related Queries

After completing Step 2 of the **Online** Application Form, the candidate may remit the examination fee (**Step 3**) in the following manner:

- Check the validity of the Debit/ Credit Card and keep it ready with you while logging on to the website for submitting the Application Form. The candidates should enter the information asked for and make payment through a Debit/ Credit Card.
- Through Net Banking, check the balance in your account and keep all credentials ready with you while logging on to the website for making payments. The candidates should log in with his/her credentials of net banking and make payments accordingly.
- For payment through a UPI Service, check whether there is a requisite balance in the Bank Account / Wallet to which the concerned UPI is linked.

The prescribed Examination Fee (please see the Information at a Glance) can be paid through any Bank/Payment Gateway in any Payment Mode [service/processing charges per transaction and GST applicable thereon @ 18 % are to be borne by the candidate

S. No	Mode of Payment	ICICI BANK			HDFC BANK			CANARA BANK			STATE BANK OF INDIA	
		ICICI Other Banks	NIL Charge		HDFC Other Banks	NIL Charge		Canara Bank Other Banks	NIL Charge		SBI Other Banks	
1	Net Banking		4.00 + GST			4.00 + GST				5.00 + GST		Rs 5.00+GST
2	All Debit Card	ICICI or Other Banks	Transaction upto Rs 2000/-	0 %	HDFC or Other Banks	Transaction upto Rs 2000/-	0 %	Canara Bank or Other Banks	Nil Charge	Nil		Transaction upto Rs 2000/-
			Transaction above Rs 2000/-	0.5 % + GST		Transaction above Rs 2000/-	0 %			Transaction above Rs 2000/-		
3	Credit Card	Domestic	0.40% of Transaction value		Domestic	0.40% of Fee + GST		Domestic	0.80% of Fee + GST		Domestic	0.80% of Fee+ GST (Minimum Rs 11/-)
		International	2.35% of Transaction value		International	Nil Charge		International	2.35% of Fee+ GST		International	3.50% of Fee+ GST (Minimum Rs 11/-)
4	Unified Payment Interface (UPI)	ICICI or other banks	Transaction upto Rs 2000/-	0 %	Nil Charge							Transaction upto Rs 2000/-
			Transaction above Rs 2000/-	5.0 % + GST								Transaction above Rs 2000/-

Note: In case, the fee payment status is not ‘OK’, or the Confirmation Page of the Online Application is not generated after fee payment (completion of Step 3) of the candidate is advised to contact the helpline number/email of the concerned Bank/Payment Gateway Integrator, as mentioned below:-



(a) If Paying through the State Bank of India (SBI):

Level	Name	Email ID	Contact Number
1	Helpdesk	dgmcs.cc@sbi.co.in	18004253800
2	Helpdesk3	sbi.05222@sbi.co.in	08026599990
3	Customer Care	agmcustomer.lhodel@sbi.co.in	1800112211
4	Through SMS	UNHAPPY (add text)	8008202020

(b) If Paying through Canara Bank:

Level	Name	Email ID	Contact Number
1	Helpdesk	pgsupport@billdesk.com	01202400850/1 9971262371
2	Complaint Management Services	genadmnrnoida@canarabank.com	01202400850/1
3	Customer Care	genadmnrnoida@canarabank.com	9971262371
4	Through SMS	genadmnrnoida@canarabank.com	01202400850/1

(c) If Paying through HDFC Bank:

Level	Name	Email ID	Contact Number
1	Shri Vikram Singh	vikram.singh4@hdfcbank.com	9799810080
2.	Amit Singh	amit.singh26@hdfcbank.com	7428869770
3	Shri Ripon Bhattacharjee	ripon.bhattacharjee@hdfcbank.com	9625031697

(d) If Paying through ICICI Bank:

S. No.	Name	Contact Number
1.	Helpdesk	1800222884
2.	Deepak Kumar	8882892218
3.	Rakesh Bhatnagar	9953972004

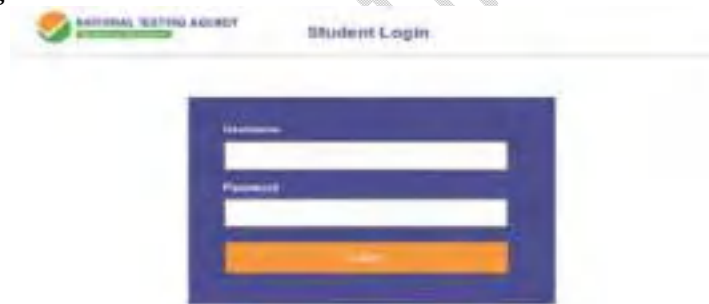
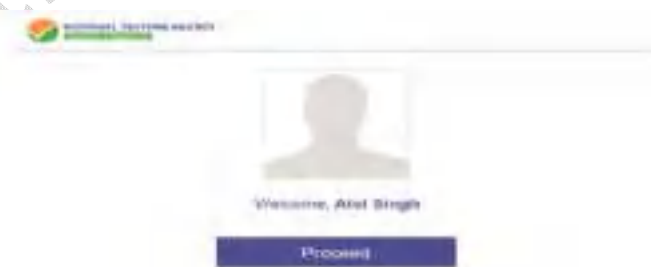
**Appendix-III****Computer Based Test (CBT)**

The major examinations being conducted by NTA are Computer-Based Tests (CBT). A CBT requires candidates to sit in front of a computer terminal (node) allocated to them against their Roll number and Admit card. After logging the candidate will get detailed instructions for the examinations. At the designated time of the start of the examination, the candidates will be able to proceed and see the questions on the computer screen using the computer mouse. Candidates will have the option to change/modify/edit/answers already entered at any time during the examination.

Procedure for appearing in Computer Based Test (CBT):

(Sample/mock test will be available on the NTA website: www.nta.ac.in for hands-on practice)

- (a) A computer terminal (node) indicating the Roll Number will be allocated to each candidate. Candidates should find and sit on their allocated computers only. Any candidate found to have changed room/hall or the computer on their own other than the one allotted would lead to cancellation of candidature and no plea in this regard would be entertained.
- (b) For login, the candidate will have to enter a **login ID and password**. The computer terminal allotted to the candidate will display the WELCOME login screen, the Candidate's photograph and the subject opted by the candidate.

Candidate Login Page**Candidate Welcome Screen**

- (c) After login, the candidate shall be able to see the detailed instructions for the examination. Candidates are advised to go through the instructions carefully regarding the type of questions and marking scheme. At the designated time of the start of the examination, the candidates will be able to proceed and see the questions on the computer screen.





Please read the instructions carefully


General Instructions:


1. The total duration of the examination is **180** minutes for **Paper 1 (B.E./B.Tech)** and **210 minutes** for (B.Arch and B.Planning) both.
2. The clock will be set on the server. The countdown timer in the top right corner of the screen will display the remaining time available for you to complete the examination. When the timer reaches zero, the examination will end by itself. You will not be required to end or submit your examination.
3. The Question Palette displayed on the right side of the screen will show the status of each question using one of the following symbols:



 You have not visited the question yet.

 You have not answered the question.

 You have answered the question.

 You have NOT answered the question, but have marked the question for review.

 The question(s) "Answered and Marked for Review" will be considered for evaluation.

4. The 'Marked for Review' status for a question simply indicates that you would like to look at that question again.
5. You can click on the ">" arrow which appears to the left of the question palette to collapse the question palette thereby maximizing the question window. To view the question palette again, you can click on "<" which appears on the right side of the question window.
6. You can click on your "Profile" image on the top right corner of your screen to change the language during the exam for the entire question paper. On clicking on the Profile image, you will get a drop-down to change the question content to the desired language.
7. You can click on  to navigate to the bottom and  to navigate to the top of the question area, without scrolling.

Navigating to a Question:

8. To answer a question, do the following:
 - a. Click on the question number in the Question Palette at the right of your screen to go to that question directly. Note that using this option does NOT save your answer to the current question.



- b. Click on **Save & Next** to save your answer for the current question and then go to the next question.
- c. Click on **Mark for Review & Next** to save your answer for the current question, mark it for review, and then go to the next question.

Answering a Question :

9. Procedure for answering a Multiple Choice Type question:
 - a. To select your answer, click on the button of one of the options.
 - b. To deselect your chosen answer, click on the button of the chosen option again or click on the **Clear Response** button.
 - c. To change your chosen answer, click on the button of another option.
 - d. To save your answer, you must click on the Save & Next button
 - e. To mark the question for review, click on the '**Mark for Review & Next**' button.
10. To change your answer to a question that has already been answered, first select that question for answering and then follow the procedure for answering that type of question.

Navigating through sections:

11. Sections in this question paper are displayed on the top bar of the screen. Questions in a section can be viewed by clicking on the Section name. The section you are currently viewing is highlighted.
12. After clicking the **Save and Next** button on the last question for a Section, you will automatically be taken to the first question of the next section.
13. You can shuffle between sections and questions anytime during the examination as per your convenience only during the time stipulated.
14. The candidate can view the corresponding section summary as part of the legend that appears in every section above the question palette.

Instruction for Question:

15. For the correctness of the translation for a particular language, only the **English version** will be considered as the final version for evaluation purposes.

The keyboard attached to the computer, if any, will be disabled during the entire duration of the examination. Depending on the type of question, the answers to questions can either be entered by clicking on the virtual on-screen keyboard (numeric or otherwise) using the computer mouse or by clicking the chosen option(s) using the computer mouse. Candidates will have the option to change/modify answers already entered at anytime during the entire duration of the examination.

In case the computer/mouse allotted to any candidate malfunctions during the test, he/she will be immediately allotted another computer system and the time lost due to this will be adjusted in the server so as to give the candidate the full allotted time.



