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

Transforming life through excellence in education and research.™

Recognized as an Institution of Eminence (IoE) by Govt. of India.

Ranked as the No.1 Private Institution for Innovation by Govt. of India.

Information Brochure
Admission to B.Tech. Degree Programmes 2020-2021

VITEEE - 2020
VIT Engineering Entrance Examination

/vituniversity /vellore_vit www.vit.ac.in /VIT_univ /vituniversityvellore

VIT - A place to learn; A chance to grow

INSTRUCTIONS FOR FILLING UP OF OMR APPLICATION FORM

1. The cost of the application is **non-refundable.**

2. **Online applicants shall neither fill OMR application nor send a print out of filled-in application.**

3. Please make sure that you are using the correct application form i.e. VITEEE-2020.

4. Read the instructions in Information Brochure before filling the Application Form.

5. Please **fill the application only in ENGLISH.**

6. Your application will be machine-processed. Hence, kindly use **only black ball-point pen and CAPITAL letters to write** and only **HB2 pencil to shade the circles.**

7. Do not scribble, smudge, tear or wrinkle the OMR sheet.

8. Your photo should be in colour, less than six months old and should have a full, unobscured view of your face in front of a white background. Avoid attested / selfie photographs.

9. Write the complete address giving your name and PINCODE correctly and legibly. Please note that this block will appear as such in all our correspondence with you. In case you happen to make a mistake, cover the whole box with a slip of white paper of the same size and write your address on it. Your address should be written only within the box.

10. The use of the address of any coaching centre/ Institution is strictly prohibited. If anybody uses the address of any coaching centre / Institution in his / her application form, it will be rejected.

11. Using an adhesive, paste the photograph in the space provided. Do not staple, pin, stitch or stick anything on to the application form.

12. Ensure the correctness of your mailing address, the PINCODE, valid e-mail address and mobile number. **Please note that VIT will not be responsible if** communications do not reach you due to incomplete or illegible address, invalid e-mail address or wrong mobile number.

13. Ensure that your application is complete in all respects. An incomplete application or an application filled in a language other than English will be summarily rejected.

14. Please retain a copy of the OMR application form for your future reference.

15. You must quote your application number for reference in all your future correspondence.

16. The filled-in OMR form should be enclosed in the envelope provided and should be sent through Registered Post or Speed Post, so as to reach the Office of Admissions on or before **29th February, 2020 to the printed address on the envelope.**

17. VIT will not be responsible for any postal delay or irregularity or loss in postal transit.

18. Options given in the application form cannot, in general, be altered at a later stage.

19. **For filling online application form and downloading admit card visit www.vit.ac.in/viteee**

CHECK LIST

Before posting the application please ensure the following:

☐ All the fields are filled-in.

☐ Affixed photograph (No stapling).

☐ Filled in complete postal address, to which communication is to be sent, clearly and legibly with correct PINCODE.

☐ Provided correct E-Mail address & Mobile number.

☐ Signed in the space for signature. No enclosures of any kind with the application; Taken a photocopy of filled-in OMR sheet.

CONTENTS

1. Introduction

VIT has carved out a niche for itself as an excellent institution of higher education, on par with top universities of the world, in the field of technology. It has surpassed the notion of excellence within the country and has reached a pinnacle of glory and now rubs shoulders with the cream of world class institutions of the world. Under the able stewardship of its Founder Chancellor Dr. G. Viswanathan, VIT exudes an ambience which is a confluence of modernity, with the use of technology at all levels, infused with the age old traditional values of integrity and ethical sincerity.

An avid sense of joy and enthusiasm pervades the campus which bears testimony to the positive learning along with the nurturing of the mind and the body experienced by each and every student at VIT. There are abundant opportunities for the overall development of individual students which includes co-curricular, extra-curricular along with academics.

There is seamless mingling of the cultures of the world as VIT has a heterogeneous group of students from across the globe who are here, at VIT, by choice. VIT has always been dedicated in providing quality education in various Engineering disciplines of Science and Technology and has also made a mark in the field of research as well. The Institute follows a rigorous selection procedure to admit students into various programmes. An exclusive entrance examination for all B.Tech programmes, Vellore Institute of Technology Engineering Entrance Examination (VITEEE) is conducted for all those aspiring for a career in engineering.

VIT Group of Institutions are VIT-Chennai, VIT-AP at Amaravati and VIT-Bhopal, Madhya Pradesh.

2. Engineering Programmes offered in VIT

Please refer our **www.vit.ac.in** for the updated list of programmes offered.

a. B.Tech. Programmes

Courses available at (1) Vellore, (2) Chennai, (3) VIT-AP, (4) VIT-Bhopal

- Aerospace Engineering [4]
- Biotechnology [1]
- Bioengineering [4]
- Chemical Engineering [1]
- Civil Engineering [1,2]
- Computer Science and Engineering [1,2,3,4]
- Computer Science and Engineering with specialisation in Bioinformatics [1]
- Computer Science and Engineering with specialisation in Information Security [1]
- Computer Science and Engineering with Business Systems [1,3]
- Computer Science and Engineering with specialisation in Data Science [1]
- Computer Science and Engineering with specialisation in Internet of Things [1]
- Computer Science and Engineering with specialisation in Data Analytics [3]
- Computer Science and Engineering with specialisation in Networking & Security [3]
- Computer Science and Engineering with specialisation in AI and Machine Learning [2,4]
- Computer Science and Engineering with specialisation in Cyber Physical Systems [2]
- Computer Science and Engineering with specialisation in Artificial Intelligence [3]
- Computer Science and Engineering with specialisation in Gaming Technology [4]
- Computer Science and Engineering with specialisation in Cyber security & Digital Forensics [4]
- Computer Science and Engineering with specialisation in Block Chain Technology [1]
- Computer Science and Engineering with specialisation in Artificial Intelligence and Robotics [2]
- Computer Science and Engineering with specialisation in Robotics [3]
- Electrical and Electronics Engineering [1,2,4]
- Electronics and Communication Engineering [1,2,3,4]
- Electronics and Communication with specialisation in Biomedical Engineering [1]
- Electronics and Communication Engineering with specialisation in Embedded Systems [3]
- Electronics and Communication Engineering with specialisation in VLSI [3]
- Electronics and Communication Engineering with specialisation in Artificial Intelligence and Cybernetics [4]
- Electronics and Instrumentation Engineering [1]
- Electronics and Computer Engineering [2]
- Fashion Technology [2]

- Information Technology [1]
- Mechanical with specialisation in Automotive Engineering [1]
- Mechanical Engineering with specialisation in Gamification [4]
- Mechanical Engineering [1,2,3,4]
- Mechatronics and Automation [2]
- Production and Industrial Engineering [1]

b. B.Des. programme

- B.Des. Industrial Design [1]

3. Eligibility

a. Nationality

The applicant for admission should be a Resident / Non Resident Indian National / PIO Holder.

b. Age Limit

Candidates whose date of birth falls on or after **1st July 1998** are eligible to apply for VITEEE-2020. The date of birth as recorded in the High School Certificate will be considered authentic. Candidates should produce this certificate in original as proof of their age at the time of counselling, failing which, they will be disqualified.

c. Qualifying Examination

Candidates appearing for the VITEEE-2020 should have either completed or shall be appearing in 2020, in any one of the following qualifying examinations:

i. The final examination of the 10+2 system of Higher Secondary Examination conducted by the State Board, Central Board of Secondary Education (CBSE, New Delhi), The Council for Indian School Certificate Examination (ISCE), New Delhi. A diploma alone after 10th standard is not eligible.

ii. Intermediate or Two-year Pre-University Examination conducted by a recognized Board/ University.

iii. High School Certificate Examination of the Cambridge University or International Baccalaureate Diploma of the International Baccalaureate Office, Geneva.

iv. General Certificate Education (GCE) examination (London/Cambridge/Srilanka) at the Advanced (A) level.

v. As per VIT Norms, Regular 'NIOS' board candidates are also eligible for VITEEE. They should produce the Migration Cum Transfer Certificate at the time of joining.

vi. Candidates who have studied in Regular, Full Time and Formal Education are alone eligible to apply.

d. Eligibility Criteria in the Qualifying Examination

i. Candidates appearing for the VITEEE in 2020 should have secured minimum aggregate of 60% in Physics, Chemistry and Mathematics /Biology in the qualifying examination (+2/Intermediate).

