

**DIGITAL NOTES**  
**ON**  
**GLOBAL EDUCATION AND PROFESSIONAL CAREER**  
**(R20A0008)**

**B. TECH II YEAR - I SEM**  
**(2022-2023)**

**Prepared By**

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**(Autonomous Institution – UGC, Govt. of India)**

(Affiliated to JNTUH, Hyderabad, Approved by AICTE - Accredited by NBA & NAAC – ‘A’ Grade - ISO 9001:2015  
Certified)

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**(R20A0008) GLOBAL EDUCATION AND PROFESSIONAL CAREER**

**COURSE OBJECTIVES:**

1. To assist students to understand the broad scope of engineering.
2. To equip the students to study the academic subjects with better perspective of the expectations of the international standards
3. To familiarize students with the financial requirements and ways to receive monetary aid
4. To enable students' understanding of the various admission tests
5. To acquaint them with their own skill set and train the students towards skills development

**Unit 1**

Importance and relevance of Engineering in today's and futuristic contexts. The jobs that will thrive in the market in the coming decades. For eg., Robot Manufacturer & service Management, Big Data & AI Scientists, Artificial Bodies Manufacturer, Gene Designers, etc

**Unit 2**

Countries and their entry requirements Non-immigrant student visas, Work Permit visas

**Unit 3**

Admission tests to colleges and universities world-over PSAT, SAT, TOEFL, AP, IELTS...

**Unit 4**

Financial capacity requirements Scholarships, Full scholarships, merit scholarships, on-campus jobs

**Unit 5**

Skills Mapping Match one's skills with jobs, Skills development

**COURSE OUTCOMES**

After completion of the course, the students will be able to:

- Comprehend the usage of engineering in various fields and disciplines.
- Identify the right college and country to pursue higher education.
- Prepare themselves for the skill-oriented academics and prospective growth.
- Plan for their future education with the precise financial management.
- Discover and discuss their skill set and the jobs that map their skills

1. **Explain about the importance of Engineering in today's society.**

Engineers play very important role in the development of society and nation. Engineers of different disciplines help in their respective ways so that our society progresses forward. Development basically means better quality life.

Engineers plan and build new bridges, huge buildings, roads, railways, dams, canals etc. that help agriculture, living, transportation and commuting. That helps a civilization to grow.

Engineers design and fabricate machines that manufacture various products we use daily morning to evening. Appliances and gadgets at home are designed by engineers. Automation reduces costs and improves quality.

Society develops better with more efficient means of communication among people. Various electronic gadgets help in quick communication.

In order to meet the needs of governments in serving growing population, engineers build softwares for different purposes.

Society lives on energy and enjoys using energy. Engineers find ways of generating energy in various forms usable by people.

Engineers build new means of internet and media like social media so that young can learn collaboratively. Young can learn from internet.

Engineers have made even the election process better by instruments. Better medical equipment and technologies built by engineers help society maintain good health.

Thus as the life and living standards of people improve, society develops.

## **2. Explain about the jobs that will thrive infuture.**

### **Java Developer**

Java developers create web applications, software, and programmes. They are involved throughout the entire development life cycle of a product. This job is always in high demand and we predict that plenty of companies will be hiring for this role in the new year.

The responsibilities of a Java developer will vary greatly depending on the company and specific position. Typical duties include designing, implementing, and maintaining Java applications, delivering high availability and performance, contributing in all phases of the development life cycle, writing well-designed, efficient, and testable code, to name but a few.

### **Cloud Architect**

A cloud architect is an IT professional who is responsible for overseeing a company's cloud computing strategy. This includes cloud adoption plans, cloud application design, and cloud management and monitoring. Often, Cloud Architects are also responsible for bridging the gaps between complex business problems and solutions in the cloud.

Necessary cloud architect skills will include experience with programming languages such as Python, Ruby and Elixir, a background in IT engineering and excellent leadership skills.

### **Cyber security Specialist**

Cyber security is more important now than ever. Cybersecurity specialists are basically bodyguards that protect companies from attacks from hackers and customers from having their information stolen. Without a team of top IT security specialists, companies risk losing huge sums of money in data breaches and a headache from unhappy customers.