The on-screen computer clock counter of every candidate will be set at the server. The countdown timer on the top right side of the computer screen will display the time remaining (in minutes) available for the candidate to complete the examination. When the timer reaches zero, the examination will end by itself. The candidates will not be required to end or submit the examination.

The Question Palette displayed on the screen will show the status of each question using one of the following symbols:



The question(s) “Answered and Marked for Review” status for a question indicates that the candidates would like to have a relook at that question again. A candidate has the option of answering a question and simultaneously “Marked for Review”, these answers will be considered for evaluation. However, if a candidate has simply put “Marked for Review” for a question without answering it, the corresponding question marked for review without an answer will not be considered for evaluation. It may be noted that a candidate can return to any “Marked for Review” question at any time during the examination by clicking on the corresponding question number icon displayed on the Question Palette of the corresponding section.

- (d) The candidates can click on the “>” arrow which appears to the left of the question palette to collapse the question palette thereby maximizing the question viewing window. To view the question palette again, the candidate can click on “<” which appears on the right side of the question window.
- (e) Candidates can click on to navigate to the bottom and to navigate to the top of the question area, without scrolling. Using the computer mouse the candidate can scroll up and down the question viewing area for viewing the entire question.
- (f) The full paper can be viewed by clicking the “Question Paper” icon on the top right corner of the screen.
- (g) Blank Sheets for doing Rough Work/calculations shall be provided to the candidates. The Blanks Sheets would have a Header page for the candidates to write down his/her Name and Roll Number. All calculations/writing work is to be done only in the Blank Sheets provided at the Centre in the Examination Room/Hall and on completion of the test candidates must hand over the rough sheets to the invigilator on duty in the Room/Hall.
- (h) **Navigating to a Question To navigate between questions within a Paper, the candidate needs to do the following:**



- (a) Click on the question number in the Question Palette at the right of the screen to go to that numbered question directly. Note that using this option does NOT save the answer to the currently displayed question.
- (b) Click on “Save and Next” to save the answer to any question. Clicking on “Save and Next” will save the answer for the current question and the next question will be displayed on the candidate’s computer screen.
- (c) Click on “Mark for Review and Next” to mark a question for review (without answering it) and proceed to the next question.



(i) Answering a Question

To navigate between questions within a Paper, the candidate needs to do the following:

Procedure for answering a Multiple-Choice type question:

- (a) To select the option(s), click on the corresponding button(s) of the option(s).
- (b) To deselect the chosen answer, click on the button of the chosen option again or click on the “Clear Response” button.
- (c) To save the answer, the candidate MUST click on the “Save and Next” button.
- (d) To mark the question for review (without answering it), click on the “Mark for Review and Next” button.

(j) Navigating through sections:

- (i) Sections in the question paper are displayed on the top bar of the screen. Questions in a section can be viewed by clicking on the section name. The section in which the candidate is currently viewing will be highlighted.
- (ii) After clicking the “Save and Next” button on the last question for a section, the candidate will automatically be taken to the first question of the next section.
- (iii) Candidates can shuffle between sections and questions within sections anytime during the examination as per convenience only during the time stipulated.
- (iv) The candidate can view the corresponding section summary as part of the legend that appears in every section above the question palette.

(k) Procedure for answering questions that require inputs from the on-screen virtual keyboard (numeric or otherwise):



- (a) The candidate will have to use the on-screen virtual keyboard (that would be displayed just below the question statement of these types of questions) and the attached computer mouse to enter his/her answer in the space provided for the answer.

On-Screen Virtual Keyboard



- (b) The answer can be changed, if required, anytime during the test. To save the answer, the candidate **MUST** click on the “Save and Next” button.
- (c) To mark the question for review (without answering it), click on the “Mark for Review and Next” button.

The candidates will have the option to change previously saved answer to any question, anytime during the entire duration of the test. To change the answer to a question that has already been answered, first select the corresponding question from the Question Palette, then click on “Clear Response” to clear the previously entered answer and subsequently follow the procedure for answering that type of question.

(I) ROUGH WORK:

All calculations/writing work is to be done only in the rough sheet provided at the Centre in the Examination Room/Hall and on completion of the test candidates must hand over the rough sheets to the invigilator on duty in the Room/Hall.



Appendix-IV

NTA: Test Practice Centres (TPCs)

What is a Test Practice Centre (TPCs)?

The Ministry of Human Resource Development mandated the NTA to set up, establish, and create a network of Test Practice Centres for candidates, especially in remote and rural areas to enable them to practice and be comfortable in taking a Computer Based Test (CBT). This facility is completely free of cost. Candidates can register online (on the NTA website) where they are provided a convenient TPC near to their location to practice on a given computer node. This facilitates and eases the process of being able to take a Computer Based Test (CBT). The entire experience of using a computer is close to the actual experience of taking a CBT. All efforts are made to provide practice tests and questions so that candidates can familiarize themselves with logging into the system, go through the detailed instructions regarding the test, use the mouse or numeric keyboard on-screen (virtual) to attempt each question, scroll down to the next question, navigate between questions, review and edit their options and submit questions.

The objective of TPCs is primarily to organize test practice for the upcoming NTA examinations.

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Appendix - V

Procedure to be adopted for compilation of NTA scores for multi-session Papers (Normalization procedure based on PERCENTILE SCORE)

NTA may conduct examinations on multiple dates, generally in two sessions per day. The candidates will be given different sets of questions per session and it is quite possible that in spite of all efforts to maintain equivalence among various question papers, the difficulty level of these question papers administered in different sessions may not be exactly the same. Some of the candidates may end up attempting a relatively tougher set of questions when compared to other sets. The candidates who attempt the comparatively tougher examination are likely to get lower marks as compared to those who attempt the easier one. In order to overcome such a situation, a “**Normalization procedure based on Percentile Score**” will be used to ensure that candidates are neither benefitted nor disadvantaged due to the difficulty level of the examination. With the objective of ensuring that a candidate’s true merit is identified and that a level playing field is created in the above context, the Normalization Procedure, set out below shall be adopted, for compiling the NTA scores for multi-session papers.

The process of Normalization is an established practice for comparing candidate scores across multi-session papers and is similar to those being adopted in other large educational selection tests conducted in India. For normalization across sections, NTA shall use the percentile equivalence.

Percentile Scores: Percentile scores are scores based on the relative performance of all those who appear for the examination. The marks obtained are transformed into a scale ranging from 100 to 0 for each session of examinees.

The Percentile Score indicates the percentage of candidates that have scored EQUAL TO OR BELOW (same or lower raw scores) that particular Percentile in that examination. Therefore the topper (highest score) of each session will get the same Percentile of 100 which is desirable. The marks obtained in between the highest and lowest scores are also converted to appropriate Percentiles.

The Percentile score will be the Normalized Score for the examination (instead of the raw marks of the candidate) and shall be used for the preparation of the merit lists.

The Percentile Scores will be calculated up to 7 decimal places to avoid the bunching effect and reduce ties.

The Percentile score of a Candidate is calculated as follows:

$$\frac{100 \times \text{Number of candidates appeared in the 'Session' with raw score EQUAL TO OR LESS than the candidate}}{\text{The total number of the candidates who appeared in the 'Session'}}$$

Note: The Percentile of the Total shall **NOT** be an aggregate or average of the Percentile of the individual subject. The percentile score is not the same as the percentage of marks obtained.

Example: Suppose a test was held in 4 sessions of examinees as per details given below:

(Allocation of Days and shifts was done randomly)

(a) **The distribution of candidates was as follows:**

Session-1: Day-1 Shift-1, **Session-2:** Day-1 Shift-2, **Session-3:** Day-2 Shift-1 and **Session-4:** Day-2 Shift-2



Session	Day/Shift	No of Candidates			Marks	
		Absent	Appeared	Total	Highest	Lowest
Session-1	Day-1 Shift-1	3974	28012	31986	335	-39
Session-2	Day-1 Shift-2	6189	32541	38730	346	-38
Session-3	Day-2 Shift-1	6036	41326	47362	331	-49
Session-4	Day-2 Shift-2	9074	40603	49677	332	-44
Total (Session-1 to Session-4)		25273	142482	167755	346	-49

In this method of scoring the HIGHEST RAW SCORE in each paper (irrespective of the raw scores) will be the 100 Percentile indicating that 100% of candidates have scored equal to or lesser than the highest scorer/ topper for that session.

Highest Raw Score and Percentile Score: All the highest raw scores will have a normalized Percentile Score of 100 for their respective session.

Session	Total Candidates Appeared	Highest Raw Score	Candidates who scored EQUAL OR LESS THAN Highest Raw Score	Percentile Score	Remarks
Session-1	28012	335	28012	100.000000 [(28012/28012)*100]	i.e. all the highest raw scores would be normalized to 100 Percentile Score for their respective session.
Session -2	32541	346	32541	100.000000 [(32541/32541)*100]	
Session -3	41326	331	41326	100.000000 [(41326/41326)*100]	
Session -4	40603	332	40603	100.000000 [(40603/40603)*100]	

Lowest Raw Score and Percentile Score: The percentile Score of all the lowest raw scores will depend on the total number of candidates who have taken the examination for their respective sessions.



Session	Total Candidates Appeared	Lowest Raw Score	Candidates who scored EQUAL OR LESS THAN Lowest Raw Score	Percentile Score	Remarks
Session -1	28012	-39	1	0.0035699 [(1/28012)*100]	i.e. Percentile Score of all the lowest raw scores is different i.e. Percentile Score depends on the total number of candidates who have taken the examination for their respective sessions.
Session -2	32541	-38	1	0.0030730 [(1/32541)*100]	
Session -3	41326	-49	1	0.0024198 [(1/41326)*100]	
Session -4	40603	-44	1	0.0024629 [(1/40603)*100]	

The following is a further explanation of the interpretation of the raw scores and Percentile Score in Session-3 (Day-2 and Shift-1) with 41326 candidates who have taken the examination.

