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ENGINEERING | MEDICINE & HEALTH SCIENCES  
MANAGEMENT | SCIENCE & HUMANITIES



**SRM**  
UNIVERSITY  
(Under section 3 of UGC Act 1956)



**GUIDE TO ENTRANCE 2014**



**SRM**  
UNIVERSITY  
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## IMPORTANT INFORMATION

### 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 and Health Sciences UG:

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

#### For M.Tech, MBA and MCA:

All candidates have to appear for online entrance exam only.



## 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 and genetic engineering:  
Minimum 70% aggregate in Mathematics / Biology, Physics and Chemistry.

##### In SRMEE-2014

- Candidates who have attempted Physics, Chemistry and Mathematics in the SRMEE are eligible for all the B.Tech. degree programs.
- Candidates who have attempted Physics, Chemistry and Biology in the SRMEE are eligible for B.Tech. Biotechnology, Biomedical Engineering and Genetic engineering programs and also for various programs in Health Sciences.

##### B.Des.:

A pass in 10+2 or its equivalent in academic stream having a minimum total aggregate of 70%.

##### B.Arch.:

(a) A pass in 10+2 or its equivalent having a minimum total aggregate of 70% with English and Mathematics as subjects of study or 10+3 Diploma (Any Stream) recognized by Central / State Government with 70% aggregate marks.  
(b) A pass in National Aptitude Test in Architecture (NATA) conducted by the Council of Architecture.

No separate entrance examination will be conducted by SRM University. However, the candidates have to apply in the prescribed application form for admission to B.Arch. program.

### Post Graduate - M.Tech

S.No	Specialization	Eligibility (A basic degree or equivalent in the following with a minimum aggregate of 60%)
1	Structural Engineering	B.E / B.Tech. in Civil / Civil Infrastructure Engg. / Architectural Engg.
2	Construction Engineering and Management	B.E / B.Tech. in Civil / Civil Infrastructure Engg. / Architectural Engg. (or) B.Arch.
3	Remote Sensing and GIS	B.E. / B.Tech (Civil / Civil Infrastructure / Architectural Engg. / Geo Informatics / CSE / ECE / EEE / IT / Agricultural Engg / Urban & Regional Planning) or B.Sc. (4 years) - Agriculture / Forestry / Horticulture / Geography or M.Sc. / M.A (Geology / Applied Geology / Geo Physics / Geography / Geo Informatics / Physics / Maths / Oceanography / Environmental Science)
4	Environmental Engineering	B.E. / B.Tech (Civil / Civil Infrastructure / Architecture Engg. / Chemical / Biotechnology), or M.Sc ( Environmental Science / Ecology / Environmental Ecology / Environmental Chemistry)
5	Geo Technical Engineering	B.E / B.Tech. (Civil / Civil Infrastructure / Architecture Engg. / Geo Informatics / Structural Engg.) or M.Sc. ( Geology / Applied Geology / Geophysics with Maths background)
6	Computer Aided Design	B.E / B.Tech. in Mechanical Engg. / Production Engg. / Automobile Engg. / Aerospace / Aeronautical Engg (or) AMIE (Mech) / AMAeSI(Aero) / IMechE. (or) any equivalent degree in the above Disciplines.
7	Computer Integrated Manufacturing	B.E / B.Tech. in Mechanical Engg. / Production Engg. / Industrial Engg. / Automobile Engg. / Metallurgical / Metallurgy Engg. / Aerospace / Aeronautical Engg. / Mechatronics Engg. (or) AMIE(Mech) / AMAeSI (Aero) / IMechE (or) any equivalent degree in the above Disciplines
8	Robotics	B.E / B.Tech. in Mechanical Engg. / Production Engg. / Industrial Engg. / Automobile Engg. / Aerospace / Aeronautical Engg. / Mechatronics Engg. / ECE / EEE / ICE / CSE (or) AMIE (Mech) / AMAeSI(Aero) / IMechE (or) any equivalent degree in the above Disciplines
9	Solar Energy	B.E. / B.Tech. in Mechanical Engineering / Automobile Engineering / Chemical Engineering / Electrical & Electronics Engineering / AMIE (Mechanical Engineering) / AMAeSI / IMechE / M.Sc.(Physics) (or) any equivalent degree in the above discipline.