The average marks obtained in the subjects Physics, Chemistry and Mathematics/Biology in the qualifying examination (+2/Intermediate) put together should be 50% for the following categories:

- Candidates belonging to SC/ST Community

- Candidates hailing from Jammu and Kashmir / Ladakh and the North Eastern states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.

ii. CERTIFICATE TO PROVE COMMUNITY, NATIVITY should be produced at the time of counselling, failing which they will not be considered for admission.

iii. In case, the mark statement is not produced by the candidates at the time of admission, the decision of the Institution regarding his/her eligibility and admission to the programme shall be final.

e. Subject Eligibility Criteria

i. **Candidates who have studied Physics, Chemistry and Mathematics in the qualifying examination is eligible for all the** B.Tech. Degree programmes.

ii. **Candidates who have studied Physics, Chemistry and Biology in the qualifying examination is eligible** only for B.Tech. Bio-stream Degree programmes as below.

B.Tech. Bio-engineering, Biotechnology, CSE with specialisation in Bioinformatics, ECE with specialisation in Biomedical Engineering programmes.

But after joining, registering for Mathematics as bridge course is mandatory.

iii. Even though the admission is done as per the VITEEE ranking, the candidate have to fulfill the eligibility norms mentioned.

4. Application Forms

a. Issue of Application Forms - Web App / Mobile App

Candidates can also apply Web App / Mobile App at **www.vit.ac.in/viteee** through the following mode: **Net banking/ Credit card/Debit card/Paytm. The online applicants need not send the hard copy of the application form to the Institute.**

b. Issue of Application Forms – OMR

- The Prospectus and the information brochure for the B.Tech programme, along with the necessary enclosures which include the Application Form and a printed self-addressed envelope, can be obtained against cash payment from the post offices as given in the VIT website: **www.vit.ac.in**

- Candidates can also obtain the application form in person from

  (i)   VIT, Vellore Campus

  (ii)   VIT, Chennai Campus

  (iii)   VIT-AP

  (iv)   VIT-Bhopal

- Candidates are advised to purchase the information brochure / application form only through the means mentioned above and not from any private publisher/ vendor. **Fake application forms will be rejected.**

c. Instructions for completing the OMR sheet

- The application form should be filled by the candidate in his/ her own handwriting.

- **It is suggested that the candidate make a photocopy of the form and use it for practice. ONLY THE ORIGINAL OMR APPLICATION FORM SHOULD BE SENT to the Institute.**

- Read the instructions carefully before filling the application form. Requests for corrections will not be entertained later. Refer the specimen copy enclosed in this brochure.

- **Do not write or make any marks on the Barcode.**

- Please note that your name, and your date of birth should be exactly the same as given in your High school / +2 / Intermediate / Pre- University examination certificate.

- Your application must be complete in all respects. **An incomplete application or application filled in a language other than English will be summarily rejected. Options filled by you in the application form cannot be changed at a later stage.**

- Please note down the ten digit application number for your future reference.

d. Returning the Completed OMR Application Form

- The application form duly completed should be checked to see, if all the items have been correctly filled and appropriate codes indicating your exact choice have been put in the right spaces provided against each.

- Please go through the checklist available inside the front cover of the brochure.

- Also ensure that you followed to the instructions for completing the computerized OMR application form in the brochure, before mailing the application. The application should be folded along the original fold only and inserted in the envelope provided.

- Your application should be sent either by Registered Post or Speed Post in the self-addressed envelope provided by VIT, so as to reach the office on or before **29th February, 2020.** Before despatching the application form ensure that you have filled in the correct Test City Code, Subject and tick the checklist on the envelope provided.

- Incomplete application form <u>shall not be processed and no correspondence shall be made in this regard.</u>

  The application form once sold shall not be taken back under any circumstances nor will the application fee be refunded in any case.

e. Receipt of Completed OMR Application Form

- The last date for receipt of OMR completed application form at VIT is **February 29, 2020**.

- Any application received after the last date will not be accepted. Any delay in receiving the application by the candidate will not be considered a valid reason for late submission. The Institute will not accept responsibility for any postal delay, irregularity or loss in postal transit. **Do not enclose any document with the application form.**

- Please note that if you are **applying through Web/ Mobile application, the application form should not be sent.**

Instructions to fill the OMR application form

● Use black ball point pen to write and HB2 pencil to shade the circles

Sl. No.	Header	Instruction
1.	Name of the Candidate	Write your name in capital letters as it appears or would appear in your XII std certificate. All the admission correspondence and the VIT documents will be issued as per the name printed on XII mark statement only. Do not prefix / suffix your name with titles like Mrs., Miss, Km., Shri. etc.,
2.	Date of Birth	Write the date, month and year of your birth as per the English calendar and as recorded in your School Board/+2/Intermediate/ Pre-University examination certificate. For example, if born on 1st July 2000, the date should be entered as follows: **01 07 00 using the last two digits for the year**. Shade the corresponding numerals for date, month and year in each column.
3.	Gender	Write the appropriate code in the box provided and then shade the appropriate circle corresponding to the code.
4.	Residential Status	Write the appropriate code in the box provided and then shade the appropriate circle to correspond with the code.
5.	XII Board	Refer to the codes for various School Education Boards given in **APPENDIX-I** of the Information Brochure and write the appropriate code in the box provided. Shade the corresponding numeral under each digit of the code.
6.	Mobile Number	Write your mobile number in the space provided in black ball-point pen and shade the corresponding numeral under each digit using pencil.
7.	Test city	Refer to the codes for Test Cities in **APPENDIX-II** of the Information Brochure and write the appropriate code in the space provided. Shade the corresponding numeral under each digit of the code. **Change of test city will not be entertained.**
8.	Email Address	Provide valid e-mail address. It is mandatory that you should produce your correct email address (**in capital letters**), as all the future communications will be through e-mail. Each application require an unique email address.
9.	Complete Postal Address	Write the complete postal address for sending any postal. The address must include your name, C/O name and all other relevant details. Please note that this block will be machine scanned and therefore, it should be **written very clearly and in CAPITAL LETTERS with black ball-point pen** only.
10.	PINCODE	Write the correct PINCODE for your postal address in the space provided. Shade the corresponding numeral under each digit.

