



VIT®

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

VITEEE 2025

VIT ENGINEERING ENTRANCE
EXAMINATION

Prospectus

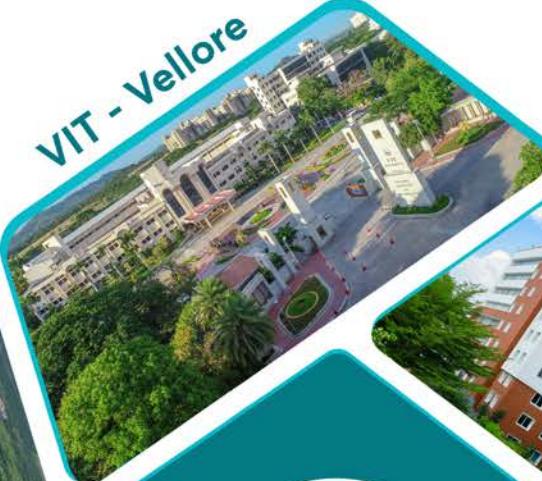
For Admission to B.Tech. Programmes of
VIT - Vellore | VIT - Chennai | VIT - AP | VIT - Bhopal | VIT - Mauritius



Sl. No.	CONTENTS
1.	About VIT
2.	Engineering programmes offered
3.	Eligibility
4.	Online Application Form
5.	Admission Process
6.	Queries and SMS/email tracking
7.	About VITEEE
8.	Salient Features of VITEEE-2025
9.	Result
10.	Counselling Procedure
11.	Document Submission for verification on admission
12.	Scholarship
13.	Fee structure
14.	Withdraw Procedure
15.	Refund Policy
16.	Campus Life
17.	Hostels
18.	Anti-ragging committee
19.	Important Dates
20.	Annexures



VIT - Vellore



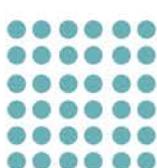
VIT - Chennai



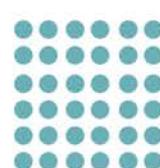
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VIT - Bhopal



VIT - Mauritius



1. About VIT

VIT (Vellore Institute of Technology), evolved from the former Vellore Engineering College during 1984 and conferred the status of a Deemed-to-be-University in the year 2001 by the Government of India under Sec. 3 of the UGC Act. During the three decades, VIT has emerged as an innovator in higher education, growing from 180 students to 67,000+ students. Today, VIT is amongst the most respected Universities in India, featuring top-ranked academic programmes. The principal campus of VIT is at Vellore, Tamil Nadu and off-campus at Chennai. VIT has its campuses at Amaravati, Andhra Pradesh; Bhopal, Madhya Pradesh. The latter two campuses are State Private Universities. VIT now has global footprints with a campus at the Republic of Mauritius in (Hons.) Engineering field. Eco-friendly in design and equipped with cutting-edge infrastructure, VIT provides a favorable atmosphere for learning and living. Quality in teaching-learning, futuristic research, and innovation are VIT's raison d'être. VIT adopts student-centric culture and places importance on quality and consistency in learning, teaching, and research experiences.



2. Programmes offered

CAMPUS-WISE PROGRAMMES IN COMMON

Programme	Vellore	Chennai	AP	Bhopal	Mauritius
B.Tech. Aerospace Engineering					✓
B.Tech. Bioengineering					✓
B.Tech. Biotechnology	✓				
B.Tech. Chemical Engineering	✓				
B.Tech. Civil Engineering	✓	✓			
B.Tech. Computer Science and Engineering	✓	✓	✓	✓	✓
B.Tech. Computer Science and Engineering (Artificial Intelligence and Machine Learning)	✓	✓	✓	✓	✓
B.Tech. Computer Science and Engineering (Artificial Intelligence and Robotics)		✓			
B.Tech. Computer Science and Engineering (Artificial Intelligence and Data Engineering)	✓				
B.Tech. Computer Science and Engineering (Bioinformatics)	✓				
B.Tech. Computer Science and Engineering (Block chain)				✓	
B.Tech. Computer Science and Engineering (Cloud Computing & Automation)					✓
B.Tech. Computer Science and Engineering (Cyber Physical Systems)		✓			
B.Tech. Computer Science and Engineering (Cyber Security & Digital Forensics)					✓
B.Tech. Computer Science and Engineering (Cyber Security)	✓	✓	✓		
B.Tech. Computer Science and Engineering (Data Analytics)			✓		
B.Tech. Computer Science and Engineering (Data Science)	✓	✓			
B.Tech. Computer Science & Engineering (E-Commerce Technology)					✓
B.Tech. Computer Science & Engineering (Education Technology)					✓
B.Tech. Computer Science and Engineering (Gaming Technology)					✓
B.Tech. Computer Science and Engineering (Health Informatics)					✓
B.Tech. Computer Science and Engineering (Software Engineering)				✓	
B.Tech. Computer Science and Engineering and Business Systems			✓	✓	
B.Tech. Computer Science and Engineering and Business Systems (in collaboration with TCS)	✓				
B.Tech. Electrical and Computer Science Engineering	✓	✓			
B.Tech. Electrical and Electronics Engineering	✓	✓			
B.Tech. Electronics and Communication Engineering	✓	✓	✓	✓	✓
B.Tech. Electronics and Communication Engineering (Artificial Intelligence & Cybernetics)					✓
B.Tech. Electronics and Communication Engineering (Biomedical Engineering)	✓				
B.Tech. Electronics and Communication Engineering (Embedded systems)			✓		
B.Tech. Electronics and Communication Engineering (VLSI)			✓		
B.Tech. Electronics and Computer Engineering			✓		
B.Tech. Electronics and Instrumentation Engineering	✓				
B.Tech. Electronics Engineering (VLSI Design and Technology)	✓	✓			
B.Tech. Fashion Technology		✓			
B.Tech. Health Sciences and Technology	✓				
B.Tech. Information Technology	✓				
B.Tech. Mechanical Engineering	✓	✓	✓	✓	✓
B.Tech. Mechanical Engineering (Artificial Intelligence & Robotics)					✓
B.Tech. Mechanical Engineering (Automotive Design)				✓	
B.Tech. Mechanical Engineering (Electric Vehicles)	✓	✓			
B.Tech. Mechanical Engineering (Smart Manufacturing)	✓				
B.Tech. Mechanical Engineering (Robotics)				✓	
B.Tech. Mechatronics and Automation		✓			
B.ENG. (HONS.) Civil Engineering					✓
B.ENG. (HONS.) Computer Engineering					✓
B.ENG. (HONS.) Computer Engineering with specialization in Artificial Intelligence and Machine Learning					✓
B.ENG. (HONS.) Computer Engineering with specialization in Data Science					✓

3. Eligibility

a. Nationality

- ◆ The applicant for VITEEE should be a Resident / Non-Resident Indian National/OCI/PIO Holder.
- ◆ NRI applicants can directly apply under 'NRI Category' through NRI application form. (<https://vit.ac.in/admissions/international/overview>). (Will be available shortly)
- ◆ Foreign applicants who studied/studying abroad can apply directly through the International application form. (Will be available shortly)

b. Age Limit

Candidates whose date of birth falls on or after 1st July 2003 are eligible to apply for VITEEE 2025. The date of birth as recorded in the High School Certificate will be considered authentic. Candidates who fail to produce this certificate in original as proof of their age at the time of counselling, shall stand disqualified.

c. Qualifying Examination

Candidates appearing for the VITEEE 2025 should have either completed or shall be appearing in 2025, in any one of the following qualifying examinations:

- 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 or any other Board accepted by VIT as equivalent to 10+2 examination.
 - ii. Intermediate or two-year Pre-University Examination conducted by a recognized Board/University.
 - iii. General Certificate Education (GCE) examination (London/Cambridge/Sri Lanka) at the Advanced (A) level.
 - iv. High School Certificate Examination of the Cambridge University or International Baccalaureate Diploma of the International Baccalaureate Office, Geneva. (Physics & Mathematics - HL, Chemistry - SL)
 - v. Senior Secondary School Examination conducted by the National Institute of Open Schooling with minimum of 5 subjects as recognized by central board
 - vi. Applicants who have completed the Class 12 (or equivalent) examination outside India should produce an equivalence certificate to the effect that the examination they have passed is equivalent to the Class 12 Examination with grade/CGPA converted to percentage.
- ◆ Candidates who have studied in Regular, Full Time and Formal Education are alone eligible to apply.
 - ◆ For Indian nationals attending VITEEE 2025 is mandatory to be eligible for B. Tech. admission.
 - ◆ In case VITEEE 2025 gets cancelled due to natural calamities or causes beyond the control of the Institute, qualifying criteria may be substituted with higher secondary marks. Applicants shall be informed accordingly.

d. Requirement in the Qualifying Examination

- ◆ Applicants should be qualified for admission to collegiate education.
- ◆ Applicants applying for the Undergraduate Engineering admission in 2025 should have passed with minimum aggregate of 60% in Physics(P), Chemistry(C), and Mathematics(M) / Biology(B) (PCM/PCB) in the qualifying examination (+2/Intermediate).
- ◆ Applicants applying for the Undergraduate Engineering admission in 2025 should have passed with minimum aggregate of 50% in Physics(P), Chemistry(C), and Mathematics(M) / Biology(B) in the qualifying examination (+2/Intermediate) for the following categories:
 - ◆ Applicants belonging to SC/ST
 - ◆ Applicants hailing from Jammu and Kashmir/ Ladakh and the Northeastern states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. Certificate to prove community / nativity should be produced at the time of counselling, failing which they will not be considered for admission.