Candidate	Percentile Score	No of Candidates	Raw Score	Remark
A	100.000000 [(41326/41326)*100]	1	331	This indicates that amongst those who appeared, 100% have scored either EQUAL TO OR LESS THAN candidate A (331 raw scores).
				It also indicates that no candidate has scored more than candidate A (331 raw scores).
B	90.1224411 [(37244/41326)*100]	77	121	This indicates that amongst those who appeared, 90.1224411% have scored either EQUAL TO OR LESS THAN candidate B (121 raw scores).
				It also indicates that the remaining candidates have scored



				more than candidate B (121 raw scores).
C	50.4549194 [(20851/41326)*100]	381	41	This indicates that amongst those who appeared, 50.4549194% have scored either EQUAL TO OR LESS THAN candidate C (41 raw scores).
				It also indicates that the remaining those who appeared have scored more than candidate C (41 raw scores).
D	31.7040120 [(13102/41326)*100]	789	25	This indicates that amongst those who appeared, 31.7040120% have scored either EQUAL TO OR LESS THAN candidate D (25 raw scores).
				It also indicates that the remaining candidates have scored more than candidate D (25 raw scores).
E	1.1034216 [(456/41326)*100]	100	-15	Indicates that amongst those who appeared, 1.1034216% have scored either EQUAL TO OR LESS THAN candidate E (-15 raw score).
				It also indicates that the remaining candidates have scored more than candidate E (-15 raw score).

STEP-BY-STEP PROCEDURE FOR NORMALIZATION AND PREPARATION OF RESULT:

Step-1: Distribution of Examinees in two shifts:

Candidates have to be distributed into two sessions randomly so that each session has an approximately equal number of candidates. These two sessions would be as follows:

Session-1: Day-1 Shift-1, **Session-2:** Day-1 Shift-2

In the event of a more number of days or less number of shifts, the candidates will be divided accordingly.



This will ensure that there is no bias in the distribution of candidates who shall take the examination. Further, with a large population of examinees spread over the entire country, the possibility of such bias becomes remote.

Step 2: Preparation of Results for each Session:

The examination results for **each session** will be prepared in the form of

- Raw Scores
- Percentiles Scores of Total raw scores.

The Percentiles would be calculated for each candidate in the Session as follows:

Let TP1 be the Percentile Score of the Total Raw Score of that candidate.

$$\text{Total Percentile (TP1) : } 100 \times \frac{\text{No. of candidates appeared from the session with raw score EQUAL TO OR LESS than the score of the Candidate}}{\text{Total No. of candidates who appeared in the session}}$$

Step-3: Compilation of NTA score and Preparation of Result:

The Percentile scores for the Total Raw Score for all the sessions (**Session-1: Day-1 Shift-1, Session-2: Day-1 Shift-2**) as calculated in Step-2 above would be merged and shall be called the NTA scores which will then be used for the compilation of results and further processing for deciding the allocation.

In the event of the percentiles for the multi-shifts being dissimilar/unequal, the lowest will be the eligibility cut-off for that category for all candidates (i.e. all shifts).

For Example: In the examination held in two shifts, if the 40% marks correspond to a Percentile score of 78 in Shift 1 and 79 in Shift 2, then all those equal to or above 78 percentiles (Percentile score of 100 to 78) in both shifts will become eligible in General Category. A similar method will be adopted for the other categories to determine eligibility cut-offs. In case the examination is held in more number of shifts the same principle shall apply.

**Appendix - VI****Syllabus for JEE (Main) - 2024****Syllabus for JEE Main Paper 1 (B.E./B.Tech.)- Mathematics, Physics, and Chemistry****MATHEMATICS****UNIT 1: SETS, RELATIONS, AND FUNCTIONS:**

Sets and their representation: Union, intersection, and complement of sets and their algebraic properties; Power set; Relation, Type of relations, equivalence relations, functions; one-one, into and onto functions, the composition of functions.

UNIT 2: COMPLEX NUMBERS AND QUADRATIC EQUATIONS:

Complex numbers as ordered pairs of reals, Representation of complex numbers in the form $a + ib$ and their representation in a plane, Argand diagram, algebra of complex number, modulus, and argument (or amplitude) of a complex number, Quadratic equations in real and complex number system and their solutions Relations between roots and co-efficient, nature of roots, the formation of quadratic equations with given roots.

UNIT 3: MATRICES AND DETERMINANTS:

Matrices, algebra of matrices, type of matrices, determinants, and matrices of order two and three, evaluation of determinants, area of triangles using determinants, Adjoint, and evaluation of inverse of a square matrix using determinants and, Test of consistency and solution of simultaneous linear equations in two or three variables using matrices.

UNIT 4: PERMUTATIONS AND COMBINATIONS:

The fundamental principle of counting, permutation as an arrangement and combination as section, Meaning of $P(n,r)$ and $C(n,r)$, simple applications.

UNIT 5: BINOMIAL THEOREM AND ITS SIMPLE APPLICATIONS:

Binomial theorem for a positive integral index, general term and middle term, and simple applications.

UNIT 6: SEQUENCE AND SERIES:

Arithmetic and Geometric progressions, insertion of arithmetic, geometric means between two given numbers, Relation between A.M and G.M.

UNIT 7: LIMIT, CONTINUITY, AND DIFFERENTIABILITY:

Real-valued functions, algebra of functions, polynomials, rational, trigonometric, logarithmic, and exponential functions, inverse function. Graphs of simple functions. Limits, continuity, and differentiability. Differentiation of the sum, difference, product, and quotient of two functions. Differentiation of trigonometric, inverse trigonometric, logarithmic, exponential, composite, and implicit functions; derivatives of order up to two, Applications of derivatives:



Rate of change of quantities, monotonic-Increasing and decreasing functions, Maxima and minima of functions of one variable,

UNIT 8: INTEGRAL CALCULAS:

Integral as an anti-derivative, Fundamental integral involving algebraic, trigonometric, exponential, and logarithmic functions. Integrations by substitution, by parts, and by partial functions. Integration using trigonometric identities.

Evaluation of simple integrals of the type

$$\int \frac{dx}{x^2+a^2}, \int \frac{dx}{\sqrt{x^2 \pm a^2}}, \int \frac{dx}{a^2-x^2}, \int \frac{dx}{\sqrt{a^2-x^2}}, \int \frac{dx}{ax^2+bx+c}, \int \frac{dx}{\sqrt{ax^2+bx+c}}, \int \frac{(px+q)dx}{ax^2+bx+c},$$
$$\int \frac{(px+q)dx}{\sqrt{ax^2+bx+c}}, \int \sqrt{a^2 \pm x^2} dx, \int \sqrt{x^2 - a^2} dx$$

. The fundamental theorem of calculus, properties of definite integrals. Evaluation of definite integrals, determining areas of the regions bounded by simple curves in standard form.

UNIT 9: DIFFERENTIAL EQUATIONS

Ordinary differential equations, their order, and degree, the solution of differential equation by the method of separation of variables, solution of a homogeneous and linear differential equation of the type

$$\frac{dy}{dx} + p(x)y = q(x)$$

UNIT 10: CO-ORDINATE GEOMETRY

Cartesian system of rectangular coordinates in a plane, distance formula, sections formula, locus, and its equation, the slope of a line, parallel and perpendicular lines, intercepts of a line on the co-ordinate axis.

Straight line

Various forms of equations of a line, intersection of lines, angles between two lines, conditions for concurrence of three lines, the distance of a point from a line, co-ordinate of the centroid, orthocentre, and circumcentre of a triangle,

Circle, conic sections

A standard form of equations of a circle, the general form of the equation of a circle, its radius and central, equation of a circle when the endpoints of a diameter are given, points of intersection of a line and a circle with the centre at the origin and sections of conics, equations of conic sections (parabola, ellipse, and hyperbola) in standard forms,

UNIT 11: THREE DIMENSIONAL GEOMETRY

Coordinates of a point in space, the distance between two points, section formula, direction ratios, and direction cosines, and the angle between two intersecting lines. Skew lines, the shortest distance between them, and its equation. Equations of a line



UNIT 12: VECTOR ALGEBRA

Vectors and scalars, the addition of vectors, components of a vector in two dimensions and three-dimensional space, scalar and vector products,

UNIT 13: STATISTICS AND PROBABILITY

Measures of discretion; calculation of mean, median, mode of grouped and ungrouped data calculation of standard deviation, variance, and mean deviation for grouped and ungrouped data.

Probability: Probability of an event, addition and multiplication theorems of probability, Baye's theorem, probability distribution of a random variate,

UNIT 14: TRIGONOMETRY

Trigonometrical identities and trigonometrical functions, inverse trigonometrical functions, and their properties,

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PHYSICS

UNIT 1: PHYSICS AND MEASUREMENT

Units of measurements, System of Units, S I Units, fundamental and derived units, least count, significant figures, Errors in measurements, Dimensions of Physics quantities, dimensional analysis, and its applications.

UNIT 2: KINEMATICS

The frame of reference, motion in a straight line, Position- time graph, speed and velocity; Uniform and non-uniform motion, average speed and instantaneous velocity, uniformly accelerated motion, velocity-time, position-time graph, relations for uniformly accelerated motion, Scalars and Vectors, Vector. Addition and subtraction, scalar and vector products, Unit Vector, Resolution of a Vector. Relative Velocity, Motion in a plane, Projectile Motion, Uniform Circular Motion.