11.	Choice of Subjects appearing in VITEEE	Write the appropriate code in the box provided and then shade the appropriate circle to correspond with the code. **MPCEA** - Candidates appearing in Mathematics/Physics/ Chemistry/ English/Aptitude is eligible for all the B.Tech. Degree programmes. **BPCEA** - Candidates appearing in Biology/Physics/ Chemistry/ English/ Aptitude is eligible only for B.Tech. Bio-stream Degree programmes (Bio-engineering, Biotechnology, CSE with specialisation in Bioinformatics and ECE with specialisation in Biomedical Engineering programmes). But after joining, registering for Mathematics as bridge course is mandatory.
12.	School Details	Write the Complete school address with pincode in each box clearly using a black ball-point pen only.
13.	School PINCODE	Write the PINCODE of the school in the space provided. Shade the corresponding numeral under each digit.
14.	Where did you see our Admission Advertisement	Please specify the name of the newspaper / website (or) any other source where you have seen the admission advertisement (write in CAPITAL LETTERS only). Refer the information brochure for code details in **APPENDIX - III** and fill the code accordingly.
15.	Declaration	The candidate must sign the declaration. The place and date should also be written. Applications without signatures will be treated as incomplete and rejected. Affix recently taken passport size colour photograph as per the instruction on the form. **Selfie photos are not accepted.** Your photo should be in colour, less than six months old and should have a full, unobscured view of your face in front of a white background. Avoid attested photographs.

5. e-Tracking / SMS tracking

Once the application is received by VIT, a message will be sent through SMS to the candidates (Indian candidates) stating that their application has been received at VIT. This would, however, be possible only if the mobile number is correctly shaded in the application form.

The candidates may also track the status of their application by typing their application number in the VIT website. However, this feature can be availed only after three weeks after the despatch of their application.

At the time of publication of the results, the rank will be intimated through SMS and it will also be made available in the website **www.vit.ac.in**

6. Test Cities for VITEEE-2020

The VITEEE - 2020 will be held in **124 cities.** The list of Test Cities along with their corresponding codes is found in **APPENDIX - II** of this information brochure.

7. e-Admit Card

- The e-Admit card will be generated once the candidate has booked his/her schedule through the Online Test Booking System.

- The e-Admit card 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 e-Admit card will indicate the e-Admit card 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 e-Admit card will be made available for candidates in **www.vit.ac.in.** Candidate should provide the

application form number and Online Test Booking password to download the e-Admit card.

- 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 counselling / admission.

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

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
- Aadhar Card
- Passport
- Driving License
- Voter ID card
- IT Pan Card

- **Admit card will not be processed if the application is incomplete.**

- 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.

8. At the Test Centre

- **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. <u>**Biometric authentication will be carried out again for the shortlisted candidates during counselling and admission.**</u>

- 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.

Do's for the candidates

- Be present at the test centre as per the reporting time mentioned in the e-Admit card.

- Register your name in the registration counter and carry the e-Admit card and a valid ID proof for verification.

- Sit in your allotted seat only.

- Maintain perfect silence and work on your testing process only

- Sign the attendance sheet in the presence of the invigilator.

Don'ts for the candidates

Applicants are:

- Not allowed to carry any text material, printed or written, bits of papers or any other such material except the e-Admit card and pen or pencil for rough work (sheets will be provided) inside the test hall.

- Not permitted to carry any electronic devices like mobile phones, paging devices, calculators, spy cameras, blue-tooth devices and music systems.

- Not allowed to go outside the test hall till the completion of the entire duration of the exam time.

- Not allowed to eat or drink anything (snacks, tea, coffee and cool drinks etc.) inside the test hall. Plain water bottles with nothing written or printed on them will be allowed.

- Violation of any instruction and adoption of any unfair means in the examination hall will make the candidate ineligible for admission.

- Impersonation (or any such crimes) will be reported to Police.

9. Pattern of the Entrance Examination

a. Question Paper

- All Questions will be of **Multiple Choice Question (MCQ) with the following sections.**

    - PART-I - Mathematics / Biology
    - PART-II - Physics
    - PART-III - Chemistry
    - PART-IV - English
    - PART-V - Aptitude

- **MPCEA** - Candidates appearing in MPCEA in VITEEE (Mathematics/ Physics/ Chemistry/ English/ Aptitude) are eligible for all the B.Tech. Degree programmes

- **BPCEA** - Candidates appearing in BPCEA in VITEEE (Biology/ Physics/ Chemistry/ English/ Aptitude) are eligible only for B.Tech. Bio-stream Degree programmes as below.

    1. Bio-engineering (VIT-Bhopal)
    2. Biotechnology (VIT, Vellore)
    3. CSE with specialisation in Bioinformatics (VIT, Vellore)
    4. ECE with specialisation in Biomedical Engineering (VIT, Vellore)

- But after joining, registering for Mathematics as bridge course is mandatory.

- **The selection of subjects (MPCEA / BPCEA) should be mentioned in the application form.**

- The syllabus for the Entrance Examination is given in **APPENDIX-IV** of this brochure.

- The aptitude section in VITEEE will be in addition to subjects viz. Maths or Biology, Physics, Chemistry and English. The number of questions for the respective sections in VITEEE will be, Maths or Biology (40 questions), Physics (35 questions), Chemistry (35 questions), Aptitude (10 questions) and English (5 questions).

- Each question is followed by 4 choices. The candidate should choose only one choice and click 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 familarize 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. The mock test will be in the form of flash file that can be downloaded to the system and the candidate can go through the entire flash file of the demo/mock test any number of times.

10. Schedule of VITEEE-2020

- VIT Engineering Entrance Examination will be conducted between **2nd and 3rd week of April, 2020 and the test will be administered online at indicated centres at timings.** Please check **www.vit.ac.in** for schedule**.**

- **The duration of the entrance examination will be of 2 hours 30 minutes.**

- The exam will be conducted generally in three sessions in a day but may change centre to centre depending on the strength and availability of the centre. Following are the general timings of the test but the candidate should report at least an hour before the start of the test.

    I session - 9.00am - 11.30am / II session - 12.30 pm - 3.00 pm / III session - 4.00 pm - 6.30 pm

- Candidate may choose to appear in session indicated at the time of slot booking.

11. Salient features of VITEEE-2020

a. Online Test Booking System

- Online Test booking system is a web based online scheduling system available at **www.vit.ac.in.**

- Candidate 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.

- The slots are booked by **'first-come-first-served'** basis and are subject to the availability of the test centre, date and time.

- In case of the candidate not booked the slot, the slot and the subject will be booked automatically by the Institution based on the information furnished in the application form.

b. Online Test Booking Password

- For both OMR and online applicants, 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.

c. Online Test Booking Procedure

- While booking your test schedule, please ensure that you have a photocopy of the application form you submitted and the Online Test Booking Password.

- **A slot once booked cannot be changed. Request for change of test city, date, slot and subject will not be entertained under any circumstances.**

- In case of non-availability of slots in the test centre of your choice, the candidate may choose to book a slot in an alternative centre / date.

- 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 in 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 e-Admit card will be generated which needs to be printed by the student from the same page. Reprint option is also available on the same URL link.

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.

- It is the responsibility of the candidate to acquire the basic computer skills before appearing for the entrance test by undertaking a mock test which will be available in **www.vit.ac.in** to familiarize the look and feel, navigation, etc.

- The candidates must ensure that the computer allotted to them is switched on and any problem with the computer should be informed to the invigilator immediately.

- Questions will be in English and will appear one by one randomly without partition of sections.

- 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.

- In the rare and unlikely event of a technical failure during the test, the candidate may be required to attempt the test again at a slot/ date as assigned by VIT.

- 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.