S.No	Specialization	Eligibility (A basic degree or equivalent in the following with a minimum aggregate of 60%)
10	Power Systems	B.E / B.Tech. in EEE
11	Power Electronics and Drives	B.E / B.Tech. in EEE / ECE / ICE / E&I
12	Telecommunication Networks	B.E / B.Tech. in ECE / ETE / TE
13	VLSI Design	B.E / B.Tech. in ECE / EEE / E&I / CSE / IT (or) M.Sc. (Electronics / Applied Electronics) (or) M.Sc. (Physics - Special Electronics)
14	Embedded System Technology	B.E / B.Tech. in EEE / ECE / CSE / IT / ICE / E&I (or) M.Sc. (Electronics / Applied Electronics) (or) M.Sc. (Physics - Special Electronics)
15	Communication Systems	B.E / B.Tech. in ECE / ETE / TE
16	Biomedical Engineering	B.E / B.Tech in Biomedical Engineering / Biomedical & Instrumentation Engineering / ICE / EIE / Biotechnology / Nanotechnology / Medical Electronics (or) M.Sc.(Electronics / Medical Electronical / Applied Electronics) (or) M.Sc.(Physics / Medical Physics / Bio-Physics) (or) M.Sc. (Bio-informatics / Biomedical Informatics / Biotechnology) (or) MBBS / BPT / BOT
17	Electronics & Control Engineering	B.E / B.Tech. in ECE / ICE / EEE / E&I
18	Computer Science & Engineering	B.E / B.Tech. in CSE / IT / ECE / EEE / E&I & ICE (or) MCA (or) M.Sc. (CS / CST / IT / SW)
19	Software Engineering	B.E / B.Tech. in CSE/IT (or) MCA (or) M.Sc (IT / CS / CST / SW)
20	Information Technology	B.E / B.Tech. in CSE / IT (or) MCA (or) M.Sc. (CSE / IT)
21	Information Security and Cyber Forensics	B.E / B.Tech. in CSE / IT (or) M.Sc. (CSE / IT) (or) MCA
22	Database Systems	B.E / B.Tech. in CSE / IT / SWE (or) M.Sc. (CSE / IT) (or) MCA
23	Cloud Computing	B.E / B.Tech in CSE / IT / SWE / ECE / EEE / EI (or) MCA (or) M.Sc (CSE / IT)
24	Chemical Engineering	B.E / B.Tech. in Chemical Engineering / Electrochemical Engg. / Petrochemical Engg.

S.No	Specialization	Eligibility (A basic degree or equivalent in the following with a minimum aggregate of 60%)
25	Biotechnology	B.E / B.Tech. in Chemical Engineering / Bio-Technology / Bio-Chemical Engineering / Genetic Engg. / Bioinformatics / Biomedical Engg. / Biomedical & Instrumentation Engg. / Bioprocess Engg. / Food Process Engineering (or) B.Pharm (or) M.Sc. (in any branch of Life Sciences / Biotechnology)
26	Food and Nutritional Biotechnology	B.E / B.Tech. in Food Process / Chemical / Biotechnology / Agricultural Engineering
27	Food Safety and Quality Management	B.E / B.Tech in Food Engineering / Agricultural Engineering / Dairy Technology / Biotechnology / Chemical Engineering (or) M.Sc in Food Science / any branch of Life Sciences / Home Science / Nutrition & Dietetics.
28	Genetic Engineering	B.E / B.Tech in Genetic Engineering / Biotechnology / Industrial or Medical or General or Food Biotechnology / Biochemical Engineering / Bioinformatics / Bioprocess Engineering (or) B.Pharm (or) B.V.Sc. (or) B.F.Sc. (or) B.Sc. (Agri) / B.Sc. (Forestry) (or) MBBS (or) M.Sc in any branch of Life Sciences.
29	Bioinformatics	B.E / B.Tech in Bioinformatics / Any Life Sciences branch / Chemical Engg. / Information Technology / Computer Science (or) M.Sc in Bioinformatics / Any branch of Life Sciences / Information Technology / Computer Science (or) B.Pharm (or) B.VSc (or) MBBS (or) B.Sc Agriculture (or) Masters in Medical Lab Technology
30	Nanotechnology	B.E / B.Tech. (Any Specialization), M.Sc (Physics / Materials Science / Chemistry / Applied Chemistry / Bio Chemistry / Biotechnology) with mathematics as one of the subjects at B.Sc level.
31	Operation Management and Learn ERP	B.E / B.Tech in Electrical, Mechanical, Production, CSE (or) MCA
32	Solar Photovoltaic	B.E / B.Tech in Electrical, Mechanical, ECE, EEE (or) M.Sc in Physics, Electronics and Material Science

## Management

### Bachelor of Business Administration (BBA)

A pass in Higher Secondary (Academic or Vocational stream) with a minimum aggregate of 60%.

### Master of Business Administration (MBA)

A Bachelor's degree with minimum aggregate of 60%.

## Health Sciences

S.No	Program	Eligibility (As prescribed for each program)
1	B.Sc Nursing	HSC (+2) or equivalent qualification with English, Physics, Chemistry and Biology or Botany & Zoology having a minimum aggregate of 60% in science group.
2	Bachelor of Physiotherapy (BPT)	HSC (+2) or equivalent qualification with Physics, Chemistry and Biology (or) Botany and Zoology a minimum aggregate of 60% in science group.
3	Bachelor of Occupational Therapy (BOT)	HSC (+2) or equivalent qualification with Physics, Chemistry and Biology (or) Botany and Zoology having a minimum aggregate of 60% in science group.
4	Bachelor of Pharmacy (B.Pharm)	HSC (+2) or equivalent qualification with English, Physics, Chemistry and Biology (or) Botany and Zoology or Mathematics having a minimum aggregate of 60% in group.
5	Bachelor of Audiology and Speech Language Pathology (BASLP)	HSC (+2) or equivalent qualification with English, Physics, Chemistry and Biology (or) Botany and Zoology having a minimum aggregate of 60% in group.
6	Bachelor of Optometry (B.Optom)	HSC with Mathematics, Physics, Chemistry and Biology having a minimum aggregate of 60%.
7	B.Sc Medical Imaging Technology	HSC (+2) or equivalent qualification with English, Physics, Chemistry and Biology having a minimum aggregate of 60%.
8	B.Sc Renal Dialysis Technology	HSC (+2) or equivalent qualification with English, Physics, Chemistry and Biology having a minimum aggregate of 60%.
9	B.Sc Medical Lab Technology (B.Sc MLT)	HSC having a minimum aggregate of 60%. Candidates with DMLT can be admitted in Second year under lateral entry.