UNIT 3: LAWS OF MOTION

Force and inertia, Newton's First law of motion; Momentum, Newton's Second Law of motion, Impulses; Newton's Third Law of motion. Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces.

Static and Kinetic friction, laws of friction, rolling friction.

Dynamics of uniform circular motion: centripetal force and its applications: vehicle on a level circular road, vehicle on a banked road.

UNIT 4: WORK, ENERGY, AND POWER

Work done by a constant force and a variable force; kinetic and potential energies, work-energy theorem, power.

The potential energy of spring conservation of mechanical energy, conservative and non-conservative forces; motion in a vertical circle: Elastic and inelastic collisions in one and two dimensions.

UNIT 5: ROTATIONAL MOTION

Centre of the mass of a two-particle system, Centre of the mass of a rigid body; Basic concepts of rotational motion; moment of a force; torque, angular momentum, conservation of angular momentum and its applications;

The moment of inertia, the radius of gyration, values of moments of inertia for simple geometrical objects, parallel and perpendicular axes theorems, and their applications. Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions.



UNIT 6: GRAVITATION

The universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Kepler's law of planetary motion. Gravitational potential energy; gravitational potential. Escape velocity, Motion of a satellite, orbital velocity, time period, and energy of satellite.

UNIT 7: PROPERTIES OF SOLIDS AND LIQUIDS

Elastic behaviour, Stress-strain relationship, Hooke's Law. Young's modulus, bulk modulus, and modulus of rigidity. Pressure due to a fluid column; Pascal's law and its applications. Effect of gravity on fluid pressure.

Viscosity. Stokes' law. terminal velocity, streamline, and turbulent flow. critical velocity. Bernoulli's principle and its applications.

Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension - drops, bubbles, and capillary rise. Heat, temperature, thermal expansion; specific heat capacity, calorimetry; change of state, latent heat. Heat transfer- conduction, convection, and radiation.

UNIT 8: THERMODYNAMICS

Thermal equilibrium, zeroth law of thermodynamics, the concept of temperature. Heat, work, and internal energy. The first law of thermodynamics, isothermal and adiabatic processes.

The second law of thermodynamics: reversible and irreversible processes.

UNIT 9: KINETIC THEORY OF GASES

Equation of state of a perfect gas, work done on compressing a gas, Kinetic theory of gases - assumptions, the concept of pressure. Kinetic interpretation of temperature: RMS speed of gas molecules: Degrees of freedom. Law of equipartition of energy and applications to specific heat capacities of gases; Mean free path. Avogadro's number.

UNIT 10: OSCILLATIONS AND WAVES

Oscillations and periodic motion – time period, frequency, displacement as a function of time. Periodic functions. Simple harmonic motion (S.H.M.) and its equation; phase: oscillations of a spring -restoring force and force constant: energy in S.H.M. - Kinetic and potential energies; Simple pendulum - derivation of expression for its time period:

Wave motion. Longitudinal and transverse waves, speed of the travelling wave. Displacement relation for a progressive wave. Principle of superposition of waves, reflection of waves. Standing waves in strings and organ pipes, fundamental mode, and harmonics. Beats.

UNIT 11: ELECTROSTATICS

Electric charges: Conservation of charge. Coulomb's law forces between two point charges, forces between multiple charges: superposition principle and continuous charge distribution.

Electric field: Electric field due to a point charge, Electric field lines. Electric dipole, Electric field due to a dipole. Torque on a dipole in a uniform electric field.



Electric flux. Gauss's law and its applications to find field due to infinitely long uniformly charged straight wire uniformly charged infinite plane sheet, and uniformly charged thin spherical shell. Electric potential and its calculation for a point charge, electric dipole and system of charges; potential difference, Equipotential surfaces, Electrical potential energy of a system of two point charges and of electric dipole in an electrostatic field.

Conductors and insulators. Dielectrics and electric polarization, capacitors and capacitances, the combination of capacitors in series and parallel, and capacitance of a parallel plate capacitor with and without dielectric medium between the plates. Energy stored in a capacitor.

UNIT 12: CURRENT ELECTRICITY

Electric current. Drift velocity, mobility, and their relation with electric current. Ohm's law. Electrical resistance. V-I characteristics of Ohmic and non-ohmic conductors. Electrical energy and power. Electrical resistivity and conductivity. Series and parallel combinations of resistors; Temperature dependence of resistance.

Internal resistance, potential difference, and emf of a cell, a combination of cells in series and parallel. Kirchhoff's laws and their applications. Wheatstone bridge. Metre Bridge.

UNIT 13: MAGNETIC EFFECTS OF CURRENT AND MAGNETISM

Biot - Savart law and its application to the current carrying circular loop. Ampere's law and its applications to infinitely long current carrying straight wire and solenoid. Force on a moving charge in uniform magnetic and electric fields.

Force on a current-carrying conductor in a uniform magnetic field. The force between two parallel currents carrying conductors-definition of ampere. Torque experienced by a current loop in a uniform magnetic field: Moving coil galvanometer, its sensitivity, and conversion to ammeter and voltmeter.

Current loop as a magnetic dipole and its magnetic dipole moment. Bar magnet as an equivalent solenoid, magnetic field lines; Magnetic field due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis. Torque on a magnetic dipole in a uniform magnetic field. Para-, dia- and ferromagnetic substances with examples, the effect of temperature on magnetic properties.

UNIT 14: ELECTROMAGNETIC INDUCTION AND ALTERNATING CURRENTS

Electromagnetic induction: Faraday's law. Induced emf and current: Lenz's Law, Eddy currents. Self and mutual inductance. Alternating currents, peak and RMS value of alternating current/ voltage: reactance and impedance: LCR series circuit, resonance: power in AC circuits, wattless current. AC generator and transformer.

UNIT 15: ELECTROMAGNETIC WAVES

Displacement current. Electromagnetic waves and their characteristics, Transverse nature of electromagnetic waves, Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet. X-rays. Gamma rays), Applications of e.m. waves.



UNIT 16: OPTICS

Reflection of light, spherical mirrors, mirror formula. Refraction of light at plane and spherical surfaces, thin lens formula, and lens maker formula. Total internal reflection and its applications. Magnification. Power of a Lens. Combination of thin lenses in contact. Refraction of light through a prism. Microscope and Astronomical Telescope (reflecting and refracting) and their magnifying powers.

Wave optics: wavefront and Huygens' principle. Laws of reflection and refraction using Huygens principle. Interference, Young's double-slit experiment, and expression for fringe width, coherent sources, and sustained interference of light. Diffraction due to a single slit, width of central maximum. Polarization, plane-polarized light: Brewster's law, uses of plane-polarized light and Polaroid.

UNIT 17: DUAL NATURE OF MATTER AND RADIATION

Dual nature of radiation. Photoelectric effect. Hertz and Lenard's observations; Einstein's photoelectric equation: particle nature of light. Matter waves-wave nature of particle, de Broglie relation.

UNIT 18: ATOMS AND NUCLEI

Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model, energy levels, hydrogen spectrum. Composition and size of nucleus, atomic masses, Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number, nuclear fission, and fusion.

UNIT 19: ELECTRONIC DEVICES

Semiconductors; semiconductor diode: I-V characteristics in forward and reverse bias; diode as a rectifier; I-V characteristics of LED. the photodiode, solar cell, and Zener diode; Zener diode as a voltage regulator. Logic gates (OR. AND. NOT. NAND and NOR).

UNIT 20: EXPERIMENTAL SKILLS

Familiarity with the basic approach and observations of the experiments and activities:

1. Vernier calipers -its use to measure the internal and external diameter and depth of a vessel.
2. Screw gauge-its use to determine the thickness/ diameter of thin sheet/wire.
3. Simple Pendulum-dissipation of energy by plotting a graph between the square of amplitude and time.
4. Metre Scale - the mass of a given object by the principle of moments.
5. Young's modulus of elasticity of the material of a metallic wire.
6. Surface tension of water by capillary rise and effect of detergents,
7. Co-efficient of Viscosity of a given viscous liquid by measuring the terminal velocity of a given spherical **body**,
8. Speed of sound in air at room temperature using a resonance tube,
9. Specific heat capacity of a given (i) solid and (ii) liquid by method of mixtures.
10. The resistivity of the material of a given wire using a metre bridge.
11. The resistance of a given wire using Ohm's law.



12. Resistance and figure of merit of a galvanometer by half deflection method.
13. The focal length of;
 - (i) Convex mirror
 - (ii) Concave mirror, and
 - (iii) Convex lens, using the parallax method.
14. The plot of the angle of deviation vs angle of incidence for a triangular prism.
15. The refractive index of a glass slab using a travelling microscope.
16. Characteristic curves of a p-n junction diode in forward and reverse bias.
17. Characteristic curves of a Zener diode and finding reverse break down voltage.
18. Identification of Diode. LED,. Resistor. A capacitor from a mixed collection of such items.

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CHEMISTRY

PHYSICAL CHEMISTRY

UNIT I: SOME BASIC CONCEPTS IN CHEMISTRY

Matter and its nature, Dalton's atomic theory: Concept of atom, molecule, element, and compound:: Laws of chemical combination; Atomic and molecular masses, mole concept, molar mass, percentage composition, empirical and molecular formulae: Chemical equations and stoichiometry.