- **Candidates should submit only one application to appear for the VITEEE. If more than one application is found, the entire registration will be cancelled by VIT.**

12. 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 Equi-percentile 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. Candidates are advised not to make assumptions and predictions of rank based on their own estimates of raw scores or past data.

13. Results

a. Rank List:

- A rank list will be prepared based on the percentile secured in VITEEE-2020.

- The rank will be intimated through SMS, to the registered mobile number of the candidate.

- Since the final ranks are determined with extreme care, there is no provision for re-ranking and re-totalling. 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.

- **Candidate should appear for the entrance exam only once. VIT has the right to hold the rank and cancel the candidacy of the candidates appearing more than once.**

b. Announcement of Results:

The entrance examination results will be available on the VIT website - **www.vit.ac.in**

14. Admission Procedure

- **Applicants who have <u>not appeared for the VITEEE are not eligible for admission.</u>**

- The admission is based on the ranks secured by the applicant in the VITEEE-2020.

- Applicants will be called for counselling based on the ranks to designated counselling centres in India on a particular day.

- **VIT does not have any agent and all payments will be in the form of crossed demand draft or bank transfer only in favour of 'VIT or Vellore Institute of Technology'.**

- **Cash is not collected at any point of time. We do not demand donation. The indicated fee should be remitted by a crossed demand draft or bank transaction in favour of VIT.**

15. Counselling Process

- The applicant or authorized blood relative should appear in person with relevant documents in original for verification.

- **Candidate will not be permitted to attend counselling more than once.**

- **The candidates should produce the following documents in original along with two sets of photocopies while reporting for counselling. Candidates will not be allowed to participate in the counselling process without these documents.**

  a. VITEEE-2020 e-Admit Card, Counselling Admit card and VITEEE Result copy.

  b. Class X Board Certificate as a proof of date of birth or any other age proof Certificate.

  c. Mark sheet of Qualifying Examination (If available)/ XII Hall ticket (For candidates awaiting results).

  d. Community Certificate (For SC/ST only) for relaxation in eligibility.

  e. Nativity Certificate (For candidates hailing from Jammu and Kashmir / Ladakh and the North Eastern

states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura) for relaxation in eligibility.

f. Counselling fee as crooced DEMAND DRAFT drawn in favour of 'Vellore Institute of Technology', payable at Vellore. (Fee will be indicated in the counselling letter). Candidates without DD will not be permitted to attend counselling.

g. Candidates will be allowed to participate in the counselling process, only after verification of documents, authentic records pertaining to identification/biometrics, age, marksheets of qualifying examination, community, nativity (if applicable) and other eligibility criteria as specified in Section-3.

h. If a candidate fails to produce any of these documents, he/she will not be allowed to participate in counselling.

● **If the mark statement of the qualifying exam has not been received before the date of counselling, the candidate should furnish an undertaking stating that if he/she fails to qualify as per the norms, he/she will forfeit his / her provisional admission.**

● It is the responsibility of the candidates to ascertain whether they have the requisite qualifications for admission. Having been called for the test / counselling does not necessarily mean acceptance of the eligibility. If found ineligible at any point of time he/she will be treated as ineligible and admission will be cancelled as per the norms.

● **It is mandatory that all the original relevant documents (such as Mark statement, Transfer Certificate or School Leaving Certificate, etc.,) should be submitted to the Admissions Office at the time of admission for verification.**

● Admission to various programmes is subject to verification of facts from the original certificates/documents of the candidates. In case, any discrepancy arises, even at a later point of time after admission, the Institute reserves all rights to cancel the candidate's admission and this decision shall be final.

● **The candidate may choose the desired programme and campus on his/her turn during counselling.**

● A provisional admission letter will be issued indicating the programme and campus.

Once admitted, change of campus or branch is not possible

● The balance fee should be paid for the indicated amount by the specified date failing which admission will be forfeited.

16. Programme Fee

Please refer our website **www.vit.ac.in**

17. Payment of Balance Fees

● The balance fee in the form of a DD drawn in favour of 'Vellore Institute of Technology', payable at the respective campuses along with a covering letter should reach the **respective campus by post** within the date specified at the time of counselling. The candidates should write their name, application number, rank and the branch allotted at the time of counselling on the reverse side of the DD.

● The Balance fee may be remitted through online. Please refer **www.vit.ac.in.** for instructions.

● Tuition and Hostel fees should be **remitted within the stipulated time, failing which the admission will automatically stand cancelled without any further notice.**

● Payment after the due date will not be entertained and no intimation will be sent separately in this regard.

● The scholarships will be awarded after complete verification of the documents. Hence the admitted candidate should remit the applicable fee fully.

18. Submission of documents for verification during Admission

● The following documents in original are required to be submitted at the time of Admission for verification:

a. Qualifying examination mark statements of all attempts.

b. Transfer Certificate / School Leaving Certificate.

c. Migration Certificate (if issued by the board).

d. Community Certificate (For SC/ST only) for relaxation in eligibility.

e. Nativity Certificate (For candidates hailing from Jammu and Kashmir/Ladakh and the North Eastern states of Arunachal Pradesh, Assam, Manipur,

Meghalaya, Mizoram, Nagaland, Sikkim and Tripura) for relaxation in eligibility.

f. Provisional Admission Letter (photo copy).

g. Recent Passport size colour photos - 4 nos.

h. Affidavit to be signed separately by Student, Parent and Hostel on a ₹20/- non-judicial stamp Paper. (Format available on the website **www.vit.ac.in**).

i. Physical Fitness Certificate.

j. Copy of student profile (Please refer **www.vit.ac.in** for filling up through online link).

● **2 sets of photocopies of all original documents (Except Affidavit, Physical Fitness Certificate & Student profile) if not submitted at the time of counselling.**

● Candidates can download the acknowledgement for the documents submitted from the VIT website. **No written acknowledgement will be issued.**

● All the above mentioned original documents shall be handed over to the Admissions Office for verification at the time of admission, failing which the provisional admission accorded will stand cancelled.

19. Refund of Fees

● Refund will be made as per the norms of UGC .

● **The Counselling processing fee is NON-REFUNDABLE,** but will be adjusted in the tuition fees once the candidate joins the Institute.

● The refund will made as per the policy available in **www.vit.ac.in.** The same will be displayed during counselling process.

● All refundable deposits will be returned, after deductions if any, at the time of completion of the course or on cancellation of admission.

● Refund will be made only after submission of original fee receipt, Provisional Admission letter, No Dues Certificate and original Transfer Certificate or School Leaving Certificate. The refund will be made through account transfer to the account number mentioned in the withdraw request. Therefore, provide correct account number details. In case of refund through DD, the DD will be made only in the name of the candidate.

a. **Withdrawal before the commencement of the programme**

In case of withdrawal before the commencement of programme, kindly give your request through online.

b. **Withdrawal after the commencement of the programme**

A student once enrolled for a course is expected to complete the same. He / She cannot withdraw from the Institute without informing the Registrar in writing. Otherwise he / she will be liable to pay fees for the period his / her name remains on the rolls.

c. **Submission of 'No Dues' Certificate**

A candidate who desires to leave the Institution after joining the programme should submit a 'NO DUES' Certificate from his/her respective school of study at VIT to get back his/her certificates. **This should be accompanied by the application for withdrawal duly signed by the Parent/ Guardian and the original fee receipt, provisional admission letter (Fax / e-mail request will not be considered) and   Original Transfer Certificate/School leaving certificate.**

d. The certificates will be returned only on production of 'NO DUES' Certificate in the prescribed form, obtained from the Admissions Office.