S.No	Program	Eligibility (As prescribed for each program)
10	Bachelor of Medical Record Science (BMRS)	Any degree of a recognized University
11	B.Sc Nursing (Post Basic)	Passed Diploma in Nursing, Registered his/her name with any State Nursing Council and put in minimum of 1 year of Nursing service in any recognized Hospital or educational institution or as a full time Public Health Nurse.
12	Pharm.D	HSC with Physics and Chemistry as compulsory subjects along with one of the following subjects: Mathematics or Biology having a minimum aggregate of 60% (or) A pass in D.Pharm course from an institution approved by Pharmacy Council of India.

## Diploma Courses

S.No	Program	Eligibility (As prescribed for each program)
13	Diploma in Nursing	HSC with with Physics, Chemistry and Biology
14	Diploma in Optometry	HSC with Physics, Chemistry, Biology and Mathematics.
15	Diploma in Medical Laboratory Technology	HSC with Physics, Chemistry and Biology
16	Diploma in Medical Record Science	HSC

## Science and Humanities

### Under Graduate

S.No	Program	Eligibility (A basic degree or equivalent in the following with a minimum aggregate of 60%)
	<b>B.Sc</b>	
1	Biotechnology	HSC with Biology / Biotechnology
2	Computer Science	HSC with Computer Science / Mathematics / Statistics / Business Maths
3	Information Technology	HSC with Mathematics / Business Maths / Commerce / Accountancy

S.No	Program	Eligibility (A basic degree or equivalent in the following with a minimum aggregate of 60%)
4	Hotel & Catering Management	HSC
5	Visual Communication	HSC (Academic or Vocational Stream)
6	Film Technology	HSC (Academic or Vocational Stream)
7	Mathematics	HSC with Mathematics / Physics and Chemistry
8	Physics	HSC with Mathematics / Physics and Chemistry
9	Chemistry	HSC with Mathematics / Physics and Chemistry
10	<b>BCA</b>	HSC with Computer Science / Mathematics / Statistics / Business Maths
11	<b>BA Journalism &amp; Mass Communication</b>	HSC
	<b>B.Com</b>	
12	General	HSC (Academic or Vocational Stream)
13	Corporate Secretaryship	HSC (Academic or Vocational Stream)
14	Accounting & Finance	HSC (Academic or Vocational Stream)
15	Information & System Management	HSC (Academic or Vocational Stream)
	<b>Diploma Programs</b>	
16	Hotel Management	HSC
17	Teacher Education	HSC
18	Film Acting	HSC
19	<b>B.Ed</b>	Any degree (Please visit our website for specific details)

#### Post Graduate

S.No	Program	Eligibility (As prescribed for each program)
	<b>MA</b>	
20	Political Science	Any graduate with second class
21	Public Administration	Any graduate with second class

S.No	Program	Eligibility (As prescribed for each program)
22	International Relations	Any graduate with second class
23	Journalism and Mass Communication	Any graduate
	<b>M.Sc</b>	
24	Biotechnology	A candidate with Bachelor's Degree in Science in the disciplines of Biology, Botany, Zoology, Biotechnology, Microbiology, Chemistry, Biochemistry, Physics, Agriculture or BE/B.Tech (Biotech), BVSC, MBBS, BDS.
25	Information Technology	Bachelor's Degree with Mathematics / Business Mathematics / Business Statistics / Mathematical Physics as main or ancillary subject
26	Hotel & Catering Management	Bachelor's Degree in Hotel & Catering Management
27	Visual Communication	Any Degree
28	Mathematics	Bachelor's Degree in Mathematics
29	Physics	Bachelor's Degree in Physics
30	Chemistry	Bachelor's Degree in Chemistry
31	Econometrics	Any Degree with Maths and Statistics as allied papers (or) B.A Econometrics
32	<b>M.Com Accounting &amp; Finance</b>	B.Com (General) / B.Com (ISM) / BA Corporate Secretaryship / BBA / BCA with Accounts as additional paper.
33	<b>MCA</b>	A pass with minimum aggregate of 60% in the under mentioned "Bachelor's Degree" of any university or equivalent thereto: B.C.A / B.E.S. / B.Sc. in Computer Science / Mathematics / Physics / Statistics / Applied Sciences / Information Technology / Computer Technology (or) B.Com. / Bachelor of Bank Management / B.B.A. / B.L.M. / B.A. (Corporate Secretaryship / B.A. Economics / any other Bachelor's Degree, in any discipline, with Business Mathematics and Statistics or Mathematics / Statistics at main / allied level (or) B.Sc. Chemistry with Mathematics and Physics as allied subjects (or) B.E / B.Tech. / MBA (or) A Bachelor's Degree in any discipline with Mathematics as one of the subjects at the Higher Secondary level (i.e., in +2 level of the 10+2 pattern)
34	<b>M.Ed</b>	A Degree with B.Ed
	<b>PG Diploma</b>	
35	Journalism	Any graduate



