SRM University,
SRM Nagar, Kattankulathur - 603 203
Kancheepuram District, Tamil Nadu, India.
Phone: +91-44-2741 7400. Information Centre: +91-44-2745 5510,
+91-44-4743 7500 Fax: + 91-44-2745 3622. Web: www.srmuniv.ac.in

ENGINEERING | MEDICINE & HEALTH SCIENCES
MANAGEMENT | SCIENCE & HUMANITIES

SRM
UNIVERSITY
(Under Section 3 of UGC Act 1956)

30 years
of enlightening lives

GUIDE TO SRMJEEE 2015 (B.TECH)

SRM
UNIVERSITY
(Under Section 3 of UGC Act 1956)

CONTENTS

IMPORTANT INFORMATION

SRM Joint Engineering Entrance Examination (SRMJEEE) for B.Tech is common for SRM Group of Universities viz., SRM University, SRM University SIKKIM and SRM University HARYANA.

Application

Applying to SRM is simple with 'two options'. You can choose either one of them (NOT BOTH)

OPTION 1: Fill the OMR sheet and send to us by safe means.

OPTION 2: Apply online using Unique Voucher Code and relevant instructions given.

Communication

Candidate's mobile number & e-mail address are mandatory as they will be used for all communications.

Examination

For B.Tech:

Candidate can choose either paper-pencil entrance exam or online entrance exam.

PART - I - GENERAL INFORMATION

1. Eligibility

1.1 Nationality

The applicant for admission should be a resident Indian national and (i) should have studied in schools located in India in the preceding two years for admission to Undergraduate program. (ii) should have studied in educational institutions in India and completed their qualifying examination.

1.2 Eligibility Criteria in Qualifying Examination

Engineering and Technology

Undergraduate Programs

B.Tech.: A pass in 10+2 or its equivalent and
(a) For all programs: Minimum 70% aggregate in Mathematics, Physics & Chemistry
(b) For biotechnology, biomedical engineering, bioinformatics and genetic engineering: Minimum 70% aggregate in Mathematics / Biology, Physics and Chemistry.

In SRMJEEE-2015

• Candidates who have attempted Physics, Chemistry and Mathematics in the SRMJEEE are eligible for all the B.Tech. degree programs.

• Candidates who have attempted Physics, Chemistry and Biology in the SRMJEEE are eligible for B.Tech. Biotechnology, Biomedical Engineering, Bioinformatics and Genetic engineering programs and also for various programs in Health Sciences.

1.3 Additional Information

• It is the responsibility of the candidates to ascertain whether they possess the requisite qualification for admission. Having been called for the written test / counseling does not necessarily mean acceptance of the eligibility.

• The admission offered to a candidate who has been provisionally admitted to a program will stand cancelled if he / she does not submit the relevant documents in original pertaining to admission (such as Marks Statements, Transfer Certificate, Conduct Certificate, etc.) to the Admissions Officer before the date stipulated by the University.

• Admissions to various programs will however be subject to verification of facts from the original certificates / documents of the candidates. In case any discrepancy is noticed, even at a later point of time after admission, the management reserves all right to cancel the candidate's admission and such a decision shall be final and binding on the candidate.

2. Admission Procedure

2.1 For B.Tech Program

• The admission will be purely on the basis of the performance in the Engineering Entrance Examination conducted by SRM University.

• The candidates short-listed based on their performance in the entrance examination will be called for the counseling to be held at the SRM University premises in Kattankulathur - 603 203, Chennai. SRM University Haryana, Sonepat – 131029, SRM University Sikkim, Gangtok - 737102.

3. SRMJEEE - 2015 Schedules

3.1 For Paper - Pencil Exam

Date: 26th April 2015, Sunday.
Time: 10.00 am to 12.30 pm.

3.2 For Online Exam

Date: 19th to 22nd April 2015.

4. SRMJEEE - 2015 Pattern

General: Question paper will be only in English. Questions are of objective type. Each question has 4 alternate answers. The correct answer has to be chosen and the appropriate oval should be shaded.

SRMJEEE - 2015 - Pattern of Question paper
For B.Tech and Health Sciences Under Graduate Programs

S.No	Details
1	Part 1: Physics 35 questions with a total weightage of 105 marks
2	Part 2: Chemistry 35 questions with a total weightage of 105 marks
3	Part 3: Mathematics 35 questions with a total weightage of 105 marks
4	Part 4: Biology 50 questions with a total weightage of 105 marks
5	Negative mark of '1' for every wrong answer in Physics, Chemistry & Mathematics and '0.7' for every wrong answer in biology
6	Total weightage 315 marks

5. Entrance Examination Rules (SRMJEEE - 2015)
5.1 For Paper - Pencil Examination

• Candidate is directed to enter into the respective Examination Hall 30 minutes prior to the commencement of the examination

• Candidate will not be permitted to enter the Examination Hall 30 minutes after the commencement of the examination

• Candidates should find and occupy his / her allotted seat

• Candidates should necessarily bring their hall ticket with them. During the examination time, invigilators will check the Hall Ticket for identity of the candidate

• Candidates are directed to bring sharp HB pencil(s), eraser, and ballpoint pen to the Examination Hall

• Candidates are not permitted to carry any text material in printed or written form, log tables, formula book, mobile phone, pager, programmable calculators in to the examination hall

• Use HB pencil for shading inside the brackets in the OMR sheet

• Answers should be given only in the answer sheet. No spare answer sheet will be given

• Altering the answer choice is not possible if shaded with ballpoint pen. If there are multiple shadings for a question, the corresponding question will be treated as unanswered

• Handle the OMR sheet with care

• Any malpractice committed is punishable as per university norms

• No candidate will be allowed to leave the examination hall till the end of the examination

• Before handing over the OMR coding sheet, candidates are requested to check the OMR coding sheet regarding the correctness of particulars and return it to their respective invigilators

5.2 For Online Examination
General Instructions

• You are going to take a computer based online Test at a workstation.

• You are required to be present in the Test Centre 30 minutes before the starting time of the Test as specified in the admit card.

• Do not carry any of your belongings inside the exam centre including mobile phone, cellular phones, pagers, palm tops, blue tooth device, or any electronic device which has the potential of misuse in cheating or unauthorized communication during the examination.

• You are allowed to carry only pen / pencil inside the test centre.

• You are required to produce your Hall Ticket and ID proof (which bears your photograph and date of birth) at the registration desk without which the entry will not be allowed.

• At the registration desk, your identity is verified, Hall Ticket scanned, photograph captured and you are assigned to a computer.

• For working purpose a paper sheet will be provided at the workstation. All rough work will need to be done in this sheet of paper and no additional material will be given for rough work.

• The administrator is authorized to dismiss you from the test session for any of the following reasons:
  - creating disturbance
  - attempting to take the test on behalf of someone else
  - talking to other examinees
  - attempting to tamper with the computer system - either hardware or software
  - if found with calculators, slide rules, pagers, cell phones, concealed microphones, wireless devices or any other material that may aid in answering questions

Specific instructions to be followed during the entrance examination will be published on our website.