**e. Subject Eligibility**

- ◆ PCMB/PCM applicants who have attempted Mathematics, Physics, Chemistry, English and Aptitude (MPCEA) in VITEEE 2025 are eligible for all B. Tech Programmes.
- ◆ PCMB/PCB applicants who have attempted Biology, Physics, Chemistry, English and Aptitude (BPCEA) in VITEEE 2025 & PCB applicants who have attempted Mathematics, Physics, Chemistry, English and Aptitude (MPCEA) in VITEEE 2025 are eligible only for the following programmes :
 - ◆ B.Tech. Biotechnology (VIT, Vellore)
 - ◆ B.Tech. Computer Science and Engineering (Bioinformatics), (VIT - Vellore)
 - ◆ B.Tech. Electronics and Communication Engineering (Biomedical Engineering), (VIT - Vellore)
 - ◆ B.Tech. Bioengineering (VIT - Bhopal)
 - ◆ B.Tech. Computer Science and Engineering (Health Informatics), (VIT - Bhopal)
 - ◆ B.Tech. Health Sciences and Technology (VIT - Vellore)

f. 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 VITEEE 2025. 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 who have appeared for multiple board examinations in the same academic year are not eligible.

4. Online Application Form

The B.Tech Admission Application Form is available online at www.vithee.vit.ac.in. The cost of the Application Form is Rs. 1,350 /- (**Non-Refundable**).

4.1. Guidelines for filling up the application form**Step 1:****4.1.1. New User Registration**

- ◆ Valid e-mail address and active mobile number are required. Enter all the relevant details carefully.
- ◆ An OTP will be sent to your Registered Indian Mobile Number for verification. Once OTP is validated, a password will be sent to your registered email address.
- ◆ All the correspondence shall be made to the registered email address and mobile number only

Step 2:**4.1.2. Sign-in for Registered Users**

- ◆ Valid e-mail address and active mobile number are required

Step 3:**4.1.3. Filling online application form**

- ◆ It is mandatory that the applicant should read the content of declaration and acknowledge the same before proceeding to fill the application form. In case of any discrepancy on the details provided on the application form and submission of supporting documents at the time of



- application/ counselling/admission, the candidature will be cancelled and no fee will be refunded.
- ◆ Fill in the relevant fields carefully. An Application Number will be generated after filling primary details.
 - ◆ The list of Boards along with respective code is listed out in the Annexure. The Board code of study in the qualifying examination should be mentioned accurately. In case of any discrepancy in the board filling on the application form and submission of relevant document at the time of admission will lead to cancellation of admission.
 - ◆ Refer this application number in all your future correspondence

Step 4:**4.1.4. Payment**

- ◆ Application cost of Rs.1350 should be paid through Net Banking / Credit Card / Debit Card / Paytm
- ◆ For test centers abroad, the fee to be paid is the equivalent of USD 90 in INR.

Note : Application cost is non-refundable**Step 5:****4.1.5. Photo and Signature Upload**

The photograph must be in color and should be taken professionally in a studio with the following specifications:

- ◆ The photograph must have been taken against a light background. Only White/off-white background is preferred.
- ◆ The photograph must show the full-frontal view without tilting the face, both ears visible, open eyes with neutral expression.
- ◆ Make sure there is no glare from spectacles and no blur in the focus. The file should be only in JPEG format.
- ◆ The file size of the photograph should be within 20 kB to 300 kB.
- ◆ The photograph dimension should be Width (300 to 400 pixels) X Height (400 to 550 pixels).
- ◆ The photograph should not be too dark or too bright but should have optimum exposure. The photograph should have only one face.

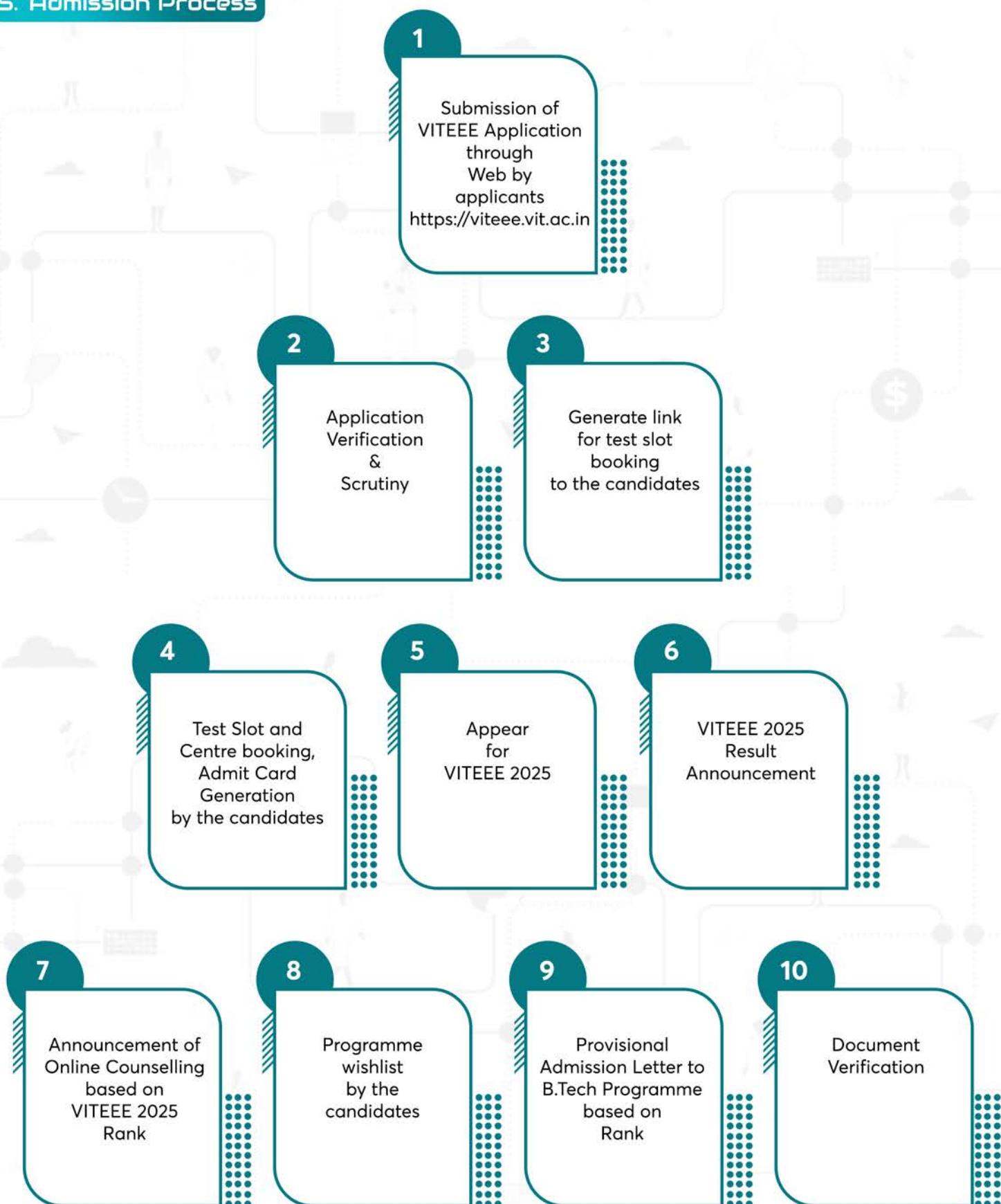
Signature uploading procedure:

- ◆ Please draw a rectangular box of size 6 cm (width) X 2 cm (height) on a A4 white paper. Sign with dark blue or black pen within the box.
- ◆ Scan the signature in (.jpeg) format using scanner and crop the image.
- ◆ You can open the scanned signature image with MS Paint and crop the image at the particular rectangular box which was already marked and signed on the A4 white paper. While cropping the image make sure that the dimension should be 3.5 cm (width) X 1.5 cm (height).
- ◆ The scanned signature image size should be within 5 kB to 150 kB.