Cyber security specialists need problem-solving skills, knowledge of security across various platforms, great communication skills, and fundamental computer forensics skills. If you've got what it takes it can be a hugely rewarding job with relatively high salaries.

## **Data Scientist**

A data scientist's job is to use machine learning to predict and analyze data. Specific tasks include things like identifying data-analytics problems, determining the correct data sets and variables, collecting large sets of data, and communicating findings to stakeholders. Data science is a growing field and one that is sure to continue to develop over the next few years.

To be eligible for this role, you'll need to be familiar with statistical programming languages such as R, Python, and SQL. You'll also need to have knowledge of data mining techniques.

## **Design, development and analysis.**

Mechanical engineers develop, design, build, test, and inspect mechanical devices and systems, such as machines, tools, and engines. Since mechanical engineering is a very broad field, they work in a variety of different industries designing a wide range of products. Most mechanical engineers work in manufacturing, research and development, or at companies that offer engineering services.

Typically, mechanical engineers have a Bachelor's degree in mechanical engineering or in a related field such as mechanical engineering technology. They need advanced mathematical skills to perform calculations and they need to be able to think creatively.

Electrical engineers design, develop, and test electrical devices and equipment, including communications systems, power generators, motors and navigation systems, and electrical

systems for automobiles and aircraft. They also oversee the manufacture of these devices, systems, and equipment.

Electronics Engineers use design and engineering equipment and software to complete engineering tasks. ... Recommend design modifications and equipment repair. Inspect electronic systems, instruments and equipment to ensure they meet applicable regulations and safety standards.

*Aeronautical engineers* work with aircraft. They are involved primarily in designing aircraft and propulsion systems and in studying the aerodynamic performance of aircraft and construction materials. They work with the theory, technology, and practice of flight within the Earth's atmosphere.

Aeronautics is the art or science of the manufacturing, design, and study of air flight capable machines. The field basically studies innovative ways to fulfill the age-old desire of humanity – the dream of flying.

Aeronautical engineering involves the study, design, and research of the machines or airplanes that move in the space and air sphere of the earth.

### **Robot manufactures and service management**

Robotics and manufacturing are a natural partnership. Robotics play a major role in the manufacturing landscape today. Automated manufacturing solutions should be a key part of any operation that strives for maximum efficiency, safety and competitive advantage in the market. Manufacturing robots automate repetitive tasks, reduce margins of error to negligible rates, and enable human workers to focus on more productive areas of the operation.

Robots used in manufacturing fill numerous roles. Fully autonomous robots in manufacturing are commonly needed for high-volume, repetitive processes — where the speed, accuracy and durability of a robot offers unparalleled advantages. Other manufacturing automation solutions include robots used to help people with more intricate tasks. The robot executes components of the process such as lifting, holding and moving heavy pieces.

Robotic process automation in manufacturing allows companies to remain competitive globally — offering an efficient, viable alternative to offshoring and fulfilling the skills gap in areas where it may be difficult to recruit the necessary employees. Manufacturing robots enable employees to focus on innovation, efficiency and other, more intricate processes that ultimately lay the groundwork for growth and success. With a dedicated manufacturing automation solution in place, you can see increased productivity, improved worker safety and satisfaction, and a better bottom line.

### **Bigdata & AI scientists**

Since the 1990s, the term Big Data has been mentioned by people. Big data has developed rapidly and is affecting our lives more and more deeply. Artificial intelligence was found at the Dartmouth Summer Research Project on Artificial Intelligence in 1956. The concept and development goals of

artificial intelligence have experienced several heartbreaks. But today, AlphaGo can beat human top players on the Go board.

Artificial intelligence is entering a rapid transition from theory to reality, which will greatly improve our quality of life. As an engine of big data, artificial intelligence is accelerating the implementation of deep data application services. In the era of massive connections in which the Internet of Everything data is exploding, we believe that companies that have mastered artificial intelligence and big data-related technologies will become the wave of the times.