6. Application Forms

Issue: The Application Forms will be issued from November onwards. There are two modes of registration.

i. Online with e-payment / Unique Voucher Code
Use the URL **www.srmuniv.ac.in/admissions,** register and pay online / use prepaid Unique Voucher Code.

ii. Online with Demand Draft
• Application to be filled online by visiting www.srmuniv.ac.in/admissions and the same can be downloaded and sent to us with the DD for ₹900/- drawn in favour of SRMIST, payable at Chennai. This has to reach us before the last date specified. Candidates should write their name and address on the reverse of DD. Your application will be processed only upon receipt of the DD.

iii. Direct
• Candidates can obtain the application form from any of the following sources upon payment of ₹900/-.
  • SRM University, Kattankulathur Campus
  • SRM University, Ramapuram Campus
  • SRM University, Vadapalani Campus
  • SRM University, NCR Campus, Delhi
  • SRM University Haryana, Sonepat
  • SRM University Sikkim, Gangtok

• The completed application should be sent to the university address mentioned in the envelope so as to reach before the last date specified.

RECEIPT OF APPLICATIONS
• Last date for receipt of filled-in application at the university office: **15th March 2015.**

• Applications received after the due date will not be accepted.

• Candidates are advised to retain a photo copy of the filled in application for future reference.

• The university will not be responsible for any postal delay, loss in postal transit or any irregularity.

7. Information at different stages
Candidates can stay updated at every stage of the admission through SMS if their correct mobile number has been provided in the application.

Candidates can also check / get all the above information by using the login details in the URL **www.srmuniv.ac.in/admissions**

8. Test Cities for SRMJEEE - 2015
Entrance examination will be conducted in two modes (i) Online Exam (ii) Paper - Pencil Exam. The list of test cities for the two modes are different. Candidates have to carefully go through the relevant list and choose the place and its code number. The lists are given along with their corresponding codes under "Instruction to fill up the application form".

IMPORTANT: Candidates opting to write online examination should browse for all the details at www.srmuniv.ac.in during a specific period and choose the examination slot. The Centre of Examination and the session, once allotted to the candidate, shall not be changed under any circumstances. While every effort will be made to allot a centre in the Test City opted by the candidate, the university reserves its right to allot a centre other than that of the candidate's choice.

9. Hall Ticket
9.1 Important Information
• The Hall Ticket will be issued only to those eligible candidates who have submitted their application forms complete in all respects, on or before the last date as specified in section 6.

• The Hall Ticket will contain **name, photograph and address of the candidate,** address of the Test Centre allotted and test schedule.

• Hall ticket should be downloaded from our website and printout taken.

• The Hall Ticket once received should be carefully examined by the candidate. If any discrepancy is noticed it should immediately be brought to the notice of the Director, Admissions.

• No candidate will be permitted to write the test without a valid Hall Ticket. The Hall Ticket should be presented to the invigilators for verification.

• Candidate must not tamper with the Hall Ticket or alter any entry made therein after it has been authenticated.

• The Hall Ticket is not transferable to any other person. Impersonation is a legally punishable offence.

• The Hall Ticket is an important document. It should be preserved and produced at the time of counseling and admission.

9.2. Hall Ticket not received due to application being incomplete

SRM University does not take any responsibility to inform candidates who have sent incomplete application. Candidates are advised to double check that the application form is complete in all respects before posting.

10. Results
10.1 Merit List
A merit list will be prepared based on the total marks secured in the SRMJEEE - 2015. Only this ranking will be intimated to the candidates and used for counseling process.

10.2 Announcement of Results
The entrance examination results will be available on **www.srmuniv.ac.in/admissions** and the rank obtained will be intimated through SMS (if you have provided your correct mobile number in the application form).

Since the machine gradable sheets are graded and scrutinized with extreme care, there is no provision for re-grading and re-totaling. No photocopy of the answer sheets will be made available. No correspondence in this regard will be entertained.

11. Marks obtained in X standard and in Higher Secondary Examinations
It is mandatory that all the candidates who apply for admission to all undergraduate programs should enter the marks obtained in X standard and in Higher Secondary Examination directly in our website using the link provided in the URL **www.srmuniv.ac.in/admissions.**

12. Counseling
Counseling Procedure for Allocation of Seats / Branch

• The date / time for counseling will be published in our university **website: www.srmuniv.ac.in/admissions.** Candidates can download and take a printout of their counseling letter and counseling record from our website and appear for the counseling as per the counseling schedule.

• Change of date / time of counseling is generally not permissible. If a candidate does not personally appear before the Admission Committee for counseling / Interview on the date and time specified, his / her seat shall be offered to the next candidate in order of merit.

• The selected candidates will have to remit the prescribed fees by way of Demand Draft drawn in favour of "SRMIST", payable at Chennai, on confirmation of the seat, and acceptance of the branch allotted.

• The candidates should produce the following documents in original along with one set of photocopies while reporting for counseling. Candidates will not be allowed to participate in the counseling process without these documents.

Required Documents in Original to be submitted during counseling & admission for UG programs.
• Counseling call letter.

• SRMJEEE - 2015 Rank Card / Hall Ticket

• High School (Class X) marks sheet.

• Marks sheet of qualifying examination (HSC).

• DEMAND DRAFT for the amount specified in the Counseling letter. DD should be drawn in favour of "SRMIST" payable at CHENNAI.

Candidates will be allowed to participate in the counseling process only after verification of the documents. Authentic records pertaining to identification, age, marks sheet of qualifying examination, community certificate (if applicable) and other eligibility criteria, will be checked. If a candidate fails to produce any of these documents, he / she will not be considered for counseling.

A candidate should decide for certain on whether he / she should join the program based on the branch allotted to him / her at the time of counseling before the payment of the fee. Allotment of branch once made is final and cannot be changed under any circumstances. Upon allotment, the candidate has to submit all the original documents and also pay the full tuition fee for first year.

13. Tuition and Special Fees
Details of the academic fees and hostel fees will be published on the website: **www.srmuniv.ac.in**

13.1 Mode of Payment
All payments are to be made only in the form of a crossed Demand Draft drawn in favour of "SRMIST", payable at CHENNAI. Candidates should write their name and mobile number on the reverse of the demand draft.

13.2 Refund of Fees
Any fees once paid will not be refunded under any circumstances.

Request for cancellation of admission and refund of fees may be considered as per the following norms. Such requests should be submitted along with original allotment order and the fee receipt to the Head of the Institution in which admission is taken.

Request received before the date of commencement of classes	₹1000/- will be deducted towards administrative charges and balance amount will be refunded.
Request received on or after the date of commencement of classes	No refund

13.3 Discontinuance / Withdrawal from the Program
A candidate who desires to leave the institution after joining the program will have to submit a 'NO DUES' certificate issued by the competent authorities. This should be accompanied by the application for withdrawal and the original fee receipt.

The original certificates will be returned only on production of 'NO DUES' certificate in the prescribed form, obtained from the Administrative Office.
Authority: Head of the Institution.

14. Special Note
14.1 Eligibility conditions such as the minimum percentage of marks / CGPA obtained by the candidate in the qualifying examination shall be as prescribed by the University from time to time.

14.2 The university reserves the right to add / delete programs depending on the viability to offer the same.

14.3 Accommodation in the University hostels will be subject to availability and allocation will be done only after the payment of full tuition fees and enrollment.

14.4 All disputes are subject to the jurisdiction of the courts at Chennai only.

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

Ragging juniors in any form is forbidden. If any one is found ragging his / her juniors, he / she can be rusticated from the University.