UNIT 2: ATOMIC STRUCTURE

Nature of electromagnetic radiation, photoelectric effect; Spectrum of the hydrogen atom. Bohr model of a hydrogen atom - its postulates, derivation of the relations for the energy of the electron and radii of the different orbits, limitations of Bohr's model; Dual nature of matter, de Broglie's relationship. Heisenberg uncertainty principle. Elementary ideas of quantum mechanics, quantum mechanics, the quantum mechanical model of the atom, and its important features. Concept of atomic orbitals as one-electron wave functions: Variation of Ψ and Ψ^2 with r for 1s and 2s orbitals; various

quantum numbers (principal, angular momentum, and magnetic quantum numbers) and their significance; shapes of s, p, and d - orbitals, electron spin, and spin quantum number: Rules for filling electrons in orbitals – Aufbau principle. Pauli's exclusion principle and Hund's rule, electronic configuration of elements, and extra stability of half-filled and completely filled orbitals.

UNIT 3: CHEMICAL BONDING AND MOLECULAR STRUCTURE

Kossel-Lewis approach to chemical bond formation, the concept of ionic and covalent bonds.

Ionic Bonding: Formation of ionic bonds, factors affecting the formation of ionic bonds; calculation of lattice enthalpy.

Covalent Bonding: Concept of electronegativity. Fajan's rule, dipole moment: Valence Shell Electron Pair Repulsion (VSEPR) theory and shapes of simple molecules.

Quantum mechanical approach to covalent bonding: Valence bond theory - its important features, the concept of hybridization involving s, p, and d orbitals; Resonance.

Molecular Orbital Theory - Its important features. LCAOs, types of molecular orbitals (bonding, antibonding), sigma and pi-bonds, molecular orbital electronic configurations of homonuclear diatomic molecules, the concept of bond order, bond length, and bond energy.

Elementary idea of metallic bonding. Hydrogen bonding and its applications.

UNIT 4: CHEMICAL THERMODYNAMICS

Fundamentals of thermodynamics: System and surroundings, extensive and intensive properties, state functions, Entropy, types of processes.

The first law of thermodynamics - Concept of work, heat internal energy and enthalpy, heat capacity, molar heat capacity; Hess's law of constant heat summation; Enthalpies of bond



dissociation, combustion, formation, atomization, sublimation, phase transition, hydration, ionization, and solution.

The second law of thermodynamics - Spontaneity of processes; ΔS of the universe and ΔG of the system as criteria for spontaneity. ΔG° (Standard Gibbs energy change) and equilibrium constant.

UNIT 5: SOLUTIONS

Different methods for expressing the concentration of solution - molality, molarity, mole fraction, percentage (by volume and mass both), the vapour pressure of solutions and Raoult's Law - Ideal and non-ideal solutions, vapour pressure - composition, plots for ideal and non-ideal solutions; Colligative properties of dilute solutions - a relative lowering of vapour pressure, depression of freezing point, the elevation of boiling point and osmotic pressure; Determination of molecular mass using colligative properties; Abnormal value of molar mass, van't Hoff factor and its significance.

UNIT 6: EQUILIBRIUM

Meaning of equilibrium is the concept of dynamic equilibrium.

Equilibria involving physical processes: Solid-liquid, liquid-gas - gas and solid-gas equilibria, Henry's law. General characteristics of equilibrium involving physical processes.

Equilibrium involving chemical processes: Law of chemical equilibrium, equilibrium constants (K_p and K_c) and their significance, the significance of ΔG and ΔG° in chemical equilibrium, factors affecting equilibrium concentration, pressure, temperature, the effect of catalyst; Le Chatelier's principle.

Ionic equilibrium: Weak and strong electrolytes, ionization of electrolytes, various concepts of acids and bases (Arrhenius, Bronsted - Lowry and Lewis) and their ionization, acid-base equilibria (including multistage ionization) and ionization constants, ionization of water. pH scale, common ion effect, hydrolysis of salts and pH of their solutions, the solubility of sparingly soluble salts and solubility products, and buffer solutions.

UNIT 7: REDOX REACTIONS AND ELECTROCHEMISTRY

Electronic concepts of oxidation and reduction, redox reactions, oxidation number, rules for assigning oxidation number, and balancing of redox reactions.

Electrolytic and metallic conduction, conductance in electrolytic solutions, molar conductivities and their variation with concentration: Kohlrausch's law and its applications.

Electrochemical cells - Electrolytic and Galvanic cells, different types of electrodes, electrode potentials including standard electrode potential, half-cell and cell reactions, emf of a Galvanic cell and its measurement: Nernst equation and its applications; Relationship between cell potential and Gibbs' energy change: Dry cell and lead accumulator; Fuel cells.

UNIT 8: CHEMICAL KINETICS

Rate of a chemical reaction, factors affecting the rate of reactions: concentration, temperature, pressure, and catalyst; elementary and complex reactions, order and molecularity of reactions, rate law, rate constant and its units, differential and integral forms of zero and first-order



reactions, their characteristics and half-lives, the effect of temperature on the rate of reactions, Arrhenius theory, activation energy and its calculation, collision theory of bimolecular gaseous reactions (no derivation).

INORGANIC CHEMISTRY

UNIT 9: CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES

Modern periodic law and present form of the periodic table, s, p, d and f block elements, periodic trends in properties of elements atomic and ionic radii, ionization enthalpy, electron gain enthalpy, valence, oxidation states, and chemical reactivity.

UNIT 10: P- BLOCK ELEMENTS

Group -13 to Group 18 Elements

General Introduction: Electronic configuration and general trends in physical and chemical properties of elements across the periods and down the groups; unique behaviour of the first element in each group.

UNIT 11: d - and f- BLOCK ELEMENTS

Transition Elements

General introduction, electronic configuration, occurrence and characteristics, general trends in properties of the first-row transition elements - physical properties, ionization enthalpy, oxidation states, atomic radii, colour, catalytic behaviour, magnetic properties, complex formation, interstitial compounds, alloy formation; Preparation, properties, and uses of $K_2Cr_2O_7$, and $KMnO_4$.

Inner Transition Elements

Lanthanoids - Electronic configuration, oxidation states, and lanthanoid contraction.

Actinoids - Electronic configuration and oxidation states.

UNIT 12: CO-ORDINATION COMPOUNDS

Introduction to coordination compounds. Werner's theory; ligands, coordination number, denticity, chelation; IUPAC nomenclature of mononuclear co-ordination compounds, isomerism; Bonding-Valence bond approach and basic ideas of Crystal field theory, colour and magnetic properties; Importance of co-ordination compounds (in qualitative analysis, extraction of metals and in biological systems).

ORGANIC CHEMISTRY

UNIT 13: PURIFICATION AND CHARACTERISATION OF ORGANIC COMPOUNDS

Purification - Crystallization, sublimation, distillation, differential extraction, and chromatography - principles and their applications.

Qualitative analysis - Detection of nitrogen, sulphur, phosphorus, and halogens.



Quantitative analysis (basic principles only) - Estimation of carbon, hydrogen, nitrogen, halogens, sulphur, and phosphorus.

Calculations of empirical formulae and molecular formulae: Numerical problems in organic quantitative analysis,

UNIT 14: SOME BASIC PRINCIPLES OF ORGANIC CHEMISTRY

Tetravalency of carbon: Shapes of simple molecules - hybridization (s and p): Classification of organic compounds based on functional groups: and those containing halogens, oxygen, nitrogen, and sulphur; Homologous series: Isomerism - structural and stereoisomerism.

Nomenclature (Trivial and IUPAC)

Covalent bond fission - Homolytic and heterolytic: free radicals, carbocations, and carbanions; stability of carbocations and free radicals, electrophiles, and nucleophiles.

Electronic displacement in a covalent bond

- Inductive effect, electromeric effect, resonance, and hyperconjugation.

Common types of organic reactions- Substitution, addition, elimination, and rearrangement.

UNITS 15: HYDROCARBONS

Classification, isomerism, IUPAC nomenclature, general methods of preparation, properties, and reactions.

Alkanes - Conformations: Sawhorse and Newman projections (of ethane): Mechanism of halogenation of alkanes.

Alkenes - Geometrical isomerism: Mechanism of electrophilic addition: addition of hydrogen, halogens, water, hydrogen halides (Markownikoffs and peroxide effect): Ozonolysis and polymerization.

Alkynes - Acidic character: Addition of hydrogen, halogens, water, and hydrogen halides: Polymerization.

Aromatic hydrocarbons - Nomenclature, benzene - structure and aromaticity: Mechanism of electrophilic substitution: halogenation, nitration.

Friedel-Craft's alkylation and acylation, directive influence of the functional group in mono-substituted benzene.

UNIT 16: ORGANIC COMPOUNDS CONTAINING HALOGENS

General methods of preparation, properties, and reactions; Nature of C-X bond; Mechanisms of substitution reactions.

Uses; Environmental effects of chloroform, iodoform freons, and DDT.

UNIT 17: ORGANIC COMPOUNDS CONTAINING OXYGEN

General methods of preparation, properties, reactions, and uses.

ALCOHOLS, PHENOLS, AND ETHERS



Alcohols: Identification of primary, secondary, and tertiary alcohols: mechanism of dehydration.

Phenols: Acidic nature, electrophilic substitution reactions: halogenation, nitration and sulphonation. Reimer - Tiemann reaction.

Ethers: Structure.

Aldehyde and Ketones: Nature of carbonyl group; Nucleophilic addition to $>C=O$ group, relative reactivities of aldehydes and ketones; Important reactions such as - Nucleophilic addition reactions (addition of HCN, NH_3 , and its derivatives), Grignard reagent; oxidation: reduction (Wolf Kishner and Clemmensen); the acidity of α -hydrogen, aldol condensation, Cannizzaro reaction, Haloform reaction, Chemical tests to distinguish between aldehydes and Ketones.

Carboxylic Acids

Acidic strength and factors affecting it,

UNIT 18: ORGANIC COMPOUNDS CONTAINING NITROGEN

General methods of preparation. Properties, reactions, and uses.