20. Scholarship under "GV School Development Programme" (GVSDP)

Please refer our website **www.vit.ac.in.** The scholarship will be awarded after two months of commencement of the classes subject to VIT Terms and Conditions.

21. Hostel Accommodation- Vellore / Chennai/ VIT-AP/ VIT-Bhopal

● Separate hostel accommodation is available for boys and girls in all the campuses. Candidates should report to the hostel within 7 days from the date of commencement of classes, failing which, the hostel allotment will be cancelled automatically and fees paid will stand forfeited for all premises.

● Hostel accommodation will be provided only to those candidates whose residence is beyond 100 kms radius from the Institution Campus. Single room accommodation will not be available for first year undergraduate students.

For details regarding fee, mess, etc., please visit **www.vit.ac.in**

22. General Discipline

- All candidates admitted to the Institute shall maintain good conduct, pay the requisite tuition fees and other charges in the stipulated dates, attend their classes regularly and abide by the rules and regulations of the Institution. If at any point of time, the conduct and character of a candidate is not satisfactory or is of a suspicious nature, the institute reserves the right, without assigning any reason, to make him/ her vacate the hostel or expel him/her from the Institute.

- Initial admission is applicable only for the first semester. Admitted students are expected to maintain registration until the completion of the course, to the satisfaction of the Institution.

- All students have to comply with the rules and regulations that are already in force and which may be amended from time to time by the competent authority during the period of study.

a. General Instructions

- The date of commencement of classes will be mentioned in the provisional admission letter.

No communication will be sent separately to the candidates regarding this. Candidates are advised to visit the Institution website for updates on changes, if any.
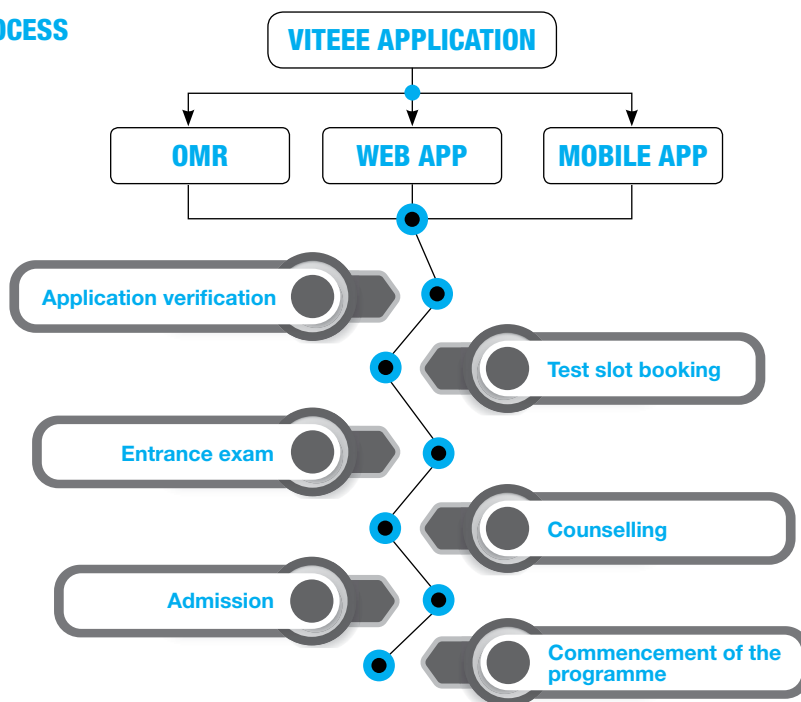
- Candidates should report to classes within 7 days from the date of commencement of classes, failing which, the admission granted will be cancelled automatically and the fees paid will stand forfeited.

- Semester scheme is followed and the medium of instruction and examination are in English only.

b. Measures for prevention of ragging at the Institution level

Ragging is totally prohibited in the institution and anyone found guilty of ragging and / or abetting ragging, whether actively or passively, or being a part of a conspiracy to promote ragging, is liable to be punished in accordance with these regulations as well as under the provisions of any penal law being in force. Ragging juniors in any form is forbidden. If anyone is found ragging his/her juniors, he/she can be rusticated from the Institution.

c. It is mandatory that candidates and parents who are attending counselling should sign an undertaking on ₹ **20/- non-judicial bond paper.** (as per UGC Regulations-2009, www.ugc.ac.in)**. Format is available on www.vit.ac.in**

ADMISSION PROCESS

Side - 1

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

VIT ENGINEERING ENTRANCE EXAMINATION
(VITEEE - 2020)

Application fee
₹1250/-

☞ Please refer to the Information Brochure and Appendixes for filling each item below.
☞ Write only in CAPITAL LETTERS using black ball point pen. Ensure that you enter the correct code mentioned against the apt choice and shade
● the circle using HB Pencil.
☞ Enter Valid email id and Mobile number for prompt communication.

BARCODE

APPLICATION NUMBER

2020400002

● ○ ○
RIGHT METHOD
✓ ✗
WRONG METHOD

1. NAME OF THE CANDIDATE (As it appears / would appear in your XII Standard Certificate-All Documents will be issued on this name only)

| S | A | J | A | L | | P | U | N | D | H | I | R | | | | | | | | | | | | | | | | | | | |

APPLICATION INCOMPLETE IN ANY RESPECT SHALL NOT BE CONSIDERED

FOLD ALONG THIS LINE

2. DATE OF BIRTH

DAY	MONTH	YEAR
0 2	0 8	0 1

3. GENDER 1
1. MALE
2. FEMALE
3. TRANSGENDER

4. RESIDENTIAL STATUS 1
1. INDIAN
2. NRI
3. PIO

5. XII BOARD REFER APPENDIX - I
0 4

6. MOBILE NUMBER
0 9 7 1 7 8 0 4 7 1 0

7. TEST CITY REFER APPENDIX - II
1 2 6

8. Enter valid Email Address :
(Use only CAPITAL LETTERS)

| S | A | J | A | L | P | U | N | D | H | I | R | @ | G | M | A | I | L | . | C | O | M | | | |

9. YOUR COMPLETE POSTAL ADDRESS INCLUDING YOUR FULL NAME (Write in Black ball point pen only. Use CAPITAL LETTERS. Do not use Pencil)

APPLICATION NUMBER

2020400002

Name : SAJAL PUNDHIR
C/O : SATISH Kr. PUNDHIR
Address : C-370
Area : BETA -1
City : GREATER NOIDA
District : GAUTAM BUDDHH NAGAR
State : UTTAR PRADESH

10. PINCODE
2 0 1 3 1 0

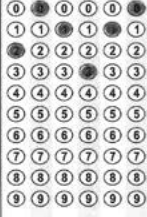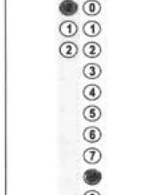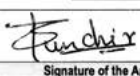VIT - A place to learn; A chance to grow

Side - 2

11. CHOICE OF SUBJECTS APPEARING IN VITEEE-2020 | 1

① ● MPCEA – (Maths / Physics / Chemistry / English / Aptitude – Candidates are eligible for all B.Tech. programmes) *
② ○ BPCEA – (Biology / Physics / Chemistry / English / Aptitude – Candidates are eligible only for B.Tech. Biostream programmes) *
*(Refer Information brochure for details)

12. DETAILS OF THE QUALIFYING EXAM PASSED / APPEARING FOR :
(Candidates must furnish this information, otherwise application will be rejected)

Qualifying Exam passed / Appearing : 12th

Name of the School : DELHI PUBLIC SCHOOL

Area : GAMMA-2

City : GREATER NOIDA

District : GAUTAM BUDDHH NAGAR

State : UTTAR PRADESH

Month & Year of Passing / Appearing : MAY 2019   (eg., APR-2020)

13. PINCODE

2 0 1 3 1 0

14. WHERE DID YOU SEE OUR ADMISSION ADVERTISEMENT ? (PLEASE SPECIFY NAME OF THE NEWS PAPER / WEBSITE etc.,)

VIT WEBSITE .