PART II - INSTRUCTIONS TO FILL UP THE COMPUTERIZED OMR APPLICATION FORM

GENERAL

Read the following instructions carefully before filling the application form. Requests for corrections will not be entertained later.

• Candidate appearing in the qualifying examinations to be held in March / April / May 2015 can also apply and take up the entrance examination. However, admission to such candidates will be subject to:

(i) Satisfying the eligibility criteria as prescribed by SRM University and

(ii) Production of all documents (originals) by the cut - off date stipulated by SRM University.

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

ONLY THE ORIGINAL APPLICATION SHOULD BE SENT

• Your application form will be machine-processed. Hence take utmost care in writing with black ballpoint pen in the boxes wherever provided. Corresponding to the above, darken the alphabet / numeral / oval using HB pencil only

• If you wish to change a marking, erase the darkened spot completely and do the fresh marking

• Do not scribble, cut, tear or erase the application form. Do not put any stray pencil marks anywhere on the application form

• Do not write / make any marks on / deface the Barcode

• Your photograph, signature and address are to be machine-scanned. So, paste a recent colour photograph of good quality with light colour background. Write your address and sign in the prescribed boxes using only a black ballpoint pen

• Note that your name, your parent's / guardian's name and your date of birth should be exactly the same as given in your High School / Higher Secondary School examination certificate

• Your application must be complete in all respects. An incomplete application or application filled in a language other than English will summarily be rejected

• Options once filled in the application form cannot be changed at a later stage

• Candidates are advised to retain with them a photocopy of the filled-in application for future reference and quote the application number in all correspondence

• If you wish to apply online using unique voucher code, use the instructions printed in the application form under Option 2.

ITEM WISE INSTRUCTIONS

Item - 1: Name of the Candidate

Write your name in CAPITAL LETTERS as given in your X standard school certificate. Write only one letter in a box. Do not leave any blank box between the letters in a word. One box should be left blank between consecutive words of your name. If your name has several initials, leave one blank after each of them. Darken the corresponding alphabet underneath each letter of the name. Do not prefix your name with Mr., Ms., etc.

Item - 2: Gender

Item - 3: Community

Write the appropriate serial number in the boxes provided and then darken the appropriate oval to correspond with the code, in all the above items.

Item - 4: Date of Birth

Write the date, month and year of your birth as per the English calendar and as recorded in your High School / Higher Secondary School examination certificate. Use numerals 01 to 31 for DATE, numerals 01 to 12 for MONTH, and all the four digits for the YEAR of birth. Darken the corresponding numerals for date, month and year in each column.

Item - 5: State mentioned in Item 18

Refer to list given below and enter the appropriate code in the box provided. Darken the numerals corresponding to the code.

Codes of the State / Union Territory

State	Code
Andhra Pradesh	11
Arunachal Pradesh	12
Assam	13
Bihar	14
Chattisgarh	15
Delhi	16
Goa	17
Gujarat	18
Haryana	19
Himachal Pradesh	20
Jammu and Kashmir	21
Jharkhand	22
Karnataka	23
Kerala	24
Madhya Pradesh	25
Maharashtra	26
Manipur	27
Meghalaya	28
Mizoram	29
Nagaland	30
Orissa	31
Punjab	32
Rajasthan	33
Sikkim	34
Tamil Nadu	35
Telangana	36
Tripura	37
Uttar Pradesh	38
Uttaranchal	39
West Bengal	40
Andaman And Nicobar Islands (UT)	41
Chandigarh (UT)	42
Dadra and Nagar Haveli (UT)	43
Daman and Diu (UT)	44
Lakshadweep (UT)	45
Puducherry (UT)	46

Item - 6: Contact Mobile Number

Write your mobile number in the space provided. Darken the corresponding numeral under each digit.

Item - 7: Photograph

Affix one recent (taken not later than a month) good quality colour photograph with light colour background in the space provided for this purpose. Spectacles if being used regularly are allowed. The photograph should be firmly affixed to the application form. It should not be pinned or stapled. Photograph should not be larger than the space provided in the box for pasting it.

It is expected that the candidate will have the same appearance at the time of the examination and counseling as in the photograph affixed in the application form. In case his / her appearance changes, he / she would be required to bring two new photographs at the time of the examination.

Item - 8: Signature

Your signature establishes your identity. Hence sign using a black ink ballpoint pen, within the box provided.

Item - 9: Details of the Qualifying Examination Passed / Appearing

Shade the appropriate box to indicate whether you have passed or are appearing. Depending on the program applying for, give the details of Higher Secondary examination or Undergraduate examination. If already passed, attach photo copies of the relevant marks sheet.

Item - 10: Percentage of Marks (%) obtained in X standard

Write the aggregate percentage marks obtained in X standard.

Darken the corresponding numerals under each digit.

Item - 11: XII Board / Equivalent

Refer to the list given below and write the appropriate code in the box provided. Darken the corresponding numeral under each digit of the code.

Codes of Secondary School Education (Class XII) Boards

Name of Board	Code
Andhra Pradesh Board of Intermediate Education	11
Assam Higher Secondary Education Council	12
Bihar Intermediate Education Council	13
Central Board of Secondary Education	14

Chattisgarh Madhyamik Shiksha Mandal	15
Council for the Indian School Certificate Examinations	16
Goa Board of Secondary and Higher Secondary Education	17
Gujarat Secondary and Higher Secondary Education	18
H P Board of School Education	19
Haryana Board of Education	20
J & K State Board of School Education	21
Jharkhand Academy Council	22
Karnataka Board of Pre-university Education	23
Kerala Board of Public Examinations	24
Madhya Pradesh Board of Secondary Education	25
Maharashtra State Board of Secondary and Higher Secondary Education	26
Manipur Council of Higher Secondary Education	27
Meghalaya Board of Secondary Education	28
Mizoram Board of School Education	29
Nagaland Board of School Education	30
National Institute of Open Schooling	31
Orissa Board of Secondary Education	32
Punjab School Education Board	33
Rajasthan Board of Secondary Education	34
Tamil Nadu Board of Higher Secondary Education	35
Telangana Intermediate Education Board	36
Tripura Board of Secondary Education	37
U.P. Board of High School & Intermediate Education	38
Uttaranchal Shiksha Evam Pariksha Parishad	39
West Bengal Council of Higher Secondary Education	40

Item - 12: Percentage of Marks (%) Obtained in XII standard / equivalent

Write the aggregate percentage of marks obtained in PCM / PCB in XII standard / equivalent examination, if already passed and the results are available; otherwise leave it blank. Darken the corresponding numerals under each digit.

Note: The percentage of marks should be rounded off to the nearest integer. However, the marks below 70% should not be rounded off.

Item - 13: Option for Online Exam

If a candidate wishes to appear for online exam, indicate "Yes" and shade accordingly otherwise indicate "No" and shade accordingly.

Item - 14: Test City Centre (for Online Exam)

If a candidate has opted for online entrance examination, refer the following list to choose a test city and write the appropriate code in the space provided. Darken the corresponding numeral under each digit.