Step 5:**4.1.6. Download filled-in application form**

- ◆ Download and save the filled-in application for your reference and further correspondence.
- ◆ Applicants NEED NOT SEND hard copy of the filled-in application form to VIT.

Note: Edit option will be made available after completion of application process. Edit option can be utilized, within the prescribed date.

**S. Admission Process**

If at any point of time, the candidates does not fulfil the eligibility as per norms, the admission accorded will be cancelled



6. Queries and SMS/email Tracking

6.1 Queries

Candidates can utilize the Need help tab in the application portal for any queries relating to application form filling.

6.2 SMS/ email Tracking

- ◆ Application number will be generated immediately after providing the primary details.
- ◆ Messages/ E-Mail will be sent to all applicants found incomplete till payment stage.
- ◆ Once the application is completed as per the requirement, a message will be triggered to the student mobile/ E-Mail that the application is successful in all respects.

7. About VITEEE

Vellore Institute of Technology Engineering Entrance Examination (VITEEE) is conducted for admission to undergraduate engineering programmes in VIT group of Institutions. VITEEE will be conducted between 21st and 27th April 2025 (tentatively) at designated centres across India and abroad (No.of days will vary for test cities). The duration of the examination will be 2 hours and 30 minutes. Candidates can appear only once for VITEEE. All questions will be Multiple Choice Questions and one mark for the right answer and zero for the wrong answer. Those who score '0' in total will be declared as "Not qualified" and will not be eligible to participate in the counselling process. There will be a total of 125 questions divided into the section Maths/Biology (40 questions), Physics (35 questions), Chemistry (35 questions), Aptitude (10 questions), and English (5 questions). The question paper will be in English only. The fee towards application and subsequent counselling is non-refundable. The detailed syllabus is available in Annexure / also at www.viteee.vit.ac.in. The method of equi-percentile is adopted for the rank list preparation of VITEEE-Computer Based Examination.

7.1. Pattern of the Entrance Examination

a. Question Paper

- ◆ All Questions will be of **Multiple Choice Question (MCQ)** with the following sections.
 - ◆ Mathematics / Biology
 - ◆ Physics
 - ◆ Chemistry
 - ◆ English
 - ◆ Aptitude
- ◆ Each question is followed by 4 choices. The candidate should choose only one choice and submit the same.
- ◆ **No negative marks for wrong answers.**
- ◆ The Question paper will be in English only.
- ◆ **Mock/Demo Test:** A mock test will be available to the candidates on the website www.vit.ac.in. This is mainly designed to provide the candidates awareness of the procedure and to familiarize them to the various components of the exam. The mock test will give the candidate an idea of all the features of the entrance test.
- ◆ **Refer the Annexure for Syllabus.**



7.2. Test Cities

Andaman and Nicobar Islands

Sri Vijaya Puram (Port Blair)

Andhra Pradesh

Amaravati (AP), Anantapur, Eluru,
Kurnool, Nellore, Rajamahendravaram,
Srikakulam, Tanuku, Tirupati, Visakhapatnam

Arunachal Pradesh

Itanagar

Assam

Dibrugarh, Guwahati,
Silchar

Bihar

Bhagalpur, Gaya, Muzaffarpur,
Patna

Chandigarh

Chandigarh

Chhattisgarh

Bhilai, Bilaspur, Raipur

Delhi

Delhi

Goa

Assagao

Gujarat

Ahmedabad, Jamnagar, Rajkot,
Surat, Vadodara

Haryana

Faridabad, Gurugram, Hisar,
Kurukshetra

Himachal Pradesh

Dharamshala, Shimla

Jammu & Kashmir

Jammu, Srinagar

Jharkhand

Bokaro, Dhanbad, Jamshedpur,
Ranchi

Karnataka

Bengaluru, Hubbali, Mangaluru, Mysuru

Kerala

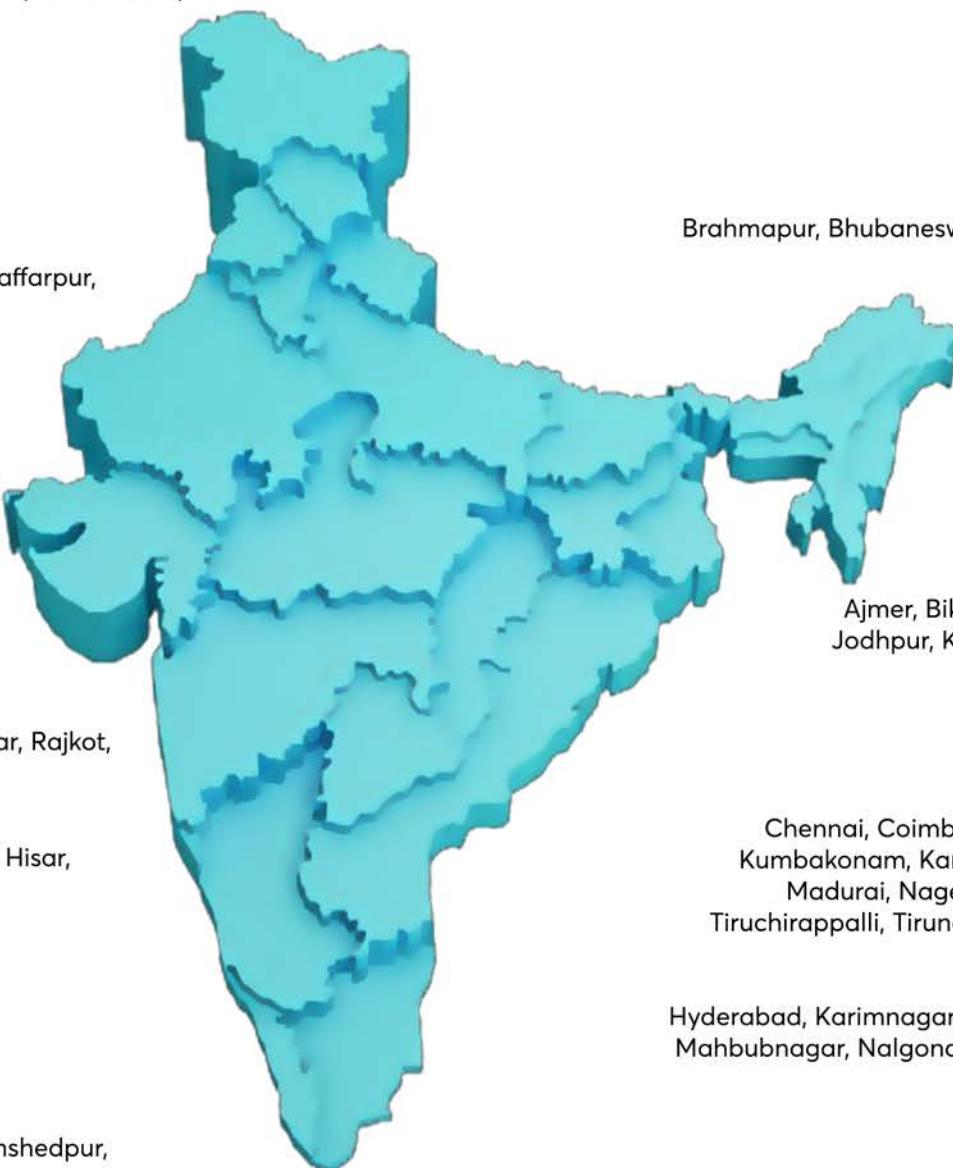
Kochi, Kozhikode, Thiruvananthapuram, Thrissur

Madhya Pradesh

Bhopal, Gwalior, Jabalpur

Maharashtra

Amravati, Chhatrapati Sambhaji Nagar (Aurangabad),
Latur, Mumbai, Nagpur, Nashik, Pune, Solapur, Thane



Manipur
Imphal

Meghalaya
Shillong

Mizoram
Aizawl

Nagaland
Dimapur

Odisha
Brahmapur, Bhubaneswar, Rourkela

Puducherry
Puducherry

Punjab
Amritsar,
Bathinda,
Jalndhar,
Ludhiana

Rajasthan
Ajmer, Bikaner, Jaipur,
Jodhpur, Kota, Udaipur

Sikkim
Gangtok

Tamil Nadu
Chennai, Coimbatore, Erode,
Kumbakonam, Kancheepuram,
Madurai, Nagercoil, Salem,
Tiruchirappalli, Tirunelveli, Vellore

Telangana
Hyderabad, Karimnagar, Khammam,
Mahbubnagar, Nalgonda, Warangal

Tripura
Agartala

Uttar Pradesh
Agra, Aligarh, Bareilly, Gorakhpur, Ghaziabad,
Jhansi, Kanpur, Lucknow, Mathura, Meerut,
Moradabad, Prayagraj, Noida, Raebareli,
Saharanpur, Varanasi

Uttarakhand
Dehradun, Pantnagar, Roorkee

West Bengal
Durgapur, Kolkata, Siliguri, Asansol

Abroad Test cities

UAE - Dubai, **Kuwait** - Kuwait, **Oman** - Muscat, **Qatar** - Qatar, **Malaysia** - Kuala Lumpur, **Singapore** - Singapore



8. Salient Features of VITEEE 2025

8.1 Online Test Booking System

1. Online Test booking system is a web based online scheduling system will be available www.vit.ac.in.
2. Candidates should first choose the Test City (This should be the same as the one chosen on the application form) the date and the session viz. slot.
3. The slots are booked by 'first-come-first-served' basis and are subject to the availability of the date and time.