REFER APPENDIX - III

0 8

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15. Declaration

I solemnly and sincerely affirm that I am an Indian National / PIO Holder and that all particulars furnished by me in this application form are true and correct. I have not concealed any information. However, in the event of any information being found to be incorrect, fraudulent or untrue, either before or after the examination or after my admission to the programme, I understand that I am liable to face criminal prosecution and the management can claim all authority to cancel my candidature / selection or admission as the case may be and I would have to forego my seat and the fees.
I will pay the required Tuition fees and the Hostel fees within the stipulated time to ensure my admission in VIT. I agree to abide by the rules and regulations governing the examination as well as the rules pertaining to the refund of Tuition and Hostel fees contained in the brochure.
I further undertake to submit all the required certificates as per the rule, either at the time of counselling or during the admission process, failing which I understand that I would have to forego my seat and fees.
I have read the brochure and understood the contents in general and the method of Equipercentile Equating in particular. I accept this method to be adopted for Merit List preparation by VIT.
I understand that all information related to VIT application form and VIT exam will be only sent through the valid mobile number as provided by me in the same form.
I am also aware of the refund policy that the Counselling processing Fee of Rs. 11,800/- is non-refundable.

Place : DELHI

Date : 17 OCTOBER 2019

Signature of the Applicant

Key dates

Last date to reach the application to VIT Vellore	: 29th February, 2020
VITEEE Dates (Tentative)	: 2nd & 3rd week of April, 2020
Counselling Dates (Tentative)	: 2nd or 3rd week of May, 2020

Instruction for mailing OMR application:

- Fold along the line as shown in the middle of OMR sheet
- Put in the envelope given
- Handover in person or post with required postage

<div align="center">

APPENDIX - I
Codes of the School Education Boards of Class XII

</div>

State	Code	State	Code
ANDHRA PRADESH BOARD OF INTERMEDIATE EDUCATION	01	ODISHA COUNCIL OF HIGHER SECONDARY EDUCATION	21
ASSAM HIGHER SECONDARY EDUCATION COUNCIL	02	PUNJAB SCHOOL EDUCATION BOARD	22
BIHAR INTERMEDIATE EDUCATION COUNCIL (BIHAR SCHOOL EXAMINATION BOARD)	03	RAJASTHAN BOARD OF SECONDARY EDUCATION	23
CENTRAL BOARD OF SECONDARY EDUCATION	04	TAMIL NADU BOARD OF HIGHER SECONDARY EDUCATION	24
CHATTISGARH MADHYAMIK SHIKSHA MANDAL (CHATTISGARH BOARD OF SECONDARY EDUCATION)	05	TELANGANA STATE BOARD OF INTERMEDIATE EDUCATION	25
COUNCIL FOR THE INDIAN SCHOOL CERTIFICATE EXAMINATIONS	06	TRIPURA BOARD OF SECONDARY EDUCATION	26
GOA BOARD OF SECONDARY AND HIGHER SECONDARY EDUCATION	07	U P BOARD OF HIGH SCHOOL AND INTERMEDIATE EDUCATION	27
GUJARAT SECONDARY EDUCATION BOARD	08	UTTARANCHAL/ UTTARAKHAND SHIKSHA EVAM PARIKSHA PARISHAD	28
HARYANA BOARD OF EDUCATION	09	WEST BENGAL COUNCIL OF HIGHER SECONDARY EDUCATION	29
H P BOARD OF SCHOOL EDUCATION	10	NATIONAL INSTITUTE OF OPEN SCHOOLING (REGULAR)	30
JAMMU AND KASHMIR STATE BOARD OF SCHOOL EDUCATION	11	JAMIA MILIA ISLAMIA, NEW DELHI	31
JHARKHAND ACADEMIC COUNCIL	12	ALIGARH MUSLIM UNIVERSITY, ALIGARH	32
KARNATAKA BOARD OF PRE UNIVERSITY EDUCATION	13	DAYALBAGH EDUCATIONAL INSTITUTE, AGRA	33
KERALA BOARD OF PUBLIC EXAMINATIONS	14	BANASTHALI VIDYAPEETH, RAJASTHAN	34
MADHYA PRADESH BOARD OF SECONDARY EDUCATION	15	VISHWA BHARTI UNIVERSITY, SHANTINIKETAN, BIRBHOOM,WB	35
MAHARASTRA STATE BOARD OF SECONDARY AND HIGHER SECONDARY EDUCATION	16	RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES, HYDERABAD	36
MANIPUR COUNCIL OF HIGHER SECONDARY EDUCATION	17	'A' LEVEL OF GENERAL CERTIFICATE OF EDUCATION, CAMBRIDGE UNIVERSITY (IGCSE)	37
MEGHALAYA BOARD OF SECONDARY EDUCATION	18	INTERNATIONAL BACCALAUREATE	38
MIZORAM BOARD OF SCHOOL EDUCATION	19	EDEXCEL, LONDON (UK)	39
NAGALAND BOARD OF SCHOOL EDUCATION	20	OTHERS	40

* Candidates who have studied in Regular full time and formal education are alone eligible to apply.