State	Centre	Centre code
Andhra Pradesh	Guntur	102
	Nellore	104
	Rajahmundri	105
	Tirupathi	106
	Vijayawada	107
	Vishakhapatnam	108
Assam	Guwahati	111
Bihar	Muzaffarpur	115
	Patna	116
Chandigarh	Chandigarh	118
Chattisgarh	Raipur	121
Gujarat	Ahmedabad	123
	Surat	125
Haryana	Gurgaon	129
	Sonepat	130
Jharkhand	Jamshedpur	137
	Ranchi	138
Karnataka	Bangalore	139
Kerala	Ernakulam	141
	Kozhikodu	143
	Thrissur	144
	Thiruvananthapuram	145
Madhya Pradesh	Bhopal	146
	Indore	148
Maharastra	Mumbai	150
	Nagpur	151
New Delhi	New Delhi	153
Orissa	Bhubaneshwar	154
Puducherry	Puducherry	156
Rajasthan	Jaipur	159
	Kota	161
Sikkim	Gangtok	163
Tamil Nadu	Chennai	165
	Chennai - Kattankulathur	166
	Coimbatore	168
	Madurai	174
	Salem	177
	Tiruchirapalli	179
	Vellore	182
Telangana	Hyderabad/Secunderabad	183
	Warangal	185
Uttar Pradesh	Allahabad	186
	Ghaziabad	189
	Kanpur	192
	Lucknow	193
	Noida	195
	Varanasi	196
Uttaranchal	Dehra Dun	197
West Bengal	Kolkata	199

Item - 15. Test City Centre (For Paper - Pencil Exam)

If a candidate has opted for Paper - Pencil Exam, refer the following list and write the appropriate code in the space provided. Darken the corresponding numeral under each digit.

Codes of the Test City Centres

State	Centre Name	Centre code
Andaman & Nicobar	Port Blair	101
Andhra Pradesh	Guntur	102
	Karnool	103
	Nellore	104
	Rajahmundri	105
	Thirupathi	106
	Vijayawada	107
	Visakhapatnam	108
Arunachal Pradesh	Itanagar	109
Assam	Dibrugarh	110
	Guwahati	111
Bihar	Bhagalpur	112
	Darbhanga	113
	Gaya	114
	Muzaffarpur	115
	Patna	116
	Samastipur	117
Chandigarh	Chandigarh	118
Chattisgarh	Bilaspur	119
	Korba	120
	Raipur	121
Goa	Panaji	122
Gujarat	Ahmedabad	123
	Rajkot	124
	Surat	125
	Vadodara	126
Haryana	Bahadurgarh	127
	Faridabad	128
	Gurgaon	129
	Sonepat	130
Himachal Pradesh	Dharamshala	131
	Shimla	132
Jammu & Kashmir	Jammu	133
	Srinagar	134
Jharkhand	Bokaro Steel City	135
	Dhanbad	136
	Jamshedpur	137
	Ranchi	138
Karnataka	Bangalore	139
	Hubli	140
Kerala	Ernakulam	141
	Kottayam	142
	Kozhikodu	143
	Thiruvananthapuram	144
	Thrissur	145
Madhya Pradesh	Bhopal	146
	Gwalior	147
	Indore	148
	Katni	149
Maharashtra	Mumbai	150
	Nagpur	151
	Pune	152
New Delhi	New Delhi	153
Orissa	Bhubaneswar	154
	Rourkela	155
Puducherry	Puducherry	156
Punjab	Jalandhar	157
Rajasthan	Bikaner	158
	Jaipur	159
	Jodhpur	160
	Kota	161
	Udaipur	162
Sikkim	Gangtok	163

Tamil Nadu	Attur(Salem)	164
	Chennai	165
	Chennai - Kattankulathur	166
	Chidambaram	167
	Coimbatore	168
	Cuddalore	169
	Dindugal	170
	Erode	171
	Krishnagiri	172
	Kumbakonam	173
	Madurai	174
	Nagercoil	175
	Namakkal	176
	Salem	177
	Thanjavur	178
	Tiruchirapalli	179
	Tirunelveli	180
	Tiruppur	181
	Vellore	182
Telangana	Hyderabad / Secunderabad	183
	Karimnagar	184
	Warangal	185
Uttar Pradesh	Allahabad	186
	Bareilly	187
	Faizabad	188
	Ghaziabad	189
	Gorakpur	190
	Jhansi	191
	Kanpur	192
	Lucknow	193
	Meerut	194
	Noida	195
	Varanasi	196
Uttaranchal	Dehra Dun	197
West Bengal	Durgapur	198
	Kolkata	199
	Siliguri	200

Item – 16: Choice of University
Use the list given here and select the University of your choice.
Darken the corresponding oval.
SRM Chennai (4 campuses)   11
SRM Haryana   12
SRM Sikkim   13

Item - 17: Branch / Specialization
Use the list given here and select branch for B.Tech. Write the appropriate code in the space provided and darken the corresponding numeral under each digit.

Programs offered during the Academic Year 2015-16
Engineering & Technology
SRM Chennai
B.Tech (duration - 4 years)
* Offered in Kattankulathur Campus

S.No.	Branch	Code
1.	Aerospace Engineering	101
2.	Automobile Engineering	102
3.	Biomedical Engineering	104
4.	Biotechnology	105
5.	Chemical Engineering	106
6.	Civil Engineering	107
7.	Computer Science & Engineering	108
8.	Electronics & Communication Engineering	109
9.	Electrical & Electronics Engineering	110
10.	Electronics & Instrumentation Engineering	111
11.	Genetic Engineering	112
12.	Information Technology	113
13.	Information & Telecommunication Engineering	114
14.	Mechanical Engineering	116
15.	Mechatronics	117
16.	Nanotechnology	118
17.	Software Engineering	119

** Offered in Ramapuram Campus: 107, 108, 109, 110, 113, 116
** Offered in Ramapuram Part II Vadapalni Campus: 108, 109, 116
** Offered in NCR Campus: 102, 107, 108, 109, 110, 113, 116

SRM Haryana

S.No.	Branch	Code
1.	Bioinformatics	103
2.	Civil Engineering	107
3.	Computer Science and Engineering	108
4.	Electronics & Communication Engineering	109
5.	Electrical & Electronics Engineering	110
6.	Mechanical Engineering	116

SRM Sikkim

S.No.	Branch	Code
1.	Civil Engineering	107
2.	Computer Science and Engineering	108
3.	Electronics & Communication Engineering	109

Item - 18: Complete Postal Address
Write the complete postal address in capital letters. The address must include your parent name, and all other details including the correct pincode, for letters to reach you. Indicate your phone no. with the correct STD code & email ID. Please note that this block will be machine-scanned and therefore the details should be written within the rectangular box provided. This address will be used on the Hall Ticket.

Item - 19: Declaration
The candidate must sign the declaration and fill up the place and date. Applications without signatures or with different signatures in item 8 and item 19 will be treated as incomplete and rejected.
The declaration by the candidate must be countersigned by the parent / guardian.

Use the URL with Login ID and Password to:
1. View your application details
2. Download and print your Hall Ticket
3. View your results and counseling details.
   Download and take printout of rank card, counseling call letter and related information.
4. Enter your X standard, Higher Secondary examination marks.

URL: **www.srmuniv.ac.in/admissions**

Login credentials: As sent to your email address

PART III - SYLLABUS AND MODEL QUESTIONS FOR ENTRANCE EXAMINATION

B.Tech:

PART 1 - PHYSICS (35 Questions)

UNIT 1: Units and Measurement
Units for measurement, system of units-S.I., fundamental and derived units, measurements-errors in measurement-significant figures, dimensions-dimensional analysis-applications.