Amines: Nomenclature, classification structure, basic character, and identification of primary, secondary, and tertiary amines and their basic character.

Diazonium Salts: Importance in synthetic organic chemistry.

UNIT 19: BIOMOLECULES

General introduction and importance of biomolecules.

CARBOHYDRATES - Classification; aldoses and ketoses: monosaccharides (glucose and fructose) and constituent monosaccharides of oligosaccharides (sucrose, lactose, and maltose).

PROTEINS - Elementary Idea of α -amino acids, peptide bond, polypeptides. Proteins: primary, secondary, tertiary, and quaternary structure (qualitative idea only), denaturation of proteins, enzymes.

VITAMINS – Classification and functions.

NUCLEIC ACIDS – Chemical constitution of DNA and RNA.

Biological functions of nucleic acids.

Hormones (General introduction)

UNIT 20: PRINCIPLES RELATED TO PRACTICAL CHEMISTRY

Detection of extra elements (Nitrogen, Sulphur, halogens) in organic compounds; Detection of the following functional groups; hydroxyl (alcoholic and phenolic), carbonyl (aldehyde and ketones) carboxyl, and amino groups in organic compounds.

- The chemistry involved in the preparation of the following:

Inorganic compounds; Mohr's salt, potash alum.



Organic compounds: Acetanilide, p-nitro acetanilide, aniline yellow, iodoform.

- The chemistry involved in the titrimetric exercises – Acids, bases, and the use of indicators, oxalic-acid vs KMnO_4 , Mohr's salt vs KMnO_4
- Chemical principles involved in the qualitative salt analysis:

Cations – Pb^{2+} , Cu^{2+} , Al^{3+} , Fe^{3+} , Zn^{2+} , Ni^{2+} , Ca^{2+} , Ba^{2+} , Mg^{2+} , NH_4^+

Anions- CO_3^{2-} , S^{2-} , SO_4^{2-} , NO_3^- , NO_2^- , Cl^- , Br^- , I^- (Insoluble salts excluded).

Chemical principles involved in the following experiments:

1. Enthalpy of solution of CuSO_4
2. Enthalpy of neutralization of strong acid and strong base.
3. Preparation of lyophilic and lyophobic sols.
4. Kinetic study of the reaction of iodide ions with hydrogen peroxide at room temperature.



**Syllabus for JEE (Main) Paper 2A (B.Arch.) - Mathematics, Aptitude Test, and Drawing
Test**

Part - I MATHEMATICS

UNIT 1: SETS, RELATIONS, AND FUNCTIONS:

Sets and their representation: Union, intersection, and complement of sets and their algebraic properties; Power set; Relation, Type of relations, equivalence relations, functions; one-one, into and onto functions, the composition of functions.

UNIT 2: COMPLEX NUMBERS AND QUADRATIC EQUATIONS:

Complex numbers as ordered pairs of reals, Representation of complex numbers in the form $a + ib$ and their representation in a plane, Argand diagram, algebra of complex number, modulus, and argument (or amplitude) of a complex number, Quadratic equations in real and complex number system and their solutions Relations between roots and co-efficient, nature of roots, the formation of quadratic equations with given roots.

UNIT 3: MATRICES AND DETERMINANTS:

Matrices, algebra of matrices, type of matrices, determinants, and matrices of order two and three, evaluation of determinants, area of triangles using determinants, Adjoint, and evaluation of inverse of a square matrix using determinants and, Test of consistency and solution of simultaneous linear equations in two or three variables using matrices.

UNIT 4: PERMUTATIONS AND COMBINATIONS:

The fundamental principle of counting, permutation as an arrangement and combination as section, Meaning of $P(n,r)$ and $C(n,r)$, simple applications.

UNIT 5: BINOMIAL THEOREM AND ITS SIMPLE APPLICATIONS:

Binomial theorem for a positive integral index, general term and middle term, and simple applications.

UNIT 6: SEQUENCE AND SERIES:

Arithmetic and Geometric progressions, insertion of arithmetic, geometric means between two given numbers, Relation between A.M and G.M.

UNIT 7: LIMIT, CONTINUITY, AND DIFFERENTIABILITY:

Real-valued functions, algebra of functions, polynomials, rational, trigonometric, logarithmic, and exponential functions, inverse function. Graphs of simple functions. Limits, continuity, and differentiability. Differentiation of the sum, difference, product, and quotient of two functions. Differentiation of trigonometric, inverse trigonometric, logarithmic, exponential, composite, and implicit functions; derivatives of order up to two, Applications of derivatives: Rate of change of quantities, monotonic-increasing and decreasing functions, Maxima and minima of functions of one variable,

**UNIT 8: INTEGRAL CALCULAS:**

Integral as an anti-derivative, Fundamental integral involving algebraic, trigonometric, exponential, and logarithms functions. Integrations by substitution, by parts, and by partial functions. Integration using trigonometric identities.

Evaluation of simple integrals of the type

$$\int \frac{dx}{x^2+a^2}, \int \frac{dx}{\sqrt{x^2 \pm a^2}}, \int \frac{dx}{a^2-x^2}, \int \frac{dx}{\sqrt{a^2-x^2}}, \int \frac{dx}{ax^2+bx+c}, \int \frac{dx}{\sqrt{ax^2+bx+c}}, \int \frac{(px+q)dx}{ax^2+bx+c},$$
$$\int \frac{(px+q)dx}{\sqrt{ax^2+bx+c}}, \int \sqrt{a^2 \pm x^2} dx, \int \sqrt{x^2 - a^2} dx$$

. The fundamental theorem of calculus, properties of definite integrals. Evaluation of definite integrals, determining areas of the regions bounded by simple curves in standard form.

UNIT 9: DIFFERENTIAL EQUATIONS

Ordinary differential equations, their order, and degree, the, solution of differential equation by the method of separation of variables, solution of a homogeneous and linear differential equation of the type

$$\frac{dy}{dx} + p(x)y = q(x)$$

UNIT 10: CO-ORDINATE GEOMETRY

Cartesian system of rectangular coordinates in a plane, distance formula, sections formula, locus, and its equation, the slope of a line, parallel and perpendicular lines, intercepts of a line on the coordinate axis.

Straight line

Various forms of equations of a line, intersection of lines, angles between two lines, conditions for concurrence of three lines, the distance of a point from a line, co-ordinate of the centroid, orthocentre, and circumcentre of a triangle,

Circle, conic sections

A standard form of equations of a circle, the general form of the equation of a circle, its radius and central, equation of a circle when the endpoints of a diameter are given, points of intersection of a line and a circle with the centre at the origin and sections of conics, equations of conic sections (parabola, ellipse, and hyperbola) in standard forms,

UNIT 11: THREE-DIMENSIONAL GEOMETRY

Coordinates of a point in space, the distance between two points, section formula, directions ratios, and direction cosines, and the angle between two intersecting lines. Skew lines, the shortest distance between them, and its equation. Equations of a line



UNIT 12: VECTOR ALGEBRA

Vectors and scalars, the addition of vectors, components of a vector in two dimensions and three-dimensional space, scalar and vector products,

UNIT 13: STATISTICS AND PROBABILITY

Measures of discretion; calculation of mean, median, mode of grouped and ungrouped data calculation of standard deviation, variance, and mean deviation for grouped and ungrouped data.

Probability: Probability of an event, addition and multiplication theorems of probability, Baye's theorem, probability distribution of a random variate,

UNIT 14: TRIGONOMETRY

Trigonometrical identities and trigonometrical functions, inverse trigonometrical functions, and their properties,

Part –II APTITUDE TEST

UNIT - 1 Awareness of persons. Buildings, Materials.

Objects, Texture related to Architecture and Build-environment, Visualizing three-dimensional objects from two-dimensional drawings. Visualizing. Different sides of three-dimensional objects. Analytical Reasoning Mental Ability (Visual. Numerical and Verbal)

UNIT – 2 Three dimensional- perception: Understanding and appreciation of scale and proportions of objects, building forms and elements, colour texture harmony and contrast Design and drawing of geometrical or abstract shapes and patterns in pencil. Transformation of forms both 2D and 3D union, subtraction rotation, development of surfaces and volumes, Generation of plans, elevations, and 3D views of objects, creating two-dimensional and three-dimensional compositions using given shapes and forms.

Part – III DRAWING TEST

Sketching of scenes and activities from memory of urbanscape (public space, market, festivals, street scenes, monuments, recreational spaces, etc.). landscape (riverfronts. Jungle. Gardens, trees. Plants, etc.) and rural life.

To be conducted in a Drawing sheet.

Note: Candidates are advised to bring pencils. Own geometry box set, crasets and colour pencils, and crayons for the Drawing Test



Syllabus for JEE (Main) Paper 2B (B.Planning.) - Mathematics, Aptitude Test, and Planning

Part - I MATHEMATICS

UNIT 1: SETS, RELATIONS, AND FUNCTIONS:

Sets and their representation: Union, intersection and complement of sets and their algebraic properties; Power set; Relation, Type of relations, equivalence relations, functions; one-one, into and onto functions, the composition of functions.

UNIT 2: COMPLEX NUMBERS AND QUADRATIC EQUATIONS:

Complex numbers as ordered pairs of reals, Representation of complex numbers in the form $a + ib$ and their representation in a plane, Argand diagram, algebra of complex number, modulus, and argument (or amplitude) of a complex number, Quadratic equations in real and complex number system and their solutions Relations between roots and co-efficient, nature of roots, the formation of quadratic equations with given roots.

UNIT 3: MATRICES AND DETERMINANTS:

Matrices, algebra of matrices, type of matrices, determinants, and matrices of order two and three, evaluation of determinants, area of triangles using determinants, Adjoint, and evaluation of inverse of a square matrix using determinants and, Test of consistency and solution of simultaneous linear equations in two or three variables using matrices.