### **The Birth of the Concept of Big Data**

The concept of big data is not new, and it has been frequently mentioned in the 1990s. But the concept of big data has become hot again in recent years, because it was thrown out again in the EMC world 2011 conference on the theme of Cloud Meets Big Data led by EMC in May 2011. In May of the same year, McKinsey published a related research report, and the concept of big data became hot again. So what is big data? Big data has a lot of technologies and different directions, so different people can have different perspectives. For example, massive data calculations, difficult and complex data analysis, etc., these may be characteristics of big data.

### **What is Big Data?**

So let's introduce what big data is. There are two popular definitions of big data. The first is what Gartner said.

Big data requires a new processing mode in order to have stronger decision-making, insight, and process optimization capabilities to adapt to massive, high growth rate and diversification of information assets.

### **What is Artificial Intelligence?**

Artificial intelligence is a new technical discipline that researches and develops theories, methods, technologies, and application systems for simulating the extension and expansion of human intelligence. The goal of artificial intelligence research is to let machines perform some complex tasks that require intelligent humans to complete. That is, we hope that the machine can replace us to solve some complicated tasks, not just repetitive mechanical activity but some that require human wisdom to participate in it.

### **Gene Designers**

**Gene Designer** is a computer [software](#) package for [bioinformatics](#).<sup>[1][2]</sup> It is used by [molecular biologists](#) from academia, government, and the pharmaceutical, chemical, agricultural, and biotechnology industries to design,<sup>[3]</sup> clone, and validate genetic sequences. It is [proprietary software](#), released as [freeware](#) needing registration.



## Features

Gene Designer enables molecular biologists to manage the full gene design process in one application, using a range of design tools.

- Algorithms for [in silico cloning](#), [codon optimization](#), [back translation](#), and [primer](#) design
- Graphic molecular View to display, annotate, and edit constructs
- Customizable database to store, manage, and track genetic elements, [genes](#), and constructs
- [Drag and drop](#) interface to move sequence elements within or between constructs (patented feature)
- Search feature for [sequence motifs](#), [restriction sites](#), and [open reading frames](#)
- Codon optimize for recombinant [protein production](#) in any organism using multiple algorithms
- Remove or add [restriction sites](#) or other [sequence motifs](#)
- Recode [open reading frames](#)
- Check [translation](#) frames and fusion junctions
- Design [oligonucleotides](#) to sequence [primers](#), includes a real time melting point calculator
- Cloning tool with drag and drop ability to cut, combine, and [clone](#) insert and [vector](#)

Gene Designer clones with a drag and drop feature. Users can drag a [vector](#) and insert into the Cloning Tool; cut, combine and [clone](#). Gene Designer assembles a [clone](#) that can then be dropped directly into a project.

## Educator and Student use

This free software has been incorporated into classroom and lab curricula for synthetic biology, systems biology, bioengineering, and bioinformatics. Students create and complete projects which manage the full gene design process in one application, using a range of design tools.

Examples of use in curricula:

- Synthetic Biophotonics Course; Utah State University, College of Engineering
- Lab Project using Gene Designer 2.0
- Systems Biology Lesson Overview
- Synthetic Biology Lesson Overview
- Student Projects

### 3. Explain about the Countries with entry requirements for Master's program.

- **A graduate degree in a relevant subject** – Depending on the programme and institution,
- **Language proficiency** – If English isn't your first language, you'll need to display a certain ability level, usually through a language test
- **Entrance exams** – These are only required in certain subject areas and qualifications.

#### English language requirements

If you're studying a Masters in English as a second language, you may be expected to take an English test as part of the admissions process for a Mastersprogramme. (This is likely in countries like the UK, USA, Australia, New Zealand and parts of Canada).

Tests prove that you have an appropriate level of written and spoken English, and ensure you would not struggle to understand a Masters course taught in English.

There are several different types of English exam. The most common of these are:

- IELTS (International English Language Testing System)
- TOEFL (Test of English as a Foreign Language)
- Cambridge Assessment English's C1 Advanced and C2 Proficiency
- PTE Academic (Pearson Test of English)

A large number of German Masters degrees are taught in English, making them more accessible to international students.