APPENDIX – II
Codes of the Test Cities – VITEEE – 2020

State	Test City	Code	State	Test City	Code	State	Test City	Code
Andaman and Nicobar Islands	Port Blair	101	Jharkhand	Ranchi	143	Tamil Nadu	Coimbatore	184
Andhra Pradesh	Amaravati (AP)	102	Karnataka	Bangalore	144		Erode	185
	Ananthapur	103		Hubli	145		Kumbakonam	186
	Eluru	104		Mangalore	146		Madurai	187
			Kerala	Kochi	147		Salem	188
	Kurnool	106		Kozhikode	148		Tiruchirapalli	189
	Nellore	107		Thiruvananthapuram	149		Tirunelveli	190
	Rajahmundry	108		Thrissur	150		Vellore	191
	Srikakulam	109	Madhya Pradesh	Bhopal	151	Telangana	Hyderabad	192
	Tanuku	110		Gwalior	152		Karim Nagar	193
	Tirupati	111		Indore	153		Khammam	194
				Jabalpur	154		Mahbubnagar	195
	Vishakapatnam	113					Nalgonda	196
Arunachal Pradesh	Ita Nagar	114	Maharashtra	Amravati	156		Warangal	197
Assam	Dibrugarh	115		Aurangabad	157	Tripura	Agartala	198
	Guwahati	116		Latur	158	Uttar Pradesh	Agra	199
	Silchar	117		Mumbai	159		Aligarh	200
Bihar	Bhagalpur	118		Nagpur	160		Allahabad	201
	Gaya	119		Nashik	161		Bareilly	202
	Muzaffarpur	120		Pune	162		Gorakhpur	203
	Patna	121		Thane	163		Jhansi	204
Chandigarh	Chandigarh	122	Manipur	Imphal	164		Kanpur	205
Chattisgarh	Bhilai	123	Meghalaya	Shillong	165		Lucknow	206
	Bilaspur	124	Mizoram	Aizwal	166		Mathura	207
	Raipur	125	Nagaland	Dimapur	167		Meerut	208
Delhi	Delhi	126	Odisha	Berhampur	168		Moradabad	209
Goa	Goa	127		Bhubaneswar	169		Noida	210
Gujarat	Ahmedabad	128		Rourkela	170		Rae Bareli	211
	Rajkot	129	Puducherry	Puducherry	171		Saharanpur	212
	Surat	130	Punjab	Amritsar	172		Varanasi	213
	Vadodara	131		Bathinda	173	Uttarakhand	Dehradun	214
Haryana	Faridabad	132		Jalandhar City	174		Pant Nagar	215
	Gurgaon	133		Ludhiana	175		Roorkee	216
	Hissar	134	Rajasthan	Ajmer	176	West Bengal	Asansol	217
	Kurukshetra	135		Bikaner	177		Durgapur	218
Himachal Pradesh	Dharmasala	136		Jaipur	178		Kolkata	219
	Shimla	137		Jodhpur	179		Siliguri	220
Jammu & Kashmir	Jammu	138		Kota	180	Centers Abroad	Dubai	221
	Srinagar	139		Udaipur	181		Kuwait	222
Jharkhand	Bokaro	140	Sikkim	Gangtok	182		Muscat	223
	Dhanbad	141	Tamil Nadu	Chennai	183		Qatar	224
	Jamshedpur	142						

APPENDIX – III

Listed below are the codes for the column (Sl.No.14 in OMR form) where did you see our Admission Advertisement:

Sources	Codes	Sources	Codes
Friends/Relatives	01	Quora	11
Google search	02	Times of India	12
Coaching centre /School	03	The Hindu	13
Social Media	04	Eenadu	14
Online Advertisement	05	Dainik Bhaskar	15
Educational portals	06	Hindustan Times	16
WhatsApp Messages	07	Dainik Jagran	17
VIT Website	08	Indian Express	18
Facebook/ Instagram	09	Sakshi	19
Youtube	10	Deccan Chronicle	20
		Others	21

APPENDIX - IV

VITEE – 2020-SYLLABUS

a. MATHEMATICS

i. Matrices and their Applications

Adjoint, inverse – properties, computation of inverses, solution of system of linear equations by matrix inversion method. Rank of a matrix – elementary transformation on a matrix, consistency of a system of linear equations, Cramer's rule, non-homogeneous equations, homogeneous linear system and rank method.

Solution of linear programming problems (LPP) in two variables.

ii. Trigonometry and Complex Numbers

Definition, range, domain, principal value branch, graphs of inverse trigonometric functions and their elementary properties.

Complex number system - conjugate, properties, ordered pair representation.

Modulus – properties, geometrical representation, polar form, principal value, conjugate, sum, difference, product, quotient, vector interpretation, solutions of polynomial equations, De Moivre's theorem and its applications.

Roots of a complex number - nth roots, cube roots, fourth roots.

iii. Analytical Geometry of two dimensions

Definition of a conic – general equation of a conic, classification with respect to the general equation of a conic, classification of conics with respect to 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 normals – Cartesian form and parametric form- equation of chord of contact of tangents from a point (x_1, y_1) to all the above said curves.

Asymptotes, Rectangular hyperbola – Standard equation of a rectangular hyperbola.

iv. Vector Algebra

Scalar Product – angle between two vectors, properties of scalar product, and applications of dot product. Vector

product, right handed and left handed systems, properties of vector product, applications of cross product.

Product of three vectors – Scalar triple product, properties of scalar triple product, vector triple product, vector product of four vectors, scalar product of four vectors.

v. Analytical Geometry of Three Dimensions

Direction cosines – direction ratios - equation of a straight line passing through a given point and parallel to a given line, passing through two given points, angle between two lines.

Planes – equation of a plane, passing through a given point and perpendicular to a line, given the distance from the origin and unit normal, passing through a given point and parallel to two given lines, passing through two given points and parallel to a given line, passing through three given non-collinear points, passing through the line of intersection of two given planes, the distance between a point and a plane, the plane which contains two given lines (co-planar lines), angle between a line and a plane.

Skew lines - shortest distance between two lines, condition for two lines to intersect, point of intersection, collinearity of three points.

Sphere - equation of the sphere whose centre and radius are given, equation of a sphere when the extremities of the diameter are given.

vi. Differential Calculus

Limits, continuity and differentiability of functions - Derivative as a rate of change, velocity, acceleration, related rates, derivative as a measure of slope, tangent, normal and angle between curves.

Mean value theorem - Rolle's Theorem, Lagrange Mean Value Theorem, Taylor's and Maclaurin's series, L' Hospital's Rule, stationary points, increasing, decreasing, maxima, minima, concavity, convexity and points of inflexion.

Errors and approximations - absolute, relative, percentage errors - curve tracing, partial derivatives, Euler's theorem.

vii. Integral Calculus and its Applications

Simple definite integrals - fundamental theorems of calculus, properties of definite integrals.

Reduction formulae – reduction formulae for $\int \sin^n x \, dx$ and $\int \cos^n x \, dx$, Bernoulli's formula. Area of bounded regions, length of the curve.

viii. Differential Equations

Differential equations - formation of differential equations, order and degree, solving differential equations (1st order), variables separable, homogeneous, linear equations and applications.

Second order linear differential equations - second order linear differential equations with constant co-efficients, finding the particular integral if $f(x) = e^{mx}$, sin mx, cos mx, x, x^2.

ix. Probability Distributions

Probability - Axioms - Addition law - Conditional probability - Multiplicative law - Baye's Theorem - Random variable - probability density function, distribution function, mathematical expectation, variance.

Theoretical distributions-discrete distributions (Binomial, Poisson distributions)- Continuous distributions (Normal distribution).

x. Discrete Mathematics

Functions–Relations –Sequence and series (AP, GP, HP)-Binomial theorem-Basics of counting.

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

Groups-binary operations, semi groups, monoids, groups, order of a group, order of an element, properties of groups.

b. BIOLOGY

i. 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)

ii. 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.

iii. Reproduction

Asexual reproduction – binary fission, sporulation, budding, gemmule formation and fragmentation. Vegetative propagation in plants, sexual reproduction in flowering plants and 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.

iv. 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, pleiotrophy), 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.

v. Human health and diseases

Pathogens, parasites causing human diseases (malaria, dengue, chickengunia, filariasis, 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.

vi. Biochemistry

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

vii. 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.

viii. 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.

ix. 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.

x. 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.

c. PHYSICS

i. Laws of Motion & Work, Energy and Power

Law of conservation of linear momentum and its applications. Static and kinetic friction - laws of friction - rolling friction - lubrication. 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 in one and two dimensions.

ii. Properties of Matter

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 - temperature - thermal expansion: thermal expansion of solids - specific heat capacity: C_p, C_v - latent heat capacity. Qualitative ideas of Blackbody radiation: Wein's displacement Law - Stefan's law.

iii. Electrostatics

Charges and their conservation; Coulomb's law-forces between two point electric charges - Forces between multiple electric charges-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 theorem and its applications. Electrostatic induction-capacitor and capacitance - dielectric and electric polarisation - parallel plate capacitor with and without dielectric medium - applications of capacitor - energy stored in a capacitor - Capacitors in series and in parallel - action of points - Van de Graaff generator.