UNIT 2: Mechanics
Motion in one dimension-uniform and non-uniform motion-uniformly accelerated motion-scalar and vector quantities-Newton's laws of motion-force and inertia-impulse and momentum-law of conservation of linear momentum-applications-motions in two dimension- projectile motion-uniform circular motion-friction-laws of friction-applications- centripetal force-centre of mass-torque-angular momentum and its conservation-moment of inertia-theorems of moment of inertia-work-energy-potential energy and kinetic energy-power-collision-elastic and inelastic collisions.

UNIT 3: Gravitation, Mechanics of Solids and Fluids
The universal law of gravitation, acceleration due to gravity-variation of 'g' with altitude, latitude and depth-gravitation potential-escape velocity and orbital velocity-geostationary satellites-Kepler's laws of planetary motion. Solids-elastic behaviour, stress-strain-Hooke's law-Modulli of elasticity-relation between them-surface tension-capillarity-applications-viscosity-Poiseuille's formula-Stokes law-applications-streamline and turbulent flow-Reynolds number-Bernoulli's theorem- applications.

UNIT 4: Oscillations and Wave Motion
Periodic motion-simple harmonic motion-equations of motion-oscillations of spring-simple pendulum-free, forced and damped oscillations-resonance-applications-wave motions-longitudinal and transverse waves-velocity of wave motion in different media-Newton's formula-Laplace's correction-super position of waves-progressive and standing waves-sonometer-air columns-Doppler effect and its applications.

UNIT 5: Heat and Thermodynamics
Kinetic theory of gases-postulates-pressure of a gas-specific heat capacity-relation between Cp and Cv-first law of thermodynamics thermodynamical processes-isothermal and adiabatic-reversible and irreversible process-second law of thermodynamics-Carnot's engine-Heat transfer-conduction-convection-radiation-thermal conductivity of solids-black body radiations-Kirchoff's law-Wien's displacement law-Stefan's law-Newton's law of cooling.

UNIT 6: Ray and Wave Optics and Magnetism
Reflection and refraction of light-total internal reflection-velocity of light determination-deviation and dispersion of light by a prism-Lens formula-magnification-power of lens-combination of thin lenses in contact-Microscope-Astronomical telescope-wavefront-Huygens principle-wave nature of light-interference-Young's double slit experiment-diffraction and polarization.

UNIT 7: Electricity and Magnetism
Electrostatics-Coulomb's inverse square law-dielectric constant-electric field-electric lines of force-electric dipole-electric potential-potential difference-electric flux-Gauss theorem-electrostatic induction-capacitor capacitors in parallel and series-action of points-lightning arrester electric current-drift velocity of electrons-Ohm's law-electrical resistivity and conductivity-super conductivity-Kirchoff's law-Wheatstone's bridge-principle of potentiometer-electric power-Earth's magnetic field and magnetic elements-magnetic field due to a magnetic dipole-torque on a magnetic dipole-tangent law tangent galvanometer-deflection magnetometer-magnetic properties of a material-dia, para and ferromagnetic materials-applications.magnetic effects of electric current-Bio Savart law-force on a moving charge in an uniform magnetic field-moving coil galvanometer-conversion of a galvanometer into voltmeter and ammeter-Faraday's law-Lenz law of electromagnetic induction-Self inductance-mutual inductance-Flemming's right hand rule-methods of inducing emf-eddy current. Alternating currents-LCR series circuit-AC generator-Transformer.

UNIT 8: Atomic Physics and Relativity
Atomic structure-properties of cathode rays and positive rays-specific charge of an electron-atom model-Thomson atom model-Rutherford atom model-Bohr atom model-merits and demerits-quantum numbers-X-rays-production-properties-Bragg's law-Bragg's X-ray spectrometer-Photoelectric effect-laser-spontaneous and stimulated emission-laser action-characteristics of laser light-ruby laser-applications of laser relativity-Einstein's mass energy relation-variation of mass with velocity.

UNIT 9: Dual Nature of Matter and Nuclear Physics
Matter waves-wave nature of particles-De Broglie wavelength- electron microscope. Nuclear properties; radius, mass, binding energy, density, isotopes, mass defect-Bainbridge mass spectrometer-nuclear forces neutron discovery-radioactivity - α, β and γ decay-half life and mean life-artificial radio activity-radio isotopes-radio carbon dating-radiation hazards. Nuclear fission-nuclear reactor-nuclear fusion-hydrogen bomb cosmic rays-elementary particles.

UNIT 10: Electronics and Communication
Semiconductors-doping-types-PN junction diode-biasing-diode as a Rectifier-transistors-transistor characteristics-amplifier-gain-feedback in amplifiers-logic gates-basic logic gates-NOT, OR, AND, NOR, NAND-universal gates-De Morgan's theorems-space communication propagation of electromagnetic waves in atmosphere-sky and space wave propagation-modulation types–demodulation-microwaves-radars.

PART 2 - CHEMISTRY (35 Questions)

UNIT 1: Some Basic Concepts in Chemistry
Matter and its nature, Dalton's atomic theory; concept of atom, molecule, element and compound; physical quantities and their measurements in chemistry, precision and accuracy, significant figures, S.I. Units, dimensional analysis; laws of chemical combination;atomic and molecular masses, mole concept, molar mass, percentage composition, empirical and molecular formulae; chemical equations and stoichiometry.

UNIT 2: States of Matter
Classification of matter into solid, liquid and gaseous states.

Solid State: Classification of solids: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea); Bragg's Law and its applications; unit cell and lattices, packing in solids (fcc, bcc and hcp lattices), voids, calculations involving unit cell parameters, imperfection in solids; electrical, magnetic and dielectric properties.

Liquid State: Properties of liquids - vapour pressure, viscosity and surface tension and effect of temperature on them (qualitative treatment only).

Gaseous State: Measurable properties of gases; Gas laws-Boyle's law, Charle's law, Graham's law of diffusion, Avogadro's law, Dalton's law of partial pressure; concept of absolute scale of temperature; ideal gas equation, kinetic theory of gases (only postulates); concept of average, root mean square and most probable velocities; real gases, deviation from ideal behaviour, compressibility factor, Van der Waals equation, liquefaction of gases, critical constants.

UNIT 3: Chemical Families - Periodic Properties
Modern periodic law and present form of the periodic table, s&p block elements, periodic trends in properties of elements, atomic and ionic radii, ionization enthalpy, electron gain enthalpy, valence, oxidation states and chemical reactivity. Transition elements-d-block elements, inner transition elements-f-block elements. Ionization energy, lanthanides and actinides-general characteristics.

Coordination Chemistry: Coordination compounds, nomenclature: terminology - Werner's coordination theory. Applications of coordination compounds.

UNIT 4: Atomic Structure
Discovery of sub-atomic particles (electron, proton and neutron); Thomson and Rutherford atomic models and their limitations; nature of electromagnetic radiation, photoelectric effect; spectrum of hydrogen atom, Bohr model of hydrogen atom-its postulates, derivation of the relations for energy of the electron and radii of the different orbits, limitations of Bohr's model; dual nature of matter, De-Broglie's relationship, Heisenberg uncertainty principle. Elementary ideas of quantum mechanics, quantum mechanical model of atom, its important features,

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

UNIT 5: Chemical Bonding and Molecular Structure

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

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

Molecular orbital theory - Its important features, LCAOs, types of molecular orbitals (bonding, anti-bonding), sigma and pi-bonds, molecular orbital electronic configurations of homonuclear diatomic molecules, concept of bond order, bond length and bond energy. Elementary idea of metallic bonding. Hydrogen bonding and its applications.