UNIT 4: PERMUTATIONS AND COMBINATIONS:

The fundamental principle of counting, permutation as an arrangement and combination as section, Meaning of $P(n,r)$ and $C(n,r)$, simple applications.

UNIT 5: BINOMIAL THEOREM AND ITS SIMPLE APPLICATIONS:

Binomial theorem for a positive integral index, general term and middle term, and simple applications.

UNIT 6: SEQUENCE AND SERIES:

Arithmetic and Geometric progressions, insertion of arithmetic, geometric means between two given numbers, Relation between A.M and G.M.

UNIT 7: LIMIT, CONTINUITY, AND DIFFERENTIABILITY:

Real-valued functions, algebra of functions, polynomials, rational, trigonometric, logarithmic, and exponential functions, inverse function. Graphs of simple functions. Limits, continuity, and differentiability. Differentiation of the sum, difference, product, and quotient of two functions. Differentiation of trigonometric, inverse trigonometric, logarithmic, exponential, composite, and implicit functions; derivatives of order up to two, Applications of derivatives: Rate of change of quantities, monotonic-increasing and decreasing functions, Maxima and minima of functions of one variable,

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Integral as an anti-derivative, Fundamental integral involving algebraic, trigonometric, exponential, and logarithmic functions. Integrations by substitution, by parts, and by partial functions. Integration using trigonometric identities.

Evaluation of simple integrals of the type

$$\int \frac{dx}{x^2+a^2}, \int \frac{dx}{\sqrt{x^2 \pm a^2}}, \int \frac{dx}{a^2-x^2}, \int \frac{dx}{\sqrt{a^2-x^2}}, \int \frac{dx}{ax^2+bx+c}, \int \frac{dx}{\sqrt{ax^2+bx+c}}, \int \frac{(px+q)dx}{ax^2+bx+c},$$
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. The fundamental theorem of calculus, properties of definite integrals. Evaluation of definite integrals, determining areas of the regions bounded by simple curves in standard form.

UNIT 9: DIFFERENTIAL EQUATIONS

Ordinary differential equations, their order, and degree, the solution of differential equation by the method of separation of variables, solution of a homogeneous and linear differential equation of the type

$$\frac{dy}{dx} + p(x)y = q(x)$$

UNIT 10: CO-ORDINATE GEOMETRY

Cartesian system of rectangular coordinates in a plane, distance formula, sections formula, locus, and its equation, the slope of a line, parallel and perpendicular lines, intercepts of a line on the coordinate axis.

Straight line

Various forms of equations of a line, intersection of lines, angles between two lines, conditions for concurrence of three lines, the distance of a point from a line, co-ordinate of the centroid, orthocentre, and circumcentre of a triangle,

Circle, conic sections

A standard form of equations of a circle, the general form of the equation of a circle, its radius and central, equation of a circle when the endpoints of a diameter are given, points of intersection of a line and a circle with the centre at the origin and sections of conics, equations of conic sections (parabola, ellipse, and hyperbola) in standard forms,

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UNIT 12: VECTOR ALGEBRA

Vectors and scalars, the addition of vectors, components of a vector in two dimensions and three-dimensional space, scalar and vector products,

UNIT 13: STATISTICS AND PROBABILITY

Measures of discretion; calculation of mean, median, mode of grouped and ungrouped data calculation of standard deviation, variance, and mean deviation for grouped and ungrouped data.

Probability: Probability of an event, addition and multiplication theorems of probability, Baye's theorem, probability distribution of a random variate,

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UNIT - 1 Awareness of persons. Buildings, Materials, Objects, and Textures related to Architecture and Build-environment, Visualizing three-dimensional objects from two-dimensional drawings. Visualizing. Different sides of three-dimensional objects. Analytical Reasoning Mental Ability (Visual. Numerical and Verbal)

UNIT – 2 Three dimensional- perception: Understanding and appreciation of scale and proportions of objects, building forms and elements, colour texture harmony and contrast Design and drawing of geometrical or abstract shapes and patterns in pencil. Transformation of forms both 2D and 3D union, subtraction rotation, development of surfaces and volumes, Generation of plans, elevations, and 3D views of objects, creating two-dimensional and three-dimensional compositions using given shapes and forms.

Part – III PLANNING

UNIT-1 GENERAL AWARENESS

General knowledge questions and knowledge about prominent cities, development issues, government programs, etc.

UNIT-2 SOCIAL SCIENCES

The idea of nationalism, nationalism in India, pre-modern world, 19th-century global economy, colonialism, and colonial cities, industrialization, resources, and development, types of resources, agriculture, water, mineral resources, industries, national economy; Human Settlements

Power-sharing, federalism, political parties, democracy, the constitution of India



Economic development- economic sectors, globalization, the concept of development, poverty; Population structure, social exclusion, and inequality, urbanization, rural development, colonial cities,

UNIT-3 THINKING SKILLS

Comprehension (unseen passage); map reading skills, scale, distance, direction, area, etc.; critical reasoning; understanding of charts, graphs, and tables; basic concepts of statistics and quantitative reasoning.

National Testing Agency



Appendix – VII

Replica of Online Application Form of JEE (Main)-2024 Examination

National Testing Agency



Registration Details:

- Registration Number: 2024XXXX
- Registration Date: 2024-01-15

Personal Information:

- Name: [Redacted]
- Date of Birth: [Redacted]
- Sex: M
- Religion: H
- Category: OBC
- Parental Information:
 - Father's Name: [Redacted]
 - Mother's Name: [Redacted]
- Address: [Redacted]
- Phone Number: [Redacted]
- Mobile Number: [Redacted]
- Communication Address: [Redacted]
- Residential Address: [Redacted]
- Work Address: [Redacted]
- Home Address: [Redacted]

Exam Details:

- Exam Name: JEE (Main)
- Exam Type: Online
- Exam Mode: Offline
- Exam Category: Regular
- Exam Center: [Redacted]
- Exam Date: 2024-01-20
- Exam Time: 09:00 AM - 12:00 PM
- Exam Duration: 3 Hours
- Exam Language: English
- Exam Mode: Offline
- Exam Category: Regular
- Exam Center: [Redacted]
- Exam Date: 2024-01-20
- Exam Time: 09:00 AM - 12:00 PM
- Exam Duration: 3 Hours
- Exam Language: English

Payment Details:

- Registration Fee: ₹ 1000
- Exam Fee: ₹ 1000
- Total Fee: ₹ 2000
- Payment Status: Paid
- Payment Date: 2024-01-18

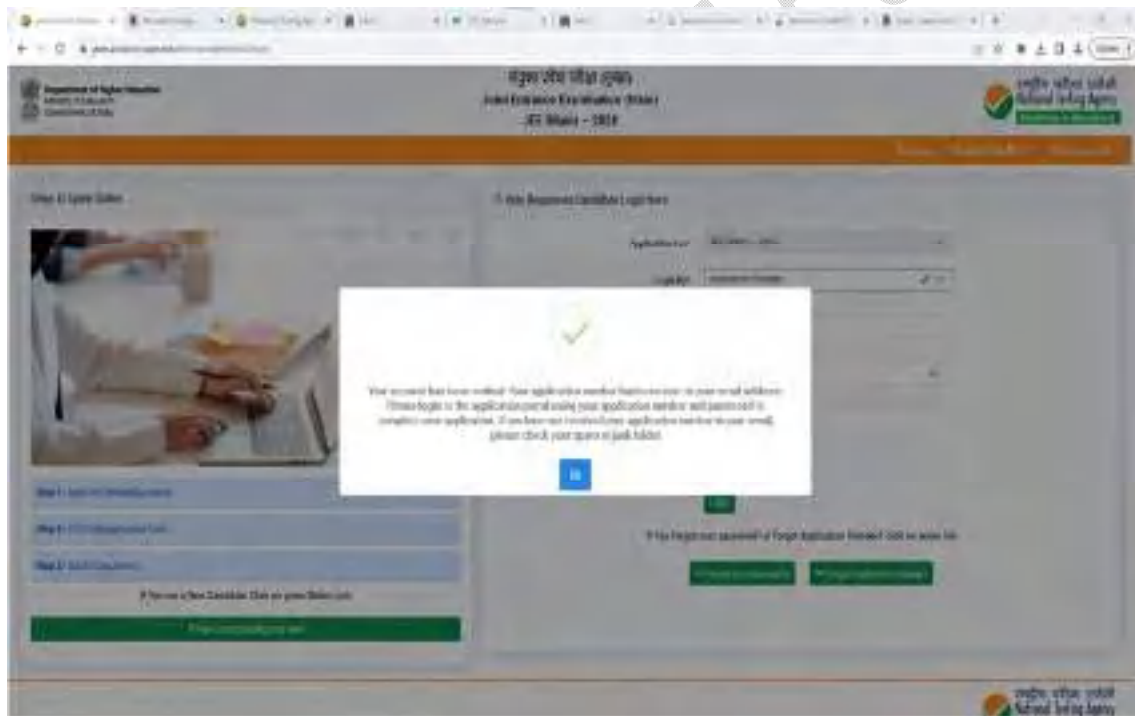
Final Confirmation:

I hereby confirm that the above information is true and correct.