8.2. Online Test Booking Password

- ◆ The password will be sent by email, to the email address mentioned on the application form. Therefore, it is mandatory to give a valid e-mail address
- ◆ VIT will not be responsible for non-receipt of the e-mail, if the email address given is incomplete or incorrect or delivery to spam / junk folder.
- ◆ The security of your Online Test Booking Password is totally your responsibility. VIT will not be held accountable or responsible for any claim or loss that results directly or indirectly from any unauthorized use or misuse of your online test booking password.
- ◆ The Online Test Booking Password must be kept confidential. Do not disclose it to others or write them down or store them in a file on your computer or as auto save password.
- ◆ Your Online Test Booking Password is required only for the purpose of booking a schedule given by the Institute. Please note that the online test booking system will not allow the candidates to book a slot after the date of booking ends.

8.3. Online Test Booking Procedure

- ◆ A slot once booked cannot be changed. Request for change of test city, date, slot and subject will not be entertained under any circumstances.
- ◆ The online test booking system is available only for those eligible candidates who have submitted the application form complete in all respects on or before the last date mentioned.
- ◆ It is the responsibility of the candidates to book their test schedule in the ONLINE TEST BOOKING SYSTEM within the stipulated time. VIT will not be held accountable for the non-bookings.
- ◆ The application fee will not be refunded, if the candidate fails to book slot or absent to the test.
- ◆ The confirmation mail will be sent automatically to the candidate's email address after he / she has booked his / her schedule through the Online Test Booking System.
- ◆ Once the booking is complete, the booking confirmation form will be generated and forwarded to your registered email.
- ◆ The e-admit card can be downloaded in 48 hours prior to the exam schedule.

8.4. e-Admit card

Instructions to be followed

- ◆ Booking confirmation (Not an e-admit card) slip will be generated once the candidate has booked his/her schedule through the Online Test Booking System. This form is only to indicate the confirmation of test city, date, time and subject.
- ◆ The booking confirmation slip will be auto-generated for only those candidates who book a slot using the Online Test Booking system before the last date. For those who have not booked, slots will be generated based on the information given on the application form and availability of the slot.
- ◆ The actual e-Admit card with address of the test venue will be available for the download in the OTBS before 48 hours of booked schedule.
- ◆ The e-Admit card will indicate the application number, photograph of the student, address of the test centre, test date and time selected by the candidate. Discrepancies, if any, must be brought to the notice of VIT immediately.
- ◆ The copy of the e-Admit card will also be emailed to the candidate.
- ◆ Candidates must provide a valid email address in the application form. The e-Admit card will not be despatched to candidates via post or fax.



- ◆ Candidates should take a print out of the e-Admit card using the print option on A4 size paper only. Please ensure that all information on the e-Admit card including photograph are clearly visible on the print out.
- ◆ Candidates will not be permitted to appear for the test without valid e-Admit card.
- ◆ Candidates should not mutilate the e-Admit card or change any entry made therein after it has been authenticated and received by them. Impersonation is a legally punishable offence.
- ◆ The e-Admit card is an important document and it must be preserved and produced at the time of examination / counselling / admission.

Candidates will not be allowed to attend the test, without the following documents. Candidate should report to the test centre with the physical copy:

- i. e-Admit card
 - ii. Any one of the following for photo identification.
 - ◆ School or college Photo ID card / Twelfth Standard board exam hall ticket (or) admit card bearing photo/ Masked Aadhar Card / Passport / Driving License / Voter ID card / IT Pan Card
- ◆ Admit card will not be processed if the application is incomplete in any respect.
 - ◆ In the case of an eligible candidate, whose application form is incomplete (For eg. Declaration not signed, photograph not affixed on the application form, address not clearly written, invalid e-mail address etc.,) the application will not be processed for the issue of an Admit Card. VIT does not take the responsibility to inform such candidates
 - ◆ Candidates are not permitted to appear more than once either in the same subject or another subject by duplicate application. Any attempt more than once will result in the disqualification of candidacy
 - ◆ Candidate will be tested on the subject chosen in the application form and mentioned in the e-admit card. No changes in the subject chosen during application will be entertained.

8.5. At the Exam Centre

- ◆ Electronic devices like calculators, tables, side ruler, pager and cellular phones are not allowed in the exam hall
- ◆ Biometric registration is a part of attendance and hall ticket verification process and VIT reserves the right to carry out the same either before or during the examination or both.
- ◆ Candidates who do not co-operate during the bio - metric registration process will not be allowed to take the examination and VIT reserves the right to disqualify such candidates. Biometric authentication will be carried out again for the shortlisted candidates during the admission.
- ◆ Students will be monitored through CCTV camera Individually.
- ◆ Candidates are not allowed to carry any items other than the documents mentioned in information brochure to the examination hall. VIT will not be responsible for any loss of valuables.

8.6. Features of Computer Based Test

- ◆ Each computer node for the candidate is connected to a central server which delivers the encrypted test in real time through a secure and reliable connection.
- ◆ Questions will be in English and will appear one by one randomly.
- ◆ All questions are multiple choice questions (MCQ). Each question has a body and four responses labelled A, B, C and D. Only one of the four responses is correct. Candidate should select only one among four choices. Candidates can navigate freely back and forth, through the questions. No negative marking for wrong answers.
- ◆ The number of examination days will be determined based on the total number of applications received and the test centres will be given as chosen by the candidates in the application form.
- ◆ VIT reserves the right to reschedule the examination for a candidate. The candidate will not be charged any additional entrance exam fee if the re-schedule is initiated by VIT. However, the candidate should make his / her own arrangements at his / her cost similar to the original schedule to take the test on the revised date.



8.7. Code of Conduct

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

- ◆ Being in possession of any item or article which has been prohibited or can be used for unfair practices including any stationery item, electronic gadgets, food or any other material or information relevant or not relevant to the examination.
- ◆ Using someone to write examination (impersonation) or preparing material for copying.
- ◆ Assisting other candidate to engage in malpractices, giving or receiving assistance directly or indirectly of any kind or attempting to do so.
- ◆ Writing questions or answers on the rough sheet / hall ticket is prohibited. Rough sheet is only for the rough work and should be handed over to the invigilators after the examination.
- ◆ Contacting or communicating or trying to do so with any person, other than the invigilator/ Chief Superintendent during the examination time in the Examination Centre.
- ◆ Exchange of any physical materials with other candidates.
- ◆ Approaching Invigilator /Test centre people proposing unfair means is also malpractice.
- ◆ Threatening/Arguing with any of the officials connected with the conduct of the examination or threatening any of the candidates.
- ◆ Using or attempting to use any other method or means to get unfair advantage.
- ◆ Forceful entry in /exit from Examination Centre/Hall
- ◆ Affixing/uploading of wrong/morphed photographs/signatures on the Application Form/Admit Card etc.,)
- ◆ Breaching examination rules or any direction issued by VIT in connection with VITEEE 2025 examination from time to time

Punishment for Malpractices:

- ◆ Cancellation of Result during, 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 Malpractice case.
- ◆ The candidate would be disqualified from VITEEE 2025 and shall also be liable for criminal action and /or any other action as deemed fit.

Candidates should submit only one application to appear for the VITEEE. Any attempt more than once will result in the disqualification of candidacy

9. Result

- ◆ A rank list will be prepared based on the percentile secured in VITEEE 2025.
- ◆ Since the final ranks are determined with extreme care, there is no provision for re-ranking and re-totaling. Neither the raw score of the candidate nor the photocopies of the answer sheets will be provided. Correspondence in this regard will not be entertained.
- ◆ VIT has the right to hold the rank and cancel the candidacy of the candidates appearing more than once, impersonation, or any mal practice at the time of giving the exam.