### 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.

### 2.2 For B.Arch. Program

- Admission to B.Arch. program will be based on the aggregate of marks secured in the qualifying examination & NATA score.
- The meritorious candidate list will be drawn giving 50% weightage to aggregate of total marks secured in qualifying examination & 50% weightage to NATA score.
- Based on the ranking, admissions will be offered to the candidate.

### 2.3 For B.Des. Program

Admission to B.Des. program will be purely on the basis of performance in the Higher Secondary examination. Candidates short listed based on their Higher Secondary marks will be offered admission directly.

### 2.4 For M.Tech. Program

Admission to this program will be on the basis of performance in the Entrance Test conducted by SRM University. However, candidates with valid

GATE score can also apply and will be considered for admission. Merit list will be prepared and candidates will be called for counseling.

### 2.5 For BBA Program

- The admission will be on the basis of the performance in the qualifying examination.
- The candidates short-listed based on their merit will be called for the counseling to be held at the SRM University premises in Kattankulathur - 603 203, Chennai.

### 2.6 For MBA Program

Admission to this program will be on the basis of performance in the Entrance Test conducted by SRM University. However candidates with valid score in GMAT, CAT, MAT, XAT, TANCET also can apply and will be considered for admission. Merit list will be prepared, candidates will be called for group discussion and personal interview and selection will be made.

### 2.7 For MCA Program

Admission to this program will be on the basis of performance in the Entrance Test conducted by SRM University. Merit list will be prepared and candidates will be called for counseling.

### 2.8 For Health Sciences

- The admission will be on the basis of the performance in the Entrance Examination conducted by SRM University and / or marks secured in the qualifying examination.
- The candidates short-listed based on their merit will be called for the counseling to be held at the SRM University premises in Kattankulathur - 603 203, Chennai.

### 2.9 For Science and Humanities

- The admission will be on the basis of the performance in the qualifying examination.
- The candidates short-listed based on their merit will be called for the counseling to be held at the SRM University premises in Kattankulathur - 603 203, Chennai.

## 3. SRMEE - 2014 Schedules

### 3.1 For Paper - Pencil Exam

*Date: 27<sup>th</sup> April 2014, Sunday.*  
*Time: 10.00 am to 12.30 pm.*

### 3.2 For Online Exam

*Date: 17<sup>th</sup> to 22<sup>nd</sup> April 2014.*

## 4. SRMEE - 2014 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.

## SRMEE - 2014 - 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

### For M.Tech Program

There will be 12 sections. Each candidate shall select any one section and answer only that section. There will be 100 questions. Each correct answer will have a weightage of 3 marks and each wrong answer will have a negative weightage of 1 mark. Total weightage is 300 marks.

### For MBA and MCA Programs

The question paper will consist of 100 questions. Each correct answer will have a weightage of 3 marks and each wrong answer will have a negative weightage of 1 mark. Total weightage is 300 marks.

## 5. Entrance Examination Rules (SRMEE - 2014)

### 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 assigned to a computer.
- For working purpose a paper sheet will be provided at the workstation. All rough work will need to be worked 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 in 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](http://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](http://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/-.

Selected branches of Axis Bank, City Union Bank, Indian Bank, Karur Vysya Bank and post offices as mentioned on our website: [www.srmuniv.ac.in](http://www.srmuniv.ac.in).

- The completed application should be sent to the university so as to reach before the last date specified.

#### RECEIPT OF APPLICATIONS

- Last date for receipt of filled-in application at the university office: **15<sup>th</sup> March 2014.**

- 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 mobile messages 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](http://www.srmuniv.ac.in/admissions)

#### 8. Test Cities for SRMEE - 2014

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](http://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 SRMEE - 2014. 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](http://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, XI 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, XI standard and in Higher Secondary Examination directly in our website using the link

provided in the URL [www.srmuniv.ac.in/admissions](http://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](http://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 / Provisional allotment letter.
- SRMEE - 2014 Rank Card / Hall Ticket (except for B.Arch).
- NATA score card for B.Arch only.
- High School (Class X) marks sheet.
- Marks sheet of qualifying examination.
- Community certificate (issued by the competent authority).
- DEMAND DRAFT for ₹1,00,000/- towards part of tuition fee or full tuition fee whichever is less. DD should be drawn in favour of "SRMIST" payable at CHENNAI.
- Balance tuition fees, if any, should be paid before the last date stipulated by the University failing which the admission offer would stand cancelled.