Signature: [Redacted]

Date: 2024-01-20







Department of Higher Education
Ministry of Education
Government of India

योगी बिरा साहू
Joint Entrance Examination (Main)
JEE (Main) - 2024

योगी बिरा साहू
National Testing Agency

Steps to apply Online

- Step 1: Register on the Application
- Step 2: Upload the Application Form
- Step 3: Payment of Application Fee

Check Application of Candidate

Application Number: [Field]

Login ID: [Field]

Application Fee: [Field]

Fee Receipt No. & Date: [Field]

Security PIN: [Field]

Go to Application

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Joint Entrance Examination (Main)
JEE (Main) - 2024

योगी बिरा साहू
National Testing Agency

JEE (Main) - 2024

Registration Status

Registration	Complete
Application Form	Incomplete
Fee Payment	Incomplete

APPLICATION IN [Field] STATUS

Proceed to Application Form





The screenshot displays the 'PERSONAL DETAILS' section of the JEE Main 2024 application form. At the top, there is a progress bar and the title 'Joint Entrance Examination (Main) - 2024'. Below the progress bar, there are several input fields for personal information, including Name, Date of Birth, Gender, and Address. A table below these fields lists 'JEE Main 2024 Application Fees' with columns for 'Exam Name', 'Category', and 'Fee Amount'. A 'PAY' button is visible at the bottom right of the form.

Exam Name	Category	Fee Amount
JEE Main	General	₹1000
JEE Main	SC/ST	₹500
JEE Main	PwD	₹500
JEE Main	NTS	₹1000

The screenshot displays the 'PAYMENT APPLICATION' section of the JEE Main 2024 application form. It features a progress bar at the top and a table with the following columns: S.No., Applicant Name, Account Application Details, and Fee Amount. There are two entries in the table, both with a 'PAY' button next to them.

S.No.	Applicant Name	Account Application Details	Fee Amount
1	[Redacted]	[Redacted]	[Redacted]
2	[Redacted]	[Redacted]	[Redacted]





आवेदन सूची (Application)

पता (Address) : [Redacted]

संपर्क सूची (Emergency Contact Details Form)

नाम (Name) : [Redacted] पता (Address) : [Redacted]

दस्तावेज अपलोड (Documents upload)

क्र.सं. (S.No.)	प्रकार (Category)	विवरण (Details)
1	फोटो (Photo)	[Redacted]
2	संकेत (Signature)	[Redacted]

[Save]

Department of Higher Education, Ministry of Education, Government of India

एनटीए जॉइंट एंट्रेंस एग्जामिनेशन (Main) 2024

NTA National Testing Agency

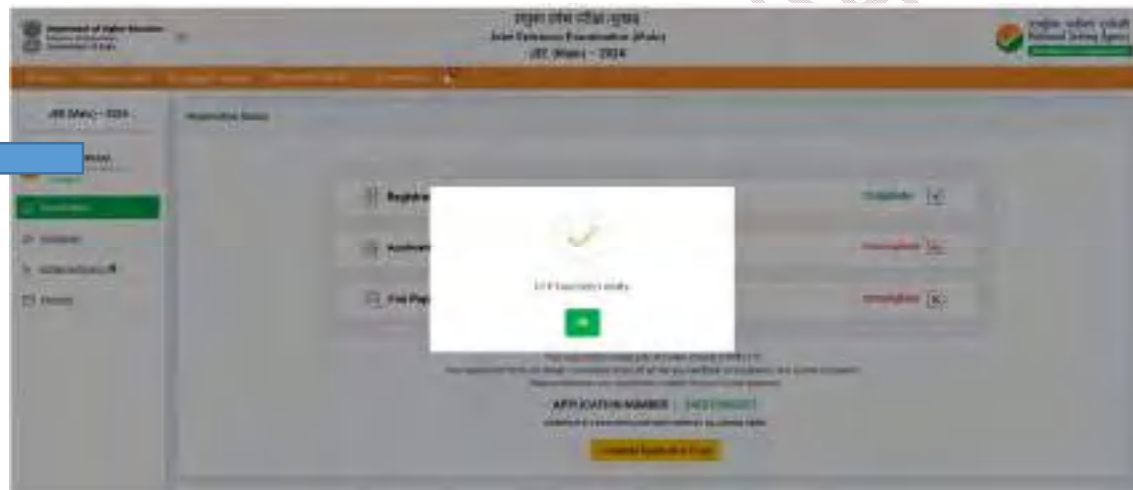
आवेदन सूची (Application Form)

नाम (Name) : [Redacted]

संपर्क सूची (Emergency Contact Details Form)

दस्तावेज अपलोड (Documents upload)

[Save]





Department of Higher Education
Ministry of Education
Government of India

Joint Entrance Examination (Main)
JEE (Main) - 2024

Joint Entrance Examination (Main)
JEE (Main) - 2024

Registration [Completed] [Check]

Application Form [Completed] [Check]

Fee Payment [Incomplete] [Check]

Go Home

Department of Higher Education
Ministry of Education
Government of India

Joint Entrance Examination (Main)
JEE (Main) - 2024

Joint Entrance Examination (Main)
JEE (Main) - 2024

Registration [Completed]

Application Form [Completed]

Payment [In Progress]

Name	Application Number	Amount
	1001000001	₹ 100

Go Home

Home | Index | Registration | Search | Add account | Payment details | Payment instructions | Payment receipt list | Payment rules

Department of Higher Education
Ministry of Education
Government of India

Joint Entrance Examination (Main)
JEE (Main) - 2024

Joint Entrance Examination (Main)
JEE (Main) - 2024

Registration [Completed]

Application Form [Completed]

Payment [In Progress]

Name	Application Number	Amount
	1001000001	₹ 100

Go Home





National Testing Agency



Department of Higher Education Ministry of Education Government of India		संयुक्त प्रवेश परीक्षा (मुख्य) Joint Entrance Examination (Main) JEE (Main) - 2024		राष्ट्रीय परीक्षा एजेंसी National Testing Agency Excellence in Assessment	
APPLICATION NUMBER		281			
DO NOT SEND THIS PAGE TO NATIONAL TESTING AGENCY (NTA).					
THE CANDIDATE IS REQUESTED TO RETAIN THE PRINTOUT OF THE CONFIRMATION PAGE FOR FUTURE REFERENCE.					
व्यक्तिगत ब्योरा (PERSONAL DETAILS)					
अभ्यर्थी का नाम (Candidate's Name)		TIK		अभ्यर्थी की जन्म तिथि (Candidate's Date of Birth)	
				19.01.1990	
माता / अभिभावक का नाम (Mother / Guardian Name)		MI		लिंग (Gender)	
				MALE	
पिता / अभिभावक का नाम (Father / Guardian Name)		AT		राष्ट्रियता (Nationality)	
				INDIAN	
श्रेणी (Category)		GENERAL			
निवास की जगह (Place of Residence)		RURAL			
वार्षिक वार्षिक आय (Annual Family Income)		300001-400000			
क्या आपको मधुमेह है ? (Are You Diabetic ?)		NO			
तैयारी का तरीका (Mode of Preparation)		SELF-STUDY			
योग्यता परीक्षा में स्कूली शिक्षा का माध्यम (Medium of schooling in qualifying exam)		NA			
के लिए आवेदन (Apply For)					
के लिए आवेदन (Apply For)		B.E./B.Tech			
पिता / अभिभावक व्यवसाय (Father / Guardian Occupation)		Engineering			
पिता / अभिभावक योग्यता (Father / Guardian Qualification)		Graduate			
माता / अभिभावक व्यवसाय (Mother / Guardian Occupation)		Engineering			
माता / अभिभावक योग्यता (Mother / Guardian Qualification)		Graduate			
प्रश्न पत्र माध्यम (Question Paper Medium)		English			
परीक्षा के सत्र के लिए आवेदन करें (Session Of Exam Apply For)		Session 1			
परीक्षा राज्य/शहर - पहली पसंद (Exam State/City - 1st Choice)		UTTAR PRADESH - AGRA			
परीक्षा राज्य/शहर - दूसरी पसंद (Exam State/City - 2nd Choice)		UTTAR PRADESH - GREATER NOIDA			
परीक्षा राज्य/शहर - तीसरी पसंद (Exam State/City - 3rd Choice)		UTTAR PRADESH - GHAZIPIUR			
परीक्षा राज्य/शहर - चौथी पसंद (Exam State/City - 4th Choice)		UTTAR PRADESH - FIROZABAD			
अतिरिक्त जानकारी (Additional Details)					
क्या आप जुड़वां हैं ? (Are You Twin ?)		NO			
वर्तमान पता (Present Address)					
परिसर संख्या/नाम (Premises No/ Name), उपस्थानीयता (Sub-Localty), स्थानीयता (Locality)		UTTAR PARDESH , MEERUT			
देश कोड (Country Code)		+91			
जिला (District), राज्य (State), देश (Country)		MEERUT , UTTAR PRADESH , INDIA			
स्थायी पता राज्य (Permanent Address State)					
राज्य (State)		UTTAR PRADESH			
उम्मीदवार द्वारा अपलोड की गई छवियां (IMAGES UPLOADED BY THE CANDIDATE)					
PHOTO					
SIGNATURE					
घोषणा (Declaration)					

I declare that information furnished by me in the application form is true in all respect and nothing is concealed. In case any entry or information is found to be false, this shall entail automatic cancellation of my admission besides rendering me liable to such actions as deemed fit by the University. I hereby undertake that I have carefully gone through the eligibility conditions prescribed in the prospectus for the programme. I am applying after satisfying that I meet the eligibility conditions. If at any stage it is found that I do not fulfill the minimum prescribed criteria, my admission, if granted, shall stand cancelled and I shall have no right to admission whatsoever.

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INFORMATION BULLETIN



National Testing Agency

(An autonomous organization under the Department of Higher Education, Ministry of Education, Government of India)

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First Floor, NSIC-MDBP Building,
Okhla Industrial Estate, New Delhi - 110020

Help Line: For Technical support, contact following during working days between 10.00 a.m. to 5.00 p.m.

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