9.1. Equating Methodology

Equating is a statistical process that is used to adjust scores on test forms (that are approximately equivalent) so that scores on the forms can be used interchangeably. Thus, equating is used to adjust scores of candidates who have taken different forms of a test, in order to facilitate meaningful and fair comparison for merit list and ranking of these candidates. The statistical procedure of Equipercentile Equating will be used by VIT to calculate the percentile ranks of candidates, such that scores on different forms with the same percentile rank are considered to be equivalent. Thus, Percentile Rank is a unique and invariant position of the test taker in that group. A Percentile Rank, say 90 Percentile Rank denotes that there are 90 percent of test takers who have scored below this score level and 10 percent above this test score. Equipercentile method is followed for ranking. Candidates are advised not to make assumptions and predictions of their course or rank based on their own estimates of raw scores or past data.



10. Counselling Procedure

- ◆ Selection is based on the rank secured through CBT (Computer Based Test) VITEEE 2025.
- ◆ Selected candidates can participate in online counselling based on their ranking. They can give options for specific campus, programme and category of fees. Allotment will be based on the rank obtained, preference given and availability during online counselling.
- ◆ Candidates with rank Upto 1 Lakh are eligible for counselling to all the four campuses, VIT - Vellore, VIT - Chennai, VIT - AP and VIT - Bhopal. Rank holders above 1 lakh are eligible for counselling to VIT - AP, VIT - Bhopal campuses only.
- ◆ Candidates are required to upload the higher secondary examination hall ticket to download the provisional admission letter after remittance of tuition fee.
- ◆ VIT will verify the eligibility of candidates after completing the tuition fee payment. Candidates are required to produce documents on the day of reporting to the campus or as and when asked for, by the Office of Admissions. Provisional Admission offered during counselling will be valid ONLY if the eligibility is fulfilled.
- ◆ The counselling process is common for VIT group of Institutions. The online counselling will be held in five phases. The rank, schedule, choice entry will be available in the counselling portal.
- ◆ A non-refundable counselling fee of Rs.5,900/- is required to participate in the counselling process.
- ◆ The applicants who fail to appear in their phase of counselling are eligible to appear in next phase, but limited to available choices in that phase.
- ◆ Applicants may select campus / programme / fee category. The allotment will be based on VITEEE Rank. Once the required fee is paid through online portal after confirmation of allotment, provisional admission letter will be available in portal.
- ◆ Once allotted campus / programme / fee category cannot be changed.

11. Document submission For verification on Admission

Original Documents:

- ◆ Copy of Provisional Letter
- ◆ XII Mark statements of all attempts of qualifying examination
- ◆ Transfer Certificate / School leaving Certificate
- ◆ Migration Certificate (if issued by the board)
- ◆ Student Profile (<https://admissions.vit.ac.in/freshersportal/login>) – (Signed by Student & Parent)
- ◆ Affidavit by the Student (https://vit.ac.in/files/admissions/Affidavit_Student.pdf) – (Signed & Notarized)
- ◆ Affidavit by the Parent (https://vit.ac.in/files/admissions/Affidavit_Parent.pdf) - (Signed & Notarized)
- ◆ Hostel Affidavit (<https://vit.ac.in/campuslife/hostels>) - (Signed by Notarized)
- ◆ Physical Fitness (https://vit.ac.in/files/admissions/PhysicalFitness_Certificate.pdf) - (Certified by authorized Physician)
- ◆ Undertaking form (<https://vit.ac.in/sites/default/files/Undertaking.pdf>) - (Signed by Student & Parent) Recent passport size colour photos – 2 Nos.

Copy of documents (1 set) :

- ◆ Aadhar card / Age proof certificate X & XII mark sheet
- ◆ Transfer Certificate/School Leaving Certificate Migration Certificate
- ◆ Community Certificate (For SC/ST only)
- ◆ Nativity Certificate (For candidates hailing from Jammu and Kashmir, Ladakh and the North Eastern states)

Note:

- ◆ All copies of documents will be archived and will not be returned for any reason.
- ◆ The candidate should submit the qualifying mark statement from the board studied as mentioned on the VITEEE application form for verification of genuineness at the time of admission. In case of submission of any fraudulent, incompetent certificate by the applicant will be lead to legal action and the admission accorded will be duly cancelled and no refund will be initiated.
- ◆ The qualifying examination mark statement submitted by the candidate will be verified from the respective board.

**12. Scholarship*****VITEEE-GVSDP SCHOLARSHIP**

PERFORMANCE	SCHOLARSHIP
VITEEE rank holders of 1 to 10	100% Tuition fee waiver for all the four years.
VITEEE rank holders of 11 to 50	75% Tuition fee waiver for all the four years.
VITEEE rank holders of 51 to 100	50% Tuition fee waiver for all the four years.
VITEEE rank holders of 101 to 500	25% Tuition fee waiver for all the four years.

*Terms and conditions apply

13. Fee Structure

PARTICULARS	GROUP-A	GROUP-B
Tuition Fees	173000	195000
Caution Deposit	3000	3000
Total	176000	198000

Note : VIT Bhopal Rs.3000 additional include in Group-B Tuition fees.

Group – A PROGRAMMES

Bioengineering	Chemical Engineering	Electrical and Electronics Engineering	Fashion Technology
Biotechnology	Civil Engineering	Electronics and Instrumentation Engineering	Health Sciences and Technology

Group – B PROGRAMMES

Aerospace Engineering	Computer Science and Engineering (Software Engineering)
Computer Science & Engineering (E-Commerce Technology)	Computer Science and Engineering and Business Systems
Computer Science & Engineering (Education Technology)	Computer Science and Engineering and Business Systems (in collaboration with TCS)
Computer Science and Engineering	Electrical and Computer Science Engineering
Computer Science and Engineering (Artificial Intelligence and Machine Learning)	Electronics and Communication Engineering
Computer Science and Engineering (Artificial Intelligence and Robotics)	Electronics and Communication Engineering (Artificial Intelligence & Cybernetics)
Computer Science and Engineering (Artificial Intelligence and Data Engineering)	Electronics and Communication Engineering (Biomedical Engineering)
Computer Science and Engineering (Bioinformatics)	Electronics and Communication Engineering (Embedded systems)
Computer Science and Engineering (Block Chain Technology)	Electronics and Communication Engineering (VLSI)
Computer Science and Engineering (Block chain)	Electronics and Computer Engineering
Computer Science and Engineering (Cloud Computing & Automation)	Electronics Engineering (VLSI Design and Technology)
Computer Science and Engineering (Cyber Physical Systems)	Information Technology
Computer Science and Engineering (Cyber Security & Digital Forensics)	Mechanical Engineering
Computer Science and Engineering (Cyber Security)	Mechanical Engineering (Artificial Intelligence & Robotics)
Computer Science and Engineering (Data Analytics)	Mechanical Engineering (Automotive Design)
Computer Science and Engineering (Data Science)	Mechanical Engineering (Electric Vehicles)
Computer Science and Engineering (Gaming Technology)	Mechanical Engineering (Manufacturing Engineering)
Computer Science and Engineering (Health Informatics)	Mechanical Engineering (Robotics)
Computer Science and Engineering (Information Security)	Mechatronics and Automation
Computer Science and Engineering (Internet of Things)	Civil Engineering (Hons.)
Computer Engineering (Hons.)	Computer Engineering with specialization in Artificial Intelligence and Machine Learning (Hons.)
Computer Engineering with specialization in Data Science (Hons.)	

**14. Withdraw Procedure**

- ◆ Online withdraw / Submit in person
- ◆ Necessary form for withdrawal / Clearances should be obtained to enable withdrawal.
- ◆ Date of Application for withdrawal is the date of submitting clearance form (NO DUES FORM).

15. Refund Policy

As per AICTE / UGC Norms only.

16. Campus Life

Every attempt has been done by the management and other administrative boards to assure that every student finds VIT a very lively, fun and resourceful community to employ their erudite years. Conscious of the influence these active years can have on the minds of the expectation of our nation and the globe, VIT endeavours to promote, introduce and expand any and all ventures to shape their minds. By bringing clubs, chapters and college festivals, students are not simply revealed to a competitive environment inside the university but also with reputed universities and colleges in and around the country.





17. Hostels

A home away from home, the hostels at VIT is more than four walls and a roof. They have been designed to provide a comfortable, safe, inclusive and secure living even as they provide opportunities to form lasting friendships and ease the transition from home to college. Residential staff is always available to support the students from different backgrounds to promote community. Living on campus provides students with opportunities to:

Connect with a diverse population of people

- ◆ Develop stronger interpersonal and communication skills
- ◆ Engage in campus leadership, organizations and activities
- ◆ Establish relationships with faculty and staff members

For more details - <https://vit.ac.in/campuslife/hostels>



18. Anti ragging committee

VIT gives immense emphasis on maintaining a ragging free campus. Anti-Ragging Committee is constituted with Director, Students' Welfare as Chairperson, Assistant Directors, Students' Welfare as Members and nominated Faculty members from each school as Coordinators. Along with the Coordinators from each school, there is a team of squad members that comprises of faculty as well as staff members.