However, you may need to provide a language test score to study in Germany if neither English or German is your first language. This will depend on your course:

- **Programmes in English** will not require proficiency in German. However, non-native English speakers may still be required to take an [English language test](#) (exceptions will normally be made if you have completed an undergraduate degree, or other course, in English).
- **Programmes in German** will normally require international applicants to sit a recognised [German language test](#) (or provide other evidence of their proficiency, such as an existing qualification studied in German). Some courses will accept a lower score at the application stage, allowing applicants to take further German language training before they commence their degree (or do so during the early stages of their Masters).

Remember, even if your course doesn't require a German test, it's still worth taking the opportunity to build up your language skills whilst studying abroad. Most universities offer language courses in parallel to their degree programmes.

Doing so will make your time in Germany much more interesting and rewarding – plus, gaining proficiency in a second language is a great way to get more out of your international Masters and reflect the experience on your CV.

### **Entrance exams**

A small number of courses require applicants to take subject-related tests as part of the admissions process.

Examples of these are the [Graduate Management Admission Test \(GMAT\)](#) , and [Graduate Record Examinations \(GRE\)](#)

### **Financial requirements**

You may be required to show evidence that you are aware of the [cost of your Masters](#), and of how you plan to fund the course. For example, your [funding](#) might come from personal savings, a [postgraduate loan](#), a scholarship, [a charity](#), or even [crowdfunding](#).

This information might be covered in your [application](#), or in the contract you sign when you register for your course.

### **Attending an interview**

Some courses require applicants to attend an interview as part of the postgraduate admissions process. This is an excellent opportunity for applicants to prove that they're passionate about their subject, and that they have what it takes to flourish on a rigorous postgraduate course.

Before attending a Masters interview, you can read about what to expect and [how to prepare](#) for this stage of your application.

## **References**

Most universities don't have time to interview every Masters candidate. This means that they rely on [academic references](#) to back up applications, and to prove that candidates have what it takes to succeed at postgraduate level.

Admissions tutors are likely to rely on references just as much as other aspects of a [Masters application](#), such as a personal statement.

Strong references from previous tutors will boost your postgraduate application, so it's important

## **Explain about the preparation for attending any job interview.**

The following are some essential steps for pre-interview preparation:

### **1. Review the job description**

Read the job description to thoroughly understand how the employer has described the position and the type of candidate they are looking for. Carefully review the keywords and key phrases the employer uses to describe their expectations. The more you can align your skills and qualifications with the job description, the better chances you stand to impress the interviewer. You may also get some clues from the job description about the questions the interviewer may ask.

### **2. Consider your eligibility for the job**

Think about your qualifications and experience. Ask yourself why you should apply for that job and why the employer should hire you. Assessing how the job fits into your career path and what value you can add to the company will help you convince the interviewer about what makes you the best candidate for the position.

### **3. Learn more about the company**

Get in-depth information about the company through its website, social media pages, employee reviews and other online sources. Find out about its mission, management, work culture, the types of products it offers and the types of clients it serves. Get some insight on its latest revenue, growth prospects and business plans. Most companies display information about the management on their "about us" page, employment-related information on their "careers" or "work with us" page and information for investors on their "investor relations" page.

Researching the company well will help you align your CV with its expectations. It will also help you answer questions about the firm during the interview. If you are familiar with the organization, you can also ask relevant questions to the interviewer, which will show your seriousness about the job. However, you need not go into technical details if you are applying for a non-technical position. The idea is to get a basic understanding of the company's line of business.

### **4. Prepare a list of expected interview questions**

Make a list of common interview questions for the given position and frame thoughtful answers. Prepare impressive responses to questions that give you an opportunity to highlight your skills and interest in the job. In addition to position-specific questions, here are some common questions to include in your list:

Tell me about yourself.

Why are looking for a job change?

Why do you want this job?

What are your strengths and weaknesses?

What motivates you?

Where do you see yourself in five years?

## **5. Practice mock interviews**

No matter how well you prepare, it is natural to feel anxious and overwhelmed at the time of the interview. Mock interviews can be a great help in this regard. They can create a real interview- like environment and help boost your confidence. Ask your friends or family to conduct a mock interview for you. Consider recording the entire process to analyse your performance. If you can't find anyone to play the interviewer, you can rehearse the interview in front of a mirror.