##### Required Documents in Original to be submitted during counseling & admission for PG programs.

- Counselling call letter / Provisional allotment letter.



- SRMEE - 2014 Rank Card / Hall Ticket.
- High school (Class X) marks sheet.
- Marks sheet / consolidated mark statement of the qualifying examination.
- Original degree / provisional certificate.
- Eligibility certificate issued by SRM University
- Community certificate (issued by the competent authority).
- Work experience certificate wherever relevant.
- DEMAND DRAFT for full tuition fee depending on the program. 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](http://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 Director, Admissions.

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 in the application form.

Requests for corrections will not be entertained later.

Candidates are advised to apply for one program only using a form.

• Candidate appearing in the qualifying examinations to be held in March / April / May 2014 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

• Use the Unique Voucher Code to enter various other details "online".

### 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 19

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
Tripura	36
Uttar Pradesh	37
Uttaranchal	38
West Bengal	39
Andaman And Nicobar Islands (UT)	40
Chandigarh (UT)	41
Dadra and Nagar Haveli (UT)	42
Daman and Diu (UT)	43
Lakshadweep (UT)	44
Puducherry (UT)	45

### 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 xerox 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
Tripura Board of Secondary Education	36
U.P. Board of High School & Intermediate Education	37
Uttaranchal Shiksha Evam Pariksha Parishad	38
West Bengal Council of Higher Secondary Education	39

**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: Percentage of Marks (%) Obtained in UG / PG Exam**

Write the aggregate percentage of marks obtained in undergraduate / postgraduate examination, if already passed and the results are available; otherwise leave it blank. Also fill the details in the attachment. Darken the corresponding numerals under each digit.

**Item - 14: Program Applying for**

Indicate the program you are applying for by shading the corresponding box.

B.Tech	1
M.Tech	2
MBA	3
MCA	4
Health Sciences – UG (Except MBBS, BDS)	5
B.Arch	6
B.Des	7
BBA	8
Science & Humanities	9

**NOTE: A CANDIDATE CAN APPLY FOR ONE PROGRAM ONLY USING ONE FORM.**

**Item - 15: Option for Online Exam**

**1. For B.Tech and Health Sciences UG** - If a candidate wishes to appear for online exam, indicate “Yes” and shade accordingly otherwise indicate “No” and shade accordingly.

**2. For M.Tech, MBA, MCA** - All candidates have to appear for online entrance exam only.

**Item - 16: 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
	Hyderabad	103
	Rajahmundry	107
	Tirupathi	108
	Vijayawada	109
	Vishakhapatnam	110
Warangal	111	
Assam	Guwahati	114
Bihar	Patna	119
Chandigarh	Chandigarh	121
Chattisgarh	Raipur	124
Gujarat	Ahmedabad	126
Haryana	Gurgaon	132
Jharkhand	Jamshedpur	139

Jharkhand	Ranchi	140
Karnataka	Bangalore	141
Kerala	Ernakulam	143
	Kozhikodu	145
Madhya Pradesh	Bhopal	148
	Indore	150
Maharashtra	Mumbai	152
	Nagpur	153
New Delhi	New Delhi	155
Orissa	Bhuvaneshwar	156
Rajasthan	Jaipur	161
	Kota	163
Tamil Nadu	Chennai	166
	Chennai - Kattankulathur	167
	Coimbatore	169
	Madurai	175
	Tiruchirapalli	180
Uttar Pradesh	Vellore	183
	Allahabad	184
	Ghaziabad	187
	Kanpur	190
	Lucknow	191
Uttaranchal	Noida	193
	Varanasi	194
Uttaranchal	Dehra Dun	195
West Bengal	Kolkata	197

**Item - 17. 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
	Hyderabad / Secunderabad	103
	Karimnagar	104
	Karnool	105
	Nellore	106
	Rajahmundry	107

Andhra Pradesh	Thirupathi	108
	Vijayawada	109
	Visakhapatnam	110
	Warangal	111
Arunachal Pradesh	Itanagar	112
Assam	Dibrugarh	113
	Guwahati	114
Bihar	Bhagalpur	115
	Darbhanga	116
	Gaya	117
	Muzaffarpur	118
	Patna	119
	Samastipur	120
	Chandigarh	Chandigarh
Chattisgarh	Bilaspur	122
	Korba	123
	Raipur	124
Goa	Panaji	125
Gujarat	Ahmedabad	126
	Rajkot	127
	Surat	128
	Vadodara	129
Haryana	Bahadurgarh	130
	Faridabad	131
	Gurgaon	132
Himachal Pradesh	Dharamshala	133
	Shimla	134
Jammu & Kashmir	Jammu	135
	Srinagar	136
Jharkhand	Bokaro Steel City	137
	Dhanbad	138
	Jamshedpur	139
	Ranchi	140
	Karnataka	Bangalore
	Hubli	142
	Kerala	Ernakulam
Kottayam		144
Kozhikodu		145
Thiruvananthapuram		146
Thrissur		147
Madhya Pradesh	Bhopal	148
	Gwalior	149