- ◆ If any student has any grievance in the nature of ragging, including any kind of harassment, the same can be brought to the notice of the Chairperson or any of the Committee Members from various schools, for necessary action and redressal.

<https://vit.ac.in/anti-ragging-committee>

19. Important Dates

Last date for submission of application form	31 st March, 2025
VITEEE (Number of days will vary for test cities)	21 st - 27 th April, 2025 (Tentatively)
Result Declaration	30 th April, 2025 (Tentatively)
Counselling	May, 2025 (Tentatively)

**20. Annexures****20.1. Annexure-1 List of Boards with Codes**

Board Name Regular	Code
A LEVEL OF GENERAL CERTIFICATE OF EDU.,CAMBRIDGE UNIVERSITY(IGCSE)	ALGCE
ASSAM HIGHER SECONDARY EDUCATION COUNCIL	AHSEC
BIHAR SCHOOL EXAMINATION BOARD	BHSEB
BOARD OF INTERMEDIATE EDUCATION (ANDHRA PRADESH) VIJAYAWADA	BIEAP
BOARD OF SCHOOL EDUCATION HARYANA	BSEHR
BOARD OF SCHOOL EDUCATION UTTARAKHAND	BSEUK
BOARD OF SECONDARY EDUCATION RAJASTHAN	BSERJ
BOARD OF SECONDARY EDUCATION, MADHYA PRADESH	BSEMP
CENTRAL BOARD OF SECONDARY EDUCATION	CNBSE
CHHATISGARH BOARD OF SECONDARY EDUCATION	CHBSE
COUNCIL FOR THE INDIAN SCHOOL CERTIFICATE EXAMINATIONS	CISCE
COUNCIL OF HIGHER SECONDARY EDUCATION, MANIPUR	CHSEM
COUNCIL OF HIGHER SECONDARY EDUCATION, ODISHA	CHSEO
DELHI BOARD OF SCHOOL EDUCATION	DLBSE
GOA BOARD OF SECONDARY AND HIGHER SECONDARY EDUCATION	GBSHE
GOVERNMENT OF TAMIL NADU, DIRECTORATE OF GOVERNMENT EXAMINATIONS, TAMILNADU	GTDGE
GOVT. OF KARNATAKA DEPT. OF PRE-UNIVERSITY EDUCATION	GKDPE
GUJARAT SECONDARY AND HIGHER SECONDARY EDUCATION BOARD	GSHEB
H. P. BOARD OF SCHOOL EDUCATION	HPBSE
INTERNATIONAL BACCALAUREATE	INBAE
INTERNATIONAL GENERAL CERTIFICATE OF SECONDARY EDUCATION (IGCSE)	IGCSE
JHARKHAND ACADEMIC COUNCIL	JHDAC
KERALA BOARD OF HIGHER SECONDARY EDUCATION	KBHSE
MAHARASHTRA STATE BOARD OF SECONDARY AND HIGHER SECONDARY EDUCATION	MBSHS
MEGHALAYA BOARD OF SCHOOL EDUCATION	MGBSE
MIZORAM BOARD OF SCHOOL EDUCATION	MZBSE
NAGALAND BOARD OF SCHOOL EDUCATION	NLBSE
PUNJAB SCHOOL EDUCATION BOARD	PNSEB
RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES ANDHRA PRADESH	RGUTA
TELANGANA STATE BOARD OF INTERMEDIATE EDUCATION, NAMPALLY, HYDERABAD	TSBIE
THE J & K STATE BOARD OF SCHOOL EDUCATION	JKBSE
TRIPURA BOARD OF SECONDARY EDUCATION	TRBSE
U.P. BOARD OF HIGH SCHOOL & INTERMEDIATE EDUCATION	UPBHS
WEST BENGAL COUNCIL OF HIGHER SECONDARY EDUCATION	WBCHS
Open Schools	Code
A.P. OPEN SCHOOL SOCIETY	APOSS
BIHAR BOARD OF OPEN SCHOOLING AND EXAMINATION (BBOSE)	BBOSE
BOARD OF OPEN SCHOOLING AND SKILL EDUCATION, SIKKIM	BOSSE
CHHATISGARH STATE OPEN SCHOOL	CHSOS
DELHI STATE OPEN SCHOOL	DLSOS
JAMMU & KASHMIR STATE OPEN SCHOOL	JKSOS
M. P. STATE OPEN SCHOOL EDUCATION BOARD	MPSOS
NATIONAL INSTITUTE OF OPEN SCHOOLING	NIOPS
RAJASTHAN STATE OPEN SCHOOL	RJSOS
STATE COUNCIL OF OPEN AND LIFELONG EDUCATION, KERELA	SCOLE
TELANGANA OPEN SCHOOL SOCIETY	TSOSS
THE WEST BENGAL COUNCIL OF RABINDRA OPEN SCHOOLING	WBCOS
OTHERS	OTHER



20.2. Annexure - 2 Syllabus

PHYSICS

1. Mechanics and Properties of Matter

Law of conservation of linear momentum and its applications. Static and kinetic friction - laws of friction - rolling friction

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

Conservative forces: conservation of mechanical energy (kinetic and potential energies)-non-conservative forces : motion in a vertical circle - elastic and inelastic collisions.

Elastic behaviour - Stress-strain relationship - Hooke's law - Young's modulus - bulk modulus - shear modulus of rigidity - Poisson's ratio - elastic energy. Viscosity - Stokes' law - terminal velocity - streamline and turbulent flow - critical velocity. Bernoulli's theorem and its applications.

Heat and Thermodynamics: Zeroeth law of thermodynamics- Temperature. First law of thermodynamics- Internal energy-Heat-Work-Isothermal and Adiabatic processes. Second law of thermodynamics- Reversible and Irreversible processes. Thermal expansion- Heat Capacity- C_p , C_v - latent heat, Qualitative idea of Blackbody radiation: Wein's displacement law- Stefan's law.

2. Electrostatics

Charges and their conservation; Coulomb's law - superposition principle. Electric field – electric field due to a point charge, electric field lines; electric dipole, electric field intensity due to a dipole - behaviour of a dipole in a uniform electric field. Electric potential - potential difference- electric potential due to a point charge and dipole - equipotential surfaces – electrical potential energy of a system of two point charges.

Electric flux-Gauss's law and its applications. Electrostatic induction-capacitor and capacitance - dielectrics- electric polarisation – parallel plate capacitor with and without dielectric – applications of capacitor – energy stored in a capacitor - Capacitors in series and in parallel – Van de Graaff generator.

3. Current Electricity & Magnetic Effects of Electric Current

Electric Current – drift velocity and mobility and their relation with electric current. Ohm's law, electrical resistance - V-I characteristics – electrical resistivity and conductivity-classification of materials in terms of conductivity – Carbon resistors – colour code for carbon resistors - combination of resistors – series and parallel – temperature dependence of resistance – internal resistance of a cell – potential difference and emf of a cell - combinations of cells in series and in parallel.

Kirchoff's law – Wheatstone's Bridge and its application - Metrebridge - special case of Wheatstone bridge - Potentiometer principle - comparing the emf of two cells.

Magnetic effect of electric current – Concept of magnetic field - Oersted's experiment – Biot- Savart law- Magnetic field due to a current carrying straight wire and circular coil – Tangent galvanometer – Bar magnet as an equivalent solenoid – magnetic field lines.

Ampere's circuital law and its application. Force on a moving charge in uniform magnetic field and electric field – cyclotron – Force on current carrying conductor in a uniform magnetic field – Forces between two parallel current carrying conductors - definition of ampere.

Torque experienced by a current loop in a uniform magnetic field - moving coil galvanometer – conversion to ammeter and voltmeter – current loop as a magnetic dipole - Magnetic dipole moment of a revolving electron.

4. Electromagnetic Induction and Alternating Current

Electromagnetic induction - Faraday's law - induced emf and current - Lenz's law. Self induction - Mutual induction - self inductance of a long solenoid - mutual inductance of two long solenoids. Methods of inducing emf - (i) by changing magnetic induction (ii) by changing area enclosed by the coil and (iii) by changing the orientation of the coil.

AC generator - (Single phase, three phase). Eddy current - applications - transformer - Alternating current - AC circuit with resistance - AC circuit with inductor - AC circuit with capacitor - LCR series circuit - Resonance and Q - factor - power in AC circuits.



5. Optics

Reflection of light, spherical mirrors, mirror formula. Refraction of light, total internal reflection and its applications, refraction at spherical surfaces, lenses, thin lens formula, lens maker's formula. Magnification, power of a lens, Resolving power, combination of thin lenses in contact, combination of a lens and a mirror. Refraction and dispersion of light through a prism.