Extractive metallurgy of sodium, lithium, properties of alkali metals, basic nature of oxides and hydroxides, compounds of alkaline earth metals, compounds of boron. Oxides, carbides, halides and sulphides of carbon group. Oxides-classification-acidic, basic, neutral, peroxide and amphoteric oxides.

UNIT 6: Chemical Energetics

First law of thermodynamics, energy changes during a chemical reaction, internal energy and enthalpy, Hess's law of constant heat summation, numerical based on these concepts. Enthalpies of reactions (enthalpy of neutralization, enthalpy of combustion, enthalpy of fusion and vaporization).

UNIT 7: Chemical Thermodynamics

Second law of thermodynamics - Spontaneity of processes; ΔS of the universe and ΔG of the system as criteria for spontaneity, ΔG^o (Standard Gibbs energy change) and equilibrium constant.

UNIT 8: Solutions

Different methods for expressing concentration of solution-Molality, molarity, mole fraction, percentage (by volume and mass both), vapour pressure of solutions and Raoult's law-ideal and non-ideal solutions, vapour pressure-composition plots for ideal and non-ideal solutions; colligative properties of dilute solutions-relative lowering of vapour pressure, depression of freezing point, elevation of boiling point and osmotic pressure; determination of

molecular mass using colligative properties; abnormal value of molar mass, Van't Hoff factor and its significance.

UNIT 9: Chemical Equilibrium

Meaning of equilibrium, concept of dynamic equilibrium.

Equilibria involving physical processes: Solid-liquid, liquid-gas and solid-gas equilibria, Henry's law, Equilibria involving chemical processes: Law of chemical equilibrium, equilibrium constants (Kp and Kc) and their significance, significance of ,1G and ,1Go in chemical equilibria, factors affecting equilibrium concentration, pressure, temperature, effect of catalyst; Le Chatelier's principle.

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

UNIT 10: Electrochemistry

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

Electrochemical cells-Electrolytic and Galvanic cells, different types of electrodes, electrode potentials including standard electrode potential, half-cell and cell reactions, emf of a galvanic cell and its measurement; Nernst equation and its applications; dry cell and lead accumulator; fuel cells; corrosion and its prevention.

UNIT 11: Surface Chemistry, Chemical Kinetics and Catalysis

Adsorption-Physisorption and chemisorption and their characteristics, factors affecting adsorption of gases on solids-Freundlich and Langmuir adsorption isotherms, adsorption from solutions.

Catalysis-Homogeneous and heterogeneous, activity and selectivity of solid catalysts, enzyme catalysis and its mechanism.

Colloidal state-Distinction among true solutions, colloids and suspensions, classification of colloids-lyophilic, lyophobic; multi molecular, macromolecular and associated colloids (micelles), preparation and properties of colloids-Tyndall effect, Brownian movement, electrophoresis, dialysis, coagulation and flocculation; emulsions and their characteristics.

Rate of reaction, instantaneous rate of reaction and order

of reaction. Factors affecting rates of reactions - factors affecting rate of collisions encountered between the reactant molecules, effect of temperature on the reaction rate, concept of activation energy, catalyst. Rate law expression. Order of a reaction (with suitable examples). Units of rates and specific rate constants. Order of reaction and effect of concentration (study will be confined to first order only). Theories of catalysis adsorption theory-some of important industrial process using catalysts.

Nuclear Chemistry: Radioactivity: isotopes and isobars: Properties of α, β and γ rays; Kinetics of radioactive decay (decay series excluded), carbon datting; Stability of nuclei with respect to proton-neutron ratio; brief discussion on fission and fusion reactions.

UNIT 12: Purification and Characterisation of Organic Compounds

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

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

Quantitative analysis (basic principles only) - Estimation of carbon, hydrogen, nitrogen, halogens, sulphur, phosphorus. Calculations of empirical formulae and molecular formulae; numerical problems in organic quantitative analysis.

UNIT 13: Some Basic Principles of Organic Chemistry

Tetravalency of carbon; shapes of simple molecules-hybridization (s and p); classification of organic compounds based on functional groups: -C=C-, -C≡C- and those containing halogens, oxygen, nitrogen and sulphur; homologous series; isomerism-structural and stereoisomerism.

Nomenclature (Trivial and IUPAC)

Covalent bond fission - Homolytic and heterolytic: free radicals, carbocations and carbanions; stability of carbocations and free radicals, electrophiles and nucleophiles. Electronic displacement in a covalent bond-inductive effect, electromeric effect, resonance and hyperconjugation.

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

UNIT 14: Hydrocarbons

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

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

Alkenes-Geometrical isomerism; mechanism of electrophilic addition: addition of hydrogen, halogens, water, hydrogen halides (Markownikoff's and peroxide effect); ozonolysis, oxidation, and polymerization.

Alkynes-Acidic character; addition of hydrogen, halogens, water and hydrogen halides; polymerization. Aromatic hydrocarbons-nomenclature, benzene-structure and aromaticity; mechanism of electrophilic substitution: halogenation, nitration, Friedel-Craft's alkylation and acylation, directive influence of functional group in monosubstituted benzene.

UNIT 15: Organic Compounds Containing Oxygen

General methods of preparation, properties, reactions and uses.

Alcohols: Distinction of primary, secondary and tertiary alcohols; mechanism of dehydration. Reactions of hydroxyl derivatives.

Phenols: Acidic nature, electrophilic substitution reactions: halogenation, nitration and sulphonation, Reimer-Tiemann reaction. Addition to >C=O group, relative reactivities of aldehydes and ketones.

Ethers: Structure.

Aldehyde and Ketones: Nature of carbonyl group; Nucleophilic addition reactions (addition of HCN, NH3 and its derivatives), Grignard reagent; oxidation; reduction (Wolff Kishner and Clemmensen); acidity of-hydrogen, aldol condensation, Cannizzaro reaction, Haloform reaction; Chemical tests to distinguish between aldehydes and Ketones.

Carboxylic acids: Reactions, Acidic strength and factors affecting it; reactions of acid derivatives.

UNIT 16: Organic Compounds Containing Nitrogen
General methods of preparation, properties, reactions and uses.

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

Diazonium salts: Importance in synthetic organic chemistry.

UNIT 17: Polymers
General introduction and classification of polymers, general methods of polymerization–addition and condensation, copolymerization; natural and synthetic rubber and vulcanization; some important polymers with emphasis on their monomers and uses - polythene, nylon, polyester and bakelite.

UNIT 18: Biomolecules
Carbohydrates-Classification: aldoses and ketoses; monosaccharides (glucose and fructose), constituent monosaccharides of oligosacchorides (sucrose, lactose, maltose) and polysaccharides (starch, cellulose, glycogen).

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

Vitamins - Classification and functions.

Nucleic acids - Chemical constitution of DNA and RNA. Biological functions of nucleic acids.

UNIT 19: Chemistry in Everyday Life
Chemicals in medicines-Analgesics, tranquilizers, antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids.

Antihistamins-their meaning and common examples. Chemicals in food-preservatives, artificial sweetening agents-common examples.

Cleansing agents–Soaps and detergents, cleansing action.