Madhya Pradesh	Indore	150
	Katni	151
Maharashtra	Mumbai	152
	Nagpur	153
	Pune	154
New Delhi	New Delhi	155
Orissa	Bhubaneswar	156
	Rourkela	157
Puducherry	Puducherry	158
Punjab	Jalandhar	159
Rajasthan	Bikaner	160
	Jaipur	161
	Jodhpur	162
	Kota	163
	Udaipur	164
Tamil Nadu	Attur (Salem)	165
	Chennai	166
	Chennai - Kattankulathur	167
	Chidambaram	168
	Coimbatore	169
	Cuddalore	170
	Dindugal	171
	Erode	172
	Krishnagiri	173
	Kumbakonam	174
	Madurai	175
	Nagercoil	176
	Namakkal	177
	Salem	178
	Thanjavur	179
	Tiruchirapalli	180
	Tirunelveli	181
Tiruppur	182	
Vellore	183	
Uttar Pradesh	Allahabad	184
	Bareilly	185
	Faizabad	186
	Ghaziabad	187
	Gorakhpur	188
	Jhansi	189
	Kanpur	190

Uttar Pradesh	Lucknow	191
	Meerut	192
	Noida	193
	Varanasi	194
	Uttaranchal	Dehra Dun
West Bengal	Durgapur	196
	Kolkata	197
	Siliguri	198

**Item - 18: Branch / Specialization**

Use the list given here and select branch for B.Tech. and specialization for M.Tech. Write the appropriate code in the space provided and darken the corresponding numeral under each digit.

**Programs Offered during the Academic Year 2014-15 Engineering & Technology**

**B.Tech** (duration - 4 years)

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

**M.Tech** (duration - 2 years)

Specialization	Code
1. Biomedical Engineering	201
2. Biotechnology	202
3. Bioinformatics	203

4. Chemical Engineering	204
5. Cloud Computing	205
6. Communication Systems	206
7. Computer Aided Design	207
8. Computer Integrated Manufacturing	208
9. Computer Science & Engineering	209
10. Construction Engineering & Management	210
11. Database Systems	211
12. Electronics & Control Engineering	212
13. Embedded System Technology	213
14. Environmental Engineering	214
15. Food and Nutritional Biotechnology	215
16. Food Safety and Quality Management	216
17. Genetic Engineering	217
18. Geo Technical Engineering	218
19. Information Technology	219
20. Information Security and Cyber Forensics	220
21. Nanotechnology	221
22. Power Electronics & Drives	222
23. Power Systems	223
24. Remote Sensing & GIS	224
25. Robotics	225
26. Software Engineering	226
27. Solar Energy	227
28. Structural Engineering	228
29. Telecommunication Networks	229
30. VLSI Design	230
31. Operation Management and Learn ERP	231
32. Solar Photovoltaic	232

<b>B.Arch.</b> (Bachelor of Architecture) (duration – 5 years)	151
<b>B.Des.</b> (Interior Design) (duration – 4 years)	152
<b>BBA</b> (Bachelor of Business Administration) (duration – 3 years)	251
<b>MBA</b> (Master of Business Administration) (duration – 2 years)	252
<b>MCA</b> (Master of Computer Applications) (duration – 3 years)	535

**Health Sciences**

<b>B.Sc Nursing</b> (duration – 4 years)	302
<b>BPT</b> (duration – 4 years + 6 month internship)	303
<b>BOT</b> (duration – 4 years + 6 month internship)	304
<b>B.Pharm</b> (duration – 4 years)	305
<b>BASLP</b> (duration – 4 years)	306
<b>B.Optom</b> (duration – 4 years)	307

<b>B.Sc Medical Imaging Technology</b> (duration – 4 years)	308
<b>B.Sc Renal Dialysis Technology</b> (duration – 3 ½ years)	309
<b>B.Sc MLT</b> (duration – 3 years)	310
<b>Pharm.D</b> (duration – 6 years)	311
<b>BMRS</b> (duration – 2 years)	312
<b>B.Sc Nursing (Post Basic)</b> (duration – 2 years)	313

**Diploma Courses**

Diploma in Optometry (duration – 2 years)	314
Diploma in Medical Laboratory Technology (duration – 2 years)	315
Diploma in Medical Record Science (duration – one year)	316
Diploma in Nursing (duration – 3 ½ years)	317

**Science & Humanities**

<b>B.Sc</b> (duration – 3 years)	
Biotechnology	501
Computer Science	502
Information Technology	503
Hotel & Catering Management	504
Visual Communication	505
Film Technology	506
Mathematics	507
Physics	508
Chemistry	509
<b>B.C.A</b> (duration – 3 years)	510
<b>B.A Journalism &amp; Mass Communication</b> (duration 3 years)	511

**B.Com** (duration – 3 years)

General	512
Corporate Secretaryship	513
Accounting & Finance	514
Information & System Management	515
<b>B.Ed</b>	516