iv. Current Electricity

Electric Current - flow of charges in a metallic conductor - 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 for temperature coefficient of resistance measurement -Metrebridge - special case of Wheatstone bridge - Potentiometer principle - comparing the emf of two cells.

v. Magnetic Effects of Electric Current

Magnetic effect of electric current - Concept of magnetic field -Oersted's experiment - Biot-Savart law-Magnetic field due to an infinitely long current carrying straight wire and circular coil - Tangent galvanometer - construction and working - 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 and its magnetic dipole moment - Magnetic dipole moment of a revolving electron.

vi. 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 (quantitative treatment). AC generator - commercial generator. (Single phase, three phase). Eddy current - applications - transformer - long distance transmission. Alternating current - measurement of AC - AC circuit with resistance - AC circuit with inductor - AC circuit with capacitor - LCR series circuit - Resonance and Q - factor - power in AC circuits.

vii. Optics

Reflection of light, spherical mirrors, mirror formula. Refraction of light, total internal reflection and its applications, optical fibers, refraction at spherical surfaces, lenses, thin lens formula, lens maker's formula. Magnification, power of a lens, combination of thin lenses in contact, combination of a lens and a mirror. Refraction and dispersion of light through a prism. Scattering of light-blue colour of sky and reddish appearances of the sun at sunrise and sunset.

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

viii. Dual Nature of Radiation and Atomic Physics

Electromagnetic waves and their characteristics- Electromagnetic spectrum - Photoelectric effect - Light waves and photons - Einstein's photoelectric equation - laws of photoelectric emission - particle nature of light - photo cells 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.

ix. Nuclear Physics

Nuclear properties - nuclear radii, masses, binding energy, density, charge - isotopes, isobars and isotones - nuclear mass defect - binding energy - stability of nuclei - Bainbridge mass spectrometer. Nature of nuclear forces - Neutron - discovery – properties -artificial transmutation - particle accelerator. Radioactivity -alpha, beta and gamma radiations and their properties -Radioactive decay law - half life - mean life - artificial radioactivity - radio isotopes - effects and uses - Geiger - Muller counter. Radio carbon dating. Nuclear fission - chain reaction - atom bomb - nuclear reactor - nuclear fusion - Hydrogen bomb - cosmic rays - elementary particles.

x. Semiconductor Devices and their Applications

Semiconductor basics - energy band 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-Zener diode as a voltage regulator - 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.

d. CHEMISTRY

i. 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; deBroglie's theory; Heisenberg's uncertainty principle -wave nature of electron - Schrodinger wave equation (No derivation). Eigen values and eigen functions. Hybridization of atomic orbitals involving s,p and d orbitals.

ii. p, d and f – Block Elements

p-block elements - Phosphorous compounds; PCl_3, PCl_5 - Oxides. Hydrogen halides, Inter halogen compounds. 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 $K_2Cr_2O_7$. Lanthanides - Introduction, electronic configuration, general characteristics, oxidation state - lanthanide contraction, uses, brief comparison of Lanthanides and Actinides.

iii. Coordination Chemistry and Solid State Chemistry

Introduction - Terminology in 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).

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).

iv. Thermodynamics, Chemical Equilibrium and Chemical Kinetics

I and II law of thermodynamics - spontaneous and non spontaneous processes, entropy, Gibb's free energy - Free energy change and chemical equilibrium - significance of entropy.

Law of mass action - Le Chatlier'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 and activation energy.

v. Electrochemistry

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 and EMF values, Fuel cells, Corrosion and its prevention.

vi. 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.

vii. 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.

viii. 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; Clemmenson reduction, Wolff - Kishner reduction, Cannizzaro reaction, Claisen Schmidt reaction, Benzoin Condensation, Aldol Condensation. Preparation and applications of Grignard reagents.

ix. 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.

x. Organic Nitrogen Compounds and Biomolecules

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. 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 - Classification with examples, Peptides- properties of peptide bond

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

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ENGLISH

Questions on English and it will be **Multiple Choice Questions** testing 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

Assessment will be on the following area.

1. Data Interpretation

2. Data Sufficiency

3. Syllogism

4. Number series, Coding and Decoding

5. Clocks, Calendars and Directions

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APPENDIX – V

CERTIFICATE TO PROVE NATIVITY AND COMMUNITY

Form for candidates hailing from Jammu and Kashmir/Ladakh and the North Eastern states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura

Certified that Mr. / Ms. _____an

applicant for admission to B.Tech. Degree programme in the year _____, son / daughter

of Shri./Smt_____ residing

at _____

in _____District of State,

is a native of _____State.

Signature of Tahsildar or Revenue Authority

Name :

Designation :

Place :

Date :

Office Seal

THE FORM OF CASTE CERTIFICATE FOR SC / ST

Certified that Mr. / Ms. _____an

applicant for admission to B.Tech. Degree programme in the year _____, son / daughter of

Shri. / Smt _____residing at _____

_____ in _____

District of _____belongs to the _____

Caste / Tribe, _____ which is recognized as a Scheduled

Caste / Scheduled Tribe under the Constitution (Scheduled Castes) Order 1950 /The Constitution (Scheduled Tribes) Order, 1950, as amended by the Scheduled Castes and Scheduled Tribes Orders Amendment Act, 1976.

Signature of Competent Authority

Name :

Designation :

Place :

Date :

OFFICE SEAL

Authorities empowered to issue Scheduled Caste / Scheduled Tribe Certificate

District Magistrate / Additional District Magistrate / Collector / Deputy Collector / Deputy Commissioner / 1st Class Stipendiary Magistrate / City Magistrate / Sub -Divisional Magistrate / Taluk Magistrate / Executive Magistrate / Extra Assistant Commissioner.

Chief Presidency Magistrate / Additional Chief Presidency Magistrate / Presidency Magistrate

Revenue Officer not below the rank of Tahsildar

Sub-Divisional Officer of the area where the candidate and / or his family normally resides.

IMPORTANT DATES

Last date for Receipt of Applications	**February 29, 2020**
VIT Engineering Entrance Examination (VITEEE-2020)	**From 2nd to 3rd week of April, 2020**
Declaration of Results (Tentative)	**End of April, 2020**
Counselling Dates (Tentative)	**2nd or 3rd week of May, 2020**

For Admission & Hostel details kindly refer the VIT website and contact respective group of Institutes.

▸ VIT Engineering Entrance Examination (VITEEE) for B. Tech. is common for VIT-Vellore, VIT-Chennai, VIT-AP and VIT-Bhopal.

▸ All admissions are based on VITEEE ranking and the students can select the programme / campus of their choice based on the availability during counselling.

▸ All admissions are subject to the discipline and conduct of the candidate.

▸ The admissions are done in a transparent manner only on merit basis. Please do not pay any money to Consultants/ Brokers / Intermediaries. There is neither **MANAGEMENT QUOTA** nor **CAPITATION FEE** at VIT. VIT does not accept cash.

LEGAL JURISDICTION

All Suits and actions arising out of or relating to VIT shall be instituted within the jurisdiction of courts at Vellore, Tamil Nadu only. The Registrar of the Institute shall be the legal person in whose name the Institute may sue or be sued.

VIT®

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

Transforming life through excellence in education and research.™

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Website : www.vit.ac.in