PART 3 - MATHEMATICS (35 Questions)

UNIT 1: Sets, Relations and Functions
Sets and their representations, union, intersection and complements of sets and their algebraic properties, relations, equivalence relations, mappings, one-one, into and onto mappings, composition of mappings.

UNIT 2: Complex Numbers
Complex numbers in the form a+ib and their representation in a plane. Argand diagram. Algebra of complex numbers, modulus and argument (or amplitude) of a complex number, square root of a complex number. Cube roots of unity, triangle inequality.

UNIT 3: Matrices and Determinants
Determinants and matrices of order two and three, properties of determinants, evaluation of determinants. Addition and multiplication of matrices, adjoint and inverse of matrix.

UNIT 4: Applications of Matrices and Determinants
Computing the rank of a matrix-test of consistency and solution of simultaneous linear equations using determinants and matrices.

UNIT 5: Quadratic Equations
Quadratic equations in real and complex number system and their solutions. Relation between roots and coefficients, nature of roots, formation of quadratic equations with given roots; symmetric functions of roots, equations reducible to quadratic equations.

UNIT 6: Permutations and Combinations
Fundamental principle of counting: permutation as an arrangement and combination as selection, meaning of P(n,r) and C(n,r). Simple applications.

UNIT 7: Mathematical Induction and its Applications
Stating and interpreting the principle of mathematical induction. Using it to prove formula and facts.

UNIT 8: Binomial Theorem and its Applications
Binomial theorem for a positive integral index; general term and middle term; Binomial theorem for any index. Properties of binomial coefficients. Simple applications for approximations.

UNIT 9: Sequences and Series
Arithmetic, geometric and harmonic progressions. Insertion of arithmetic, geometric and harmonic means between two given numbers. Relation between A.M., G.M. and H.M. arithmetic, geometric series, exponential and logarithmic series.

UNIT 10: Differential Calculus
Polynomials, rational, trigonometric, logarithmic and exponential functions. Inverse functions. Graphs of simple functions. Limits, continuity, differentiation of the sum, difference, product and quotient of two functions, differentiation of trigonometric, inverse trigonometric, logarithmic, exponential, composite and implicit functions, derivatives of order up to two.

UNIT 11: Applications of Differential Calculus
Rate of change of quantities, onotonic - increasing and decreasing functions, maxima and minima of functions of one variable, tangents and normals, Rolle's and Lagrange's mean value theorems.

UNIT 12: Integral Calculus
Integral as an anti-derivative. Fundamental integrals involving algebraic, trigonometric, exponential and logarithmic functions. Integration by substitution, by parts and by partial fractions. Integration using trigonometric identities. Integral as limit of a sum. Properties of definite integrals. Evaluation of definite integrals; Determining areas of the regions bounded by simple curves.

UNIT 13: Differential Equations
Ordinary differential equations, their order and degree. Formation of differential equations. Solution of differential equations by the method of separation of variables. Solution of homogeneous and linear differential equations and those of the type $d2y / dx2 = f(x)$.

UNIT 14: Straight Lines in Two Dimensions
Cartesian system of rectangular co-ordinates in plane, distance formula, area of a triangle, condition for the collinearity of three points and section formula, centroid and in-centre of a triangle, locus and its equation, translation of axes, slope of a line, parallel and perpendicular lines, intercepts of a line on the coordinate axes. Various forms of equations of a line, intersection of lines, angles between two lines, conditions for concurrence of three lines, distance of a point from a line. Equations of internal and external bisectors of angles between two lines, coordinates of centroid, orthocentre and circumcentre of a triangle, equation of family of lines passing through the point of intersection of two lines, homogeneous equation of second degree in x and y, angle between pair of lines through the origin, combined equation of the bisectors of the angles between a pair of lines, condition for the general second degree equation to represent a pair of lines, point of intersection and angle between two lines.

UNIT 15: Circles in Two Dimensions
Standard form of equation of a circle, general form of the equation of a circle, its radius and centre, equation of a circle in the parametric form, equation of a circle when the end points of a diameter are given, points of intersection of a line and a circle with the centre at the origin and condition for a line to be tangent to the circle, length of the tangent, equation of the tangent, equation of a family of circles through the intersection of two circles, condition for two intersecting circles to be orthogonal.

UNIT 16: Conic Sections in Two Dimensions
Sections of cones, equations of conic sections (parabola, ellipse and hyperbola) in standard form, condition for y = mx+c to be a tangent and point(s) of tangency.

UNIT 17: Vector Algebra
Vectors and scalars, addition of vectors, components of a vector in two dimensions and three dimensional space, scalar and vector products, scalar and vector triple product. Application of vectors to plane geometry.

UNIT 18: Measures of Central Tendency and Dispersion
Calculation of mean, median and mode of grouped and ungrouped data. Calculation of standard deviation, variance and mean deviation for grouped and ungrouped data.

UNIT 19: Probability
Probability of an event, addition and multiplication theorems of probability and their applications; Conditional probability; Baye's theorem, probability distribution of a random variate; binomial and poisson distributions and their properties.

UNIT 20: Trigonometry
Trigonometrical identities and equations. Inverse trigonometric functions and their properties. Properties of triangles, including, incentre, circumcentre and orthocenter, solution of triangles.

PART 4: BIOLOGY (50 Questions)

BOTANY

Unit 1: Taxonomy of Angiosperm
Types of classifications - Artificial, Natural, Phylogenetic - Biosystematics - Binomial

Nomenclature - Herbaria and their uses - Bentham and Hooker's classification of plants - Families Malvaceae,Solanaceae - Euphorbiaceae, Musaceae and Economic Importance.

Unit 2: Plant Anatomy
Tissues and Tissue System - anatomy of monocot and dicot roots - anatomy of Monocot and dicot stem and anatomy of dicot leaf.

Unit 3: Cell Biology and Genetics
Chromosomes - Structure and types - genes recombination of chromosomes mutation - chromosomal aberration - DNA as genetic material - Structure of DNA - replication of DNA - Structure of RNA and its type.

Unit 4: Biotechnology
Recombinant DNA Technology - Transgenic plants with beneficial traits - plant tissue culture and its application - Protoplasmic fusion

Unit 5: Plant Physiology
Photosynthesis - Significance - site of photosynthesis - photochemical and biosynthetic phases - electron transport system - cyclic and non cyclic photophosphorylation - C3 and C4 pathway - photorespiration - factor affecting photosynthesis - fermentation - plant growth - growth regulators - phytohormones - auxin - gibberellins - cytokinins - ethylene.

Unit 6: Biology in Human Welfare
Food production - breeding experiments - improved varieties and role of biofertilizer - crop diseases and their control - biopesticides - genetically modified food - sustained agriculture and medicinal plants including microbes.

ZOOLOGY

Unit I: Human Physiology
Nutrition - introduction - carbohydrates - proteins - lipids - vitamins mineral - water - Balanced diet - calorie value - (ICBM standard) obesity - Hyperglycemia - hypoglycemia - malnutrition. Digestion - enzymes and enzyme action - Bones and Joints (Major types) - Arthritis - Rickets and Osteomalacia - Gout.

Muscles - muscle action - muscle tone - Rigor Mortis - aerobic exercises (body building) myasthenia gravis.