**Diploma Program**

Hotel Management (duration – 3 years)	517
Teacher Education (duration – 2 years)	518
Film Acting (duration – 1 year)	519

**M.A** (duration – 2 years)

Political Science	520
Public Administration	521

International Relations	522
Journalism and Mass Communication	523
<b>M.Sc</b> (duration – 2 years)	
Biotechnology	524
Information Technology	525
Hotel & Catering Management	526
Visual Communication	527
Mathematics	528
Physics	529
Chemistry	530
Econometrics	531
<b>M.Com Accounting and Finance</b> (duration – 2 years)	532
<b>M.Ed</b> (duration – 1 year)	533
<b>PG Diploma</b> (duration – 1 year)	
Journalism	534

#### Item - 19: 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.

#### 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 counseling call letter.
4. Enter your X standard, XI standard, Higher Secondary and Undergraduate examination marks.
5. Enter your NATA Score (for B.Arch candidates)

URL: [www.srmuniv.ac.in/admissions](http://www.srmuniv.ac.in/admissions)

**Login ID:** email address

**Password:** to be generated by the University and sent to you. You can change your password at your will. Options available: Forgot password / Reset Password.

#### Item - 20: 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 20 will be treated as incomplete and rejected.

The declaration by the candidate must be countersigned by the parent / guardian.

## PART III - SYLLABUS AND MODEL QUESTIONS FOR ENTRANCE EXAMINATION

### B.Tech and Under graduate programs in Health Sciences:

#### 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-Moduli 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  $C_p$  and  $C_v$ -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 -  $\alpha$ ,  $\beta$  and  $\gamma$  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, Charles 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;  $\Delta S$  of the universe and  $\Delta G$  of the system as criteria for spontaneity,  $\Delta G^\circ$  (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 ( $K_p$  and  $K_c$ ) and their significance, significance of  $\Delta G$  and  $\Delta G^\circ$  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  $\alpha$ ,  $\beta$  and  $\gamma$  rays; Kinetics of radioactive decay (decay series excluded), carbon dating; 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:  $-C=C-$ ,  $-C\equiv C-$  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,  $NH_3$  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 oligosaccharides (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  $d^2y/dx^2 = f(x)$ .

#### 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-corpules-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.

## MODEL QUESTIONS - B.Tech and Under graduate programs in Health Sciences

### PART1: PHYSICS

- Torque per unit moment of inertia is equal to
  - angular velocity
  - angular acceleration
  - radius of gyration
  - inertia
- If a projectile has a velocity greater than the escape velocity, which trajectory will it follow?
  - elliptic
  - hyperbolic
  - vertical straight
  - parabolic
- To a fish under water, viewing obliquely a fisherman standing on the bank of a lake, does appear as
  - slightly shorter
  - taller
  - with no change in height
  - with half the original height.
- Moderator is used to
  - accelerate the bombarding neutrons
  - slow down the bombarding neutrons
  - to eject more electrons
  - to arrest the nuclear reaction
- In a ferroelectric material, as the applied field is gradually reduced to zero, the polarization still left is known as
  - remanent polarization
  - coercive polarization
  - zero polarization
  - positive polarization.

### PART 2: CHEMISTRY

- Which is used as flux in metallurgy?
  - CaF<sub>2</sub>
  - SF<sub>6</sub>
  - UF<sub>6</sub>
  - NaF
- The value of electrical resistance at super conductivity state is
  - 100
  - 0
  - Low
  - High
- Geometrical isomerism is exhibited by (i) 1-pentene (ii) 2-pentene (iii) 2-chloro-2-pentene (iv) 3-methyl-2-pentene
  - (i) and (ii)
  - (ii) and (iii)
  - (iii) and (iv)
  - (ii), (iii) and (iv)
- Which among the following has both local anaesthetics and antiseptic properties?
  - Benzyl benzoate
  - Phenol
  - Benzyl alcohol
  - n-propyl alcohol
- The medicines which prevent nausea, vomiting and motion sickness is
  - Antibiotics
  - Antacids
  - Antispasmodics
  - All of these



**PART 3: MATHEMATICS**

11. If  $f(2) = 4$  and  $f'(2) = 4$ , then  $\lim_{x \rightarrow 2} \left( \frac{x f(2) - 2 f(x)}{(x-2)} \right)$  is equal to  
 a) 2  
 b) -2  
 c) -4  
 d) 3
12. Let  $f: \mathbf{R} \rightarrow \mathbf{R}$  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  $\frac{x-1}{2} = \frac{y+1}{3} = \frac{z-1}{4}$  and  $\frac{x-3}{1} = \frac{y-k}{2} = \frac{z}{1}$  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) Anthrax  
 b) Mycobacterium  
 c) Diptheria  
 d) Streptococcus
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

**M.Tech. Program: Syllabus & Pattern**

**Question Paper Pattern:**

- The questions will be set at the corresponding degree level.
- The questions will be of scholastic aptitude type.
- The question paper consists of 100 questions with duration of 150 minutes.
- Each correct answer carries 3 marks and each wrong answer carries negative mark of 1.
- Question booklet will consist of 12 sections each having 100 questions (to include Mathematics wherever relevant):

Section Code	Subject
01	Civil
02	Mechanical
03	Electrical
04	Electronics
05	Instrumentation
06	Computer Science
07	Chemical
08	Biotechnology
09	GIS
10	Environmental
11	Food Processing
12	Materials Science

Syllabus and model question paper are published on our website: [www.srmuniv.ac.in](http://www.srmuniv.ac.in)

**MBA Program: Syllabus & Pattern**

The question paper consists of 100 questions with duration of 150 minutes.