Wavefront and Huygens's principle - Reflection, total internal reflection and refraction of plane wave at a plane surface using wavefronts. Interference - Young's double slit experiment and expression for fringe width - coherent source - Formation of colours in thin films - Newton's rings. Diffraction - differences between interference and diffraction of light. Polarisation of light waves - polarisation by reflection - Brewster's law - double refraction - nicol prism - uses of plane polarised light.

6. Dual Nature of Radiation, Atomic & Nuclear Physics

Displacement current - Electromagnetic waves and their characteristics - Transverse nature of electromagnetic waves - Electromagnetic spectrum - Photoelectric effect - Light waves and photons - particle nature of light - photocells and their applications.

Atomic structure – discovery of the electron – specific charge (Thomson's method) and charge of the electron (Millikan's oil drop method) – alpha scattering – Rutherford's atom model.

Nuclear properties - nuclear radii, masses, binding energy, density, charge - isotopes, isobars and isotones - nuclear mass defect - binding energy - stability of nuclei

Nature of nuclear forces - Radioactivity - alpha, beta and gamma radiations and their properties - Radioactive decay law - half life - mean life - artificial radioactivity - radio isotopes - effects and uses. Radio carbon dating. Nuclear fission - chain reaction - atom bomb - nuclear reactor - nuclear fusion.

7. Semiconductor Devices and their Applications

Semiconductor basics - energy bands in solids: difference between metals, insulators and semiconductors - semiconductor doping - Intrinsic and Extrinsic semiconductors. Formation of P-N Junction - Barrier potential and depletion layer-P-N Junction diode - Forward and reverse bias characteristics - diode as a rectifier - Zener diode- LED. Junction transistors - characteristics - transistor as a switch - transistor as an amplifier - transistor as an oscillator.

Logic gates - NOT, OR, AND, EXOR using discrete components - NAND and NOR gates as universal gates - De Morgan's theorem - Laws and theorems of Boolean algebra.

CHEMISTRY

1. Physical Chemistry

Atomic Structure - Bohr's atomic model-Sommerfeld's extension of atomic structure; Electronic configuration and Quantum numbers; Shapes of s, p, d, f orbitals - Pauli's exclusion principle - Hund's Rule of maximum multiplicity- Aufbau principle. Emission and absorption spectra, line and band spectra; Hydrogen spectrum – Lyman, Balmer, Paschen, Brackett and Pfund series; de Broglie's theory; Heisenberg's uncertainty principle – wave nature of electron

- Schrodinger wave equation (No derivation). Eigen values and eigen functions. Chemical bonding and hybridization of atomic orbitals involving s, p and d orbitals.

Thermodynamics, Chemical Equilibrium and Chemical Kinetics - I and II Laws of thermodynamics – spontaneous and non-spontaneous processes, entropy, Gibb's free energy – Standard Gibbs free energy change (ΔG°) and chemical equilibrium – significance of entropy. Rate of a chemical reaction, factors affecting rates of reaction: concentration, temperature, pressure and catalyst; Law of mass action – Le Chatelier's principle, applications of chemical equilibrium. Rate expression, order, and molecularity of reactions, zero order, first order and pseudo first order reaction – half-life period. Determination of rate constant and order of reaction. Temperature dependence of rate constant – Arrhenius equation, activation energy and its calculation; elementary concept of collision theory of bimolecular gaseous reactions.



Solutions - Colligative properties of dilute solutions; Different methods for expressing the concentration of solution - molality, molarity, mole fraction, percentage, the vapour pressure of solutions and Raoult's Law - Ideal and non-ideal solutions, vapour pressure - composition, plots for ideal and non-ideal solutions

2. Inorganic and Material Chemistry

The s-block elements – properties and chemical reactivity of alkali and alkaline earth metals

The p-block elements – Phosphorous compounds: PCl_3 , PCl_5 – Oxides, Hydrogen halides, Inter-halogen compounds and Xenon fluoride compounds

General characteristics of d – block elements – Electronic Configuration – Oxidation states of first row transition elements and their colours. Occurrence and principles of extraction: Copper, Silver, Gold and Zinc. Preparation and properties of CuSO_4 , AgNO_3 and $\text{K}_2\text{Cr}_2\text{O}_7$.

Lanthanides – Introduction, electronic configuration, general characteristics, oxidation state – lanthanide contraction, uses, brief comparison of Lanthanides and Actinides

Introduction to coordination chemistry - IUPAC nomenclature of mononuclear coordination compounds; Isomerism, Geometrical isomerism in 4-coordinate, 6-coordinate complexes. Theories on coordination compounds – Werner's theory (brief), Valence Bond theory. Uses of coordination compounds. Bioinorganic compounds (Haemoglobin and chlorophyll).

Solid-State Chemistry - Lattice – unit cell, systems, types of crystals, packing in solids; Ionic crystals – Imperfections in solids – point defects, X-Ray diffraction – Electrical Property, Amorphous solids (elementary ideas only)

Surface Chemistry - Adsorption- physisorption and chemisorption; Catalysis – homogeneous and heterogeneous catalysis

3. Analytical Chemistry

Electrochemistry - Redox reactions; Theory of electrical conductance; metallic and electrolytic conductance. Faraday's laws – theory of strong electrolytes – Specific resistance, specific conductance, equivalent and molar conductance – Variation of conductance with dilution – Kohlrausch's Law – Ionic product of water, pH, and pH- buffer solutions – use of pH values. Cells – Electrodes and electrode potentials – construction of cell, EMF values and standard electrode potentials, Nernst equation and its application to chemical cells. Relation between Gibbs energy change and EMF of a cell, dry cell, electrolytic cells and Galvanic cells; lead accumulator; Fuel cells, Corrosion, and its prevention.

Environmental Chemistry - Environmental pollution - Atmospheric, water and soil.

4. Basic Principles of Organic Chemistry

Carbon – tetravalency, hybridization; Classification of organic compounds – functional groups; Homologous series; Nomenclature (IUPAC); Homolytic and heterolytic bond cleavage; carbocations, carbanions and free radicals; electrophiles and nucleophiles; Inductive effect, electromeric effect, resonance and hyperconjugation.

Common organic reactions - Substitution, addition, elimination and rearrangement

Isomerism in Organic Compounds: Definition, Classification – structural isomerism, stereo isomerism – geometrical and optical isomerism. Optical activity - chirality – compounds containing chiral centres – R, S notation, D, L notation.

Detection of the functional groups in organic compounds: Hydroxyl (alcoholic and phenolic), carbonyl (aldehyde and ketones) carboxyl and amino groups.

5. Properties and Chemistry of Functionalized Organic Compounds

Alcohols and Ethers - Nomenclature of alcohols – Classification of alcohols - distinction between 1°, 2° and 3° alcohols – General methods of preparation of primary alcohols, properties. Methods of preparation of dihydric alcohols: Glycol – Properties – Uses. Methods of preparation of trihydric alcohols - Properties – Uses. Aromatic alcohols – preparation and properties of phenols and benzyl alcohol; Ethers – Nomenclature of ethers – general methods of preparation of aliphatic ethers - Properties – Uses. Aromatic ethers – Preparation of Anisole – Uses



Carbonyl Compounds - Nomenclature of carbonyl compounds – Comparison of aldehydes and ketones. General methods of preparation of aldehydes – Properties – Uses. Aromatic aldehydes - Preparation of benzaldehyde – Properties and Uses. Ketones – general methods of preparation of aliphatic ketones (acetone) – Properties – Uses. Aromatic ketones – preparation of acetophenone – Properties – Uses, preparation of benzophenone – Properties. Name reactions; Clemmensen reduction, Wolff – Kishner reduction, Cannizzaro reaction, Claisen Schmidt reaction, Benzoin Condensation, Aldol Condensation. Preparation and applications of Grignard reagents.

Carboxylic Acids and their derivatives - Nomenclature – Preparation of aliphatic monocarboxylic acids – formic acid – Properties – Uses. Monohydroxy mono carboxylic acids; Lactic acid – Synthesis of lactic acid. Aliphatic dicarboxylic acids; Preparation of oxalic and succinic acids. Aromatic acids: Benzoic and Salicylic acids – Properties – Uses. Derivatives of carboxylic acids; acetyl chloride (CH_3COCl) – Preparation – Properties – Uses. Preparation of acetamide, Properties – acetic anhydride – Preparation, Properties. Preparation of esters – methyl acetate –Properties

6. Organic Nitrogen Compounds

Organic Nitrogen Compounds - Aliphatic nitro compounds – Preparation of aliphatic nitroalkanes – Properties – Uses. Aromatic nitro compounds – Preparation – Properties – Uses. Distinction between aliphatic and aromatic nitro compounds. Amines; aliphatic amines – General methods of preparation – Properties – Distinction between 1°, 2° and 3° amines. Aromatic amines – Synthesis of benzylamine – Properties, Aniline – Preparation – Properties – Uses. Differences between aliphatic and aromatic amines. Aliphatic nitriles – Preparation – properties – Uses. Diazonium salts – Preparation of benzene diazonium chloride – Properties.