Respiration - Process of pulmonary respiration - inspiration Expiration - Exchange of gases at alveolar level - Circulation - Functioning of heart origin and conduction of heart beat - Artificial pacemaker - coronary blood vessels and its significance - myocardial infarction - Angina pectoria - Atherosclerosis - heart attack - Resuscitation in heart attack

(First aid) Blood

components-functions-plasma-corpuscles-blood clotting-anticoagulants-Thrombosis-embolism-blood related diseases like polycythemia-Leukemia-Lymph fluid.

Physiological Co ordination System:
Brain-functioning of different regions-memory-sleep-stroke-Alzheimer's disease-meningitis-Thyroid-parathyroid hormones-insulin and glucagon-Hormones of adrenal cortex and medulla-Reproductive hormones-problems related to secretion, non secretion of hormones.

Receptor Organs:
Eye-Focussing mechanism and photo chemistry of retina-short sightedness-Nyctalopia-Eye infection-conjunctivitis-Glaucoma-Ear-Hearing mechanism-Hearing impairments and aids - Noise pollution and its importance-skin-melanin functions - Effect of solar radiation / UV Excretion:

Ureotelism-urea-Biosynthesis(ornithine cycle) Nephron-ultrafiltration-tubular reabsorption and tubular secretion-Renal failure-Dialysis kidney stone formation kidney transplantation-Diabetes.

Reproductive System:
Brief account of spermatogenesis and oogenesis-menstrual cycle-in vitro fertilization-Birth control

Unit 2: Microbiology
Introduction-History of medical microbiology-The influence of Pasteur, Koch and Lister-Virology-structure Genetics culture and diseases-AIDS and its control-Bacteriology-structure, Genetics and diseases-protozoan microbiology-Diseases oriented-pathogenecity of micro organism-anti microbial resistance chemotherapy. Single cell protein. Microbial culture technique and its applications - Strain Isolation and Improvement - Isolation of microbial products.

Unit 3: Immunology
Innate immunity (Non specific) - anatomical Barriers-Physiological barriers-phagocytic barriers Lymphoidal organs-Thymus- Bursa of fabricius-Peripheral Lymphoid organs-Lymph nodes-Transplantation immunology-Autoimmune disorders.

Unit 4: Modern Genetics and Animal Biotechnology
Introduction-scope-Human Genetics Karyotyping Chromosome gene mapping-Recombinant DNA technology and segmenting-genetic diseases-Human genome project-cloning-Transgenic organisms-Genetically modified organism(GMO)-Gene therapy-Animal cell culture and its

applications-Stem cell technology-Bioethics of genetic engineering in animals.

Unit 5: Environmental Science
Human population and explosion-issue-Global Warming Crisis-Green house effect-Ozone layer depletion-waste management-Biodiversity conservation (Biosphere reserve)

Unit 6: Applied Biology
Livestock and management-Breeds-Farming method-poultry diseases-Economic value Pisciculture-fish farming-Edible fishes of Tamil Nadu.

Unit 7: Theories of Evolution
Lamarckism-Darwinism-Modern concept of natural selection-species of concept-origin of species and isolating mechanism.

IMPORTANT DATES TO REMEMBER

1.	Last date for receipt of filled-in application	10th March 2015
2.	Slot booking for Online examination	26th to 30th March 2015
3.	Entrance Examination	
	(a) Paper-pencil examination	26th April 2015
	(b) Online examination	19th to 22nd April 2015
4.	Publication of rank list & counseling schedule	4th May 2015

The application form included with this guide is valid for the academic year 2015-2016 only.

MODEL QUESTIONS - B.Tech

PART1: PHYSICS

1. Torque per unit moment of inertia is equal to
   a) angular velocity
   b) angular acceleration
   c) radius of gyration
   d) inertia

2. If a projectile has a velocity greater than the escape velocity, which trajectory will it follow?
   a) elliptic
   b) hyperbolic
   c) vertical straight
   d) parabolic

3. To a fish under water, viewing obliquely a fisher-man standing on the bank of a lake, does appear as
   a) slightly shorter
   b) taller
   c) with no change in height
   d) with half the original height.

4. Moderator is used to
   a) accelerate the bombarding neutrons
   b) slow down the bombarding neutrons
   c) to eject more electrons
   d) to arrest the nuclear reaction

5. In a ferroelectric material, as the applied field is gradually reduced to zero, the polarization still left is known as
   a) remanent polarization
   b) coercive polarization
   c) zero polarization
   d) positive polarization.

PART 2: CHEMISTRY

6. Which is used as flux in metallurgy?
   a) CaF_2
   b) SF_6
   c) UF_6
   d) NaF

7. The value of electrical resistance at super conductivity state is
   a) 100
   b) 0
   c) Low
   d) High

8. Geometrical isomerism is exhibited by (i) 1-pentene (ii) 2-pentene (iii) 2-chloro-2-pentene (iv) 3-methyl-2-pentene
   a) (i) and (ii)
   b) (ii) and (iii)
   c) (iii) and (iv)
   d) (ii), (iii) and (iv)

9. Which among the following has both local anaesthetics and antiseptic properties?
   a) Benzyl benzoate
   b) Phenol
   c) Benzyl alcohol
   d) n-propyl alcohol

10. The medicines which prevent nausea, vomiting and motion sickness is
    a) Antibiotics
    b) Antacids
    c) Antispasmodics
    d) All of these

PART 3: MATHEMATICS

11. If $f(2) = 4$ and $f'(2) = 4$, then $\lim_{x \to 2} \left(\dfrac{x f(2) - 2f(x)}{(x-2)} \right)$ is equal to
    a) 2
    b) -2
    c) -4
    d) 3

12. Let f: $\mathbf{R} \to \mathbf{R}$ be a function defined by $f(x) = |x| + 1$.
    Then which of the following is true?
    a) f is 1-1 and onto
    b) f is neither 1-1 nor onto
    c) f is onto but not 1-1
    d) f^{-1} exists

13. The principal value of i^i is equal to
    a) e
    b) $e^{-\pi/2}$
    c) $e^{-3\pi/2}$
    d) none of these

14. The line $y = 4x + c$ touches the parabola $y^2 = 4x$ if
    a) $C = 0$
    b) $C = 1/4$
    c) $C = 4$
    d) 2

15. If the lines $\dfrac{x-1}{2} = \dfrac{y+1}{3} = \dfrac{z-1}{4}$ and $\dfrac{x-3}{1} = \dfrac{y-k}{2} = \dfrac{z}{1}$ intersect, then k equals
    a) $3/2$
    b) $9/2$
    c) $-2/9$
    d) $-3/2$

PART 4: BIOLOGY

16. Passage through pores in the nuclear envelope is restricted primarily to
    a) proteins, RNA, and protein-RNA complexes
    b) lipids and glycolipids
    c) DNA and RNA
    d) RNA and protein-carbohydrate complexes

17. Which of the following are not energy sources but necessary for enzymatic reactions, for protein complexes, or as precursors for biomolecules?
    a) minerals and vitamins
    b) carbohydrates
    c) lipids
    d) proteins

18. What was the first bacterium shown to cause human disease?
    a) Anthrx
    b) Mycobacterium
    c) Diphteria
    d) Streptococus

19. The cytoplasm of a bacterium
    a) is supported by the cytoskeleton
    b) is supported by microtubules
    c) is supported by keratin
    d) has no internal support structure

20. Which of the following is not an isoenzyme?
    a) G6PDH
    b) LDH
    c) NP
    d) ATPase