Each correct answer carries 3 marks and each wrong answer carries negative mark of 1.

The question paper will have 5 parts with the following topics:

**PART 1. DATA INTERPRETATION: (20 Questions)**

To evaluate the candidate's ability to pick out critically the data and apply the data to business decisions from given typical business situations.

- Data Interpretation based on text, Data

Interpretation based on graphs and tables.  
 • Graphs can be Column graphs, Bar Graphs, Line charts, Pie chart, Graphs representing Area, Venn Diagram, etc.

**PART 2. QUANTITATIVE: (20 Questions)**

To evaluate the skill on solving mathematical problems of graduate level including those learnt in plus two or equivalent level.

- Ratios and Proportion, Ratios, Percentages, In-equations, Algebra and Profit & Loss
- Averages, Percentages, Partnership & Time -

- Speed - Distance, Work and Time
- Probability, Permutations & Combinations

**PART 3. REASONING: (20 Questions)**

To evaluate the candidate's skill on Logical reasoning

- Critical reasoning, Visual reasoning, Assumption - Premise - Conclusion, Assertion and reasons, Statements and assumptions, identifying valid inferences, identifying Strong arguments and Weak arguments, Statements and Conclusions, Cause and Effect, Identifying Probably true, Probably false, definitely true, definitely false kind of statement, Linear arrangements, Matrix arrangements.
- Puzzles, Syllogisms, Functions, Family tree - identifying relationship among group of people, Symbol Based problems, Coding and decoding, Sequencing, identifying next number in series, etc.

**PART 4: ENGLISH: (20 Questions)**

To evaluate the skill of the candidate on written English with questions on errors in usage, grammar, punctuation and the like.

- Comprehension of passage
- Verbal Reasoning, Syllogisms, Antonyms, Fill in the Blanks, Jumbled paragraphs with 4 or 5 sentences
- Sentence Correction, Sentence completion, Sentence Correction, odd man out, idioms, one word substitution, Different usage of same word, etc.

**PART 5: GK / CA / BA: (20 Questions)**

To evaluate the candidate's skill on general knowledge, current affairs and business affairs

- Current Affairs, Business, Punch line of companies, Top officials of big companies, Major corporate events
- Famous award and prizes
- Science, History, Geography, International organizations
- Social issues, Sports, Finance, Automobiles, Entertainment, Politics, etc.

**MCA Program: Syllabus & Pattern**

**Question Paper Pattern**

The question paper consists of 100 questions with duration of 150 minutes.

Each correct answer carries 3 marks and each wrong answer carries negative mark of 1.

The question paper will have 5 parts with the following topics:

- Part 1: Data Interpretation based on graphs and tables (20 questions)
- Part 2: Quantitative (20 questions)
  - Ratios, Time-speed-distance, Work and time, Probability, Permutation and Combinations
- Part 3: Logical Reasoning (20 questions)
  - Sequences, Coding and decoding, Visual reasoning (Diagrammatic and pictorial form)
- Part 4: English (20 questions)
  - Verbal reasoning, Comprehension, Synonyms and antonyms
- Part 5: Basic Knowledge of Computers (20 questions)

**Model question paper is published on our website: [www.srmuniv.ac.in](http://www.srmuniv.ac.in)**

**IMPORTANT DATES TO REMEMBER**

1.	Last date for receipt of filled-in application	15 <sup>th</sup> March 2014
2.	Entrance Examination (a) Paper-pencil examination (b) Online examination	27 <sup>th</sup> April 2014 17 <sup>th</sup> to 22 <sup>nd</sup> April 2014
3.	Publication of rank list & counseling schedule	3 <sup>rd</sup> May 2014
4.	Counseling for admission to B.Tech	17 <sup>th</sup> to 24 <sup>th</sup> May 2014
5.	Counseling for admission to Undergraduate programs in Health Sciences	24 <sup>th</sup> May 2014
6.	Counseling for admission to M.Tech	25 <sup>th</sup> May 2014
7.	Counseling for admission to MBA and MCA	1 <sup>st</sup> June 2014
8.	Last date for receipt of NATA score and higher secondary marks for B.Arch admission	5 <sup>th</sup> June 2014
9.	Publication of rank list & counseling schedule for B.Arch	8 <sup>th</sup> June 2014
10.	Counseling for admission to B.Arch	13 <sup>th</sup> June 2014
11.	Last date for payment of full tuition fees for B.Tech	15 <sup>th</sup> June 2014

**The application form included with this guide is valid for the academic year 2014-2015 only.**