7. Biomolecules and Polymers

Carbohydrates – Distinction between sugars and non-sugars, structural formulae of glucose, fructose, and sucrose, with their linkages, invert sugar – definition, examples of oligo and polysaccharides

Amino acids and Proteins – Classification of amino acids with examples, Peptides - properties of peptide bond; Proteins - primary, secondary, tertiary and quaternary structure (qualitative idea only), denaturation of proteins, enzymes

Lipids - Definition, classification with examples, difference between fats, oils, and waxes.

Nucleic acids – Chemical constitution of DNA and RNA.

Polymers - Classification – Natural and synthetic, methods of polymerization (addition and condensation), copolymerization. Some important polymers: natural and synthetic like polythene, nylon, polyesters, Bakelite, rubber. Biodegradable and non-biodegradable polymers.

MATHEMATICS

1. Matrices and their Applications

Algebra of matrices, Determinants and its properties – Adjoint and inverse of a square matrix using determinants and elementary transformations – Rank, Test of consistency and solution of simultaneous linear equations up to three variables – Solution of Linear Programming problem in two Variables.

2. Trigonometry and Complex Numbers

Fundamentals of Trigonometry, Trigonometric, inverse Trigonometric functions and their properties, heights and distances.

Complex number system – conjugate, properties, ordered pair representation. Argand diagram, Algebra of complex numbers, modulus and argument (or polar form) of a complex number. Solution of polynomial equations – De Moivre's theorem and its applications. Roots of a complex number – Cube and fourth roots.

**3. Analytical Geometry of two dimensions**

Coordinate geometry – Equation of a straight line and family of straight lines - Properties
Definition of a conic – general equation of a conic, classification with respect to the general equation of a conic and eccentricity. Equations of conic sections (parabola, ellipse and hyperbola) in standard forms and general forms – Directrix, Focus and Latus-rectum – parametric form of conics and chords.
– Tangents and normal's – Cartesian form and parametric form – equation of chord of contact of tangents.

4. Vector Algebra

Scalar Product and Vector product of two Vectors, properties and applications – Scalar and Vector triple product – Properties.

5. Analytical Geometry of Three Dimensions

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

6. Differential Calculus

Limits, continuity and differentiability of functions – properties – applications: tangent, normal and angle between curves.

Mean value theorem – Rolle's Theorem, Lagrange Mean Value Theorem, Taylor's and Maclaurin's series, stationary points, increasing, minima of decreasing, maxima, functions of one variable, concavity and points of inflexion-Errors and approximations.

7. Integral Calculus and its Applications

Simple definite integrals – fundamental theorems of calculus, properties of definite integrals, Reduction formulae – Area of bounded regions, length of the curves.

8. Differential Equations

Differential equations – formation, order and degree. Solution of first order differential equations: Variables separable, Homogeneous, Linear equations and applications.

9. Probability and Distributions

Basics of Probability – Axioms – Addition law – Conditional probability – Multiplicative law – Baye's Theorem.

Random variables – probability density function, distribution functions, mathematical expectation, variance – Discrete distributions: Binomial and Poisson.

10. Discrete Mathematics

Sets – Relations – Functions – Binary Operations. Sequence and series (AP, GP, HP) – Binomial Theorem – Counting Techniques

Mathematical logic – logical statements, connectives, truth tables, logical equivalence, tautology, contradiction.

BIOLOGY**1. Taxonomy**

Need for classification; three domains of life. Linnaean, Whittaker, Bentham and Hooker systems of classification. Salient features and classification of non-chordates up to phyla levels and chordates up to class levels. Morphology and anatomy of flowering plants. Structural organization in insects (cockroach)

2. Cell and Molecular Biology

Cell theory. Prokaryotic cell and it's ultrastructure. Eukaryotic cell- cell wall, cell membrane, cytoskeleton, nucleus, chloroplast, mitochondria, endoplasmic reticulum, Golgi bodies, ribosomes, lysosomes, vacuoles and centrosomes. Cell cycle and division - amitosis, mitosis and meiosis. Search for genetic material; structure of DNA and RNA; replication, transcription, genetic code, translation, splicing, gene expression and regulation (lac operon) and DNA repair.



3. Reproduction

Asexual reproduction – binary fission, sporulation, budding, gemmule formation and fragmentation, Vegetative propagation in plants. Sexual reproduction in flowering plants - structure of flowers. Pollination, fertilization, development of seeds and fruits, seed dispersal, apomixis, parthenocarpy and poly-embryony. Human reproductive system - Gametogenesis, menstrual cycle, fertilization, implantation, embryo development upto blastocyst formation, pregnancy, parturition and lactation. Assisted reproductive technologies.

4. Genetics and evolution

Chromosomes - structure and types, linkage and crossing over, recombination of chromosomes, mutation and chromosomal aberrations. Mendelian inheritance, chromosomal theory of inheritance, deviation from Mendelian ratio (incomplete dominance, co-dominance, multiple allelism, pleiotropy), sex linked inheritance and sex determination in humans.

Darwinism, neo Darwinism, Hardy and Weinberg's principle and factors affecting the equilibrium: selection, mutation, migration and random genetic drift.

5. Human health and diseases

Pathogens, parasites causing human diseases (malaria, dengue, chickengunia, filariasis, COVID, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control. Basic concepts of immunology, vaccines, antibiotics, cancer, HIV and AIDS. Adolescence, drug and alcohol abuse.

6. Biochemistry

Structure and function of carbohydrates, lipids and proteins. Enzymes – types, properties and enzyme action. Metabolism - glycolysis, fermentation and Kreb's cycle.

7. Plant physiology

Movement of water, food, nutrients, gases and minerals. Passive diffusion, facilitated diffusion, and active transport. Imbibition, osmosis, apoplast and symplast transport and guttation. Macro and micronutrients and their deficiency symptoms. Transpiration, photosynthesis (light and dark reactions) and electron transport chain. Hormones and growth regulators, photo-periodism and vernalization. Nitrogen cycle and biological nitrogen fixation.

8. Human physiology

Digestion and absorption, breathing and respiration, body fluids and circulation, excretory system, endocrine system, nervous system, skeletal and muscular systems. Locomotion and movement, growth, aging and death. Hormones - types of hormones, functions and disorders.

9. Biotechnology and its applications

Recombinant DNA technology, applications in health, agriculture and industries; genetically modified organisms; Human insulin, vaccine and antibiotic production. Stem cell technology and gene therapy. Apiculture and animal husbandry. Plant breeding, tissue culture, single cell protein, fortification, Bt crops and transgenic animals. Microbes in food processing, sewage treatment, waste management and energy generation. Biocontrol agents and biofertilizers. Bio-safety issues, biopiracy and patents. Human and rice genome projects. DNA fingerprinting.

10. Biodiversity, ecology and environment

Ecosystems: components, types, pyramids, nutrient cycles (carbon and phosphorous), ecological succession and energy flow in an ecosystem; Biodiversity - concepts, patterns, importance, conservation, hot spots, endangered organisms, extinction, Red data book, botanical gardens, national parks, sanctuaries, museums, biosphere reserves and Ramsar sites. Environmental issues: pollution and its control. Solid and radioactive waste management. Climate change impact and its mitigation. Population attributes - growth, birth and death rate and age distribution.

**ENGLISH**

Multiple Choice Questions to test the comprehension of a short passage or line of poems, English grammar, and pronunciation. Please note that the passages, lines of poems, dialogues, grammar, and pronunciation items are chosen to suit the level of higher secondary or equivalent education.

APTITUDE

1. Data Interpretation - Tabular Chart, Pie Chart, Bar Chart, Line Graph, Mixed Charts
2. Data Sufficiency - All topics combined
3. Syllogism - 2 statements and 2 conclusions, 3 statements and 2 conclusion, 2 statements and 4 conclusions, 3 statements and 4 conclusions, 3 statement and 3 conclusions
4. Number series, Coding, and Decoding - Number series, Letter to Letter Coding, Letter to Number Coding, Mixed coding
5. Clocks, Calendars, and Directions - Mirror image of the clock, Angle based questions, Gain or loss per day, finding days/dates, finding odd days, Occurrence of same calendar year, Directions faced with respect to the starting point, Distance between two points

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*Vellore & Chennai



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VITEEE 2025