## **6. Organise your documents**

You may have applied using a digital copy of your CV, but it always helps to keep hard copies of all your documents with you, just in case the interviewer needs them for easy access. Take a printout of your resume and cover letter. Put all the important documents including your mark sheets, certificates, ID proofs and photographs in a folder. If the HR has asked you to bring any particular documents like salary slips, relieving letter from previous employer or bank statement , be sure to keep them ready as well.

## **7. Update your social media profile**

If you are on LinkedIn, Facebook, Twitter or any other social media platform, make sure you have an updated profile. Employers often check your social media presence to get an idea about your personality and background. Search for your name in Google to see what results turn up. If there is anything unpleasant, prepare yourself for a response if the interviewer asks about it.

## **8. Make travel arrangements**

Familiarise yourself with the location map that the company has sent you. You can also check directions to the venue using Google Maps. Based on the distance and the time it would take to commute, plan your timing and decide on the mode of transport. Have contact information of the HR department ready with you just in case you need any help locating the company.

## **9. Decide on your interview dress**

Choose a formal dress that you would be wearing for the interview. Make sure the clothes are clean and wrinkle-free. If you plan to spray deodorant or perfume, make sure it is mild. Overall, plan for a neat and clean look with well-cut hair and shaved or trimmed beard.

How to prepare for a job interview: During the interview

**Follow these steps to prepare for a job interview when you are at the interview venue:**

### **1. Reach the location early**

Reach the venue a few minutes before the schedule. It will give you some time to rest and relax. If it is a far-off location from your place and the journey has been tiring, you can use the extra time at hand to drink water, use the washroom or freshen yourself up. Reaching early helps reduce anxiety and gives time to mentally prepare for the interview.

### **2. Be polite**

The way you hold yourself in the office tells a lot about you. Many companies use CCTV footage to analyse your personality. Sit patiently in a good posture while waiting for your turn. Be polite to the people you meet including the receptionist, security guard and other candidates.

### **3. Be mindful of your body language**

Be firm and confident while speaking to the interviewer. You can start practising it the very moment you enter the company. Be mindful of your body language while interacting with the receptionist or HR executive. Pay attention to how you smile and greet them.

### **4. Ask thoughtful questions to the interviewer**

Most interviewers would give you an opportunity to clarify your doubts and queries. Make mental notes during the interview to ask pertinent questions to the interviewer. If you have any doubts regarding the position, company or any other issue, you can get them clarified towards the end of the interview.



**Explain about the IELTS examination.**

**IELTS** is an English language exam that is required to be taken by international candidates considering studying or working in a country where English is the main language of communication. Most popular countries where IELTS is accepted for university admissions are the UK, Australia, New Zealand, USA, and Canada. The exam mainly measures the ability of test-takers to communicate in the four basic English language skills – listening, reading, speaking, and writing. IELTS exam is jointly owned and conducted by IDP Education Australia, British Council, and Cambridge English Language Assessment. With the number of IELTS tests grew to a record of 3.5 million in the year 2018, it has become a leader in the area of international higher education. It is accepted in 100% of universities in the UK and Australia. Also, it is accepted in more than 3,400 institutions in the US and thousands of institutions in English-speaking countries.

IELTS test can be taken on a computer or paper. Test-takers who opt for the IELTS computer-based test take the Listening, Writing, and Reading sections on a computer. Whereas, the Speaking test is conducted face-to-face with a trained examiner. With the Computer-based IELTS, one gets more test dates to choose from and gets results in 3-5 days. Test takers who opt to take IELTS on paper will take Reading, Writing, and Listening sections on paper with either HB pencils or pen. Whereas, the Speaking test is conducted face-to-face with a professional IELTS examiner.

IELTS 2021 exam is required for migration as well as academic purposes abroad in English-speaking countries like Australia, UK, New Zealand, USA, and Canada. It is the only English Language Test approved by UK Visas and Immigration (UKVI) for visa applicants applying both outside and inside the UK. A lot of students get confused about why are the IELTS scores required. The simple answer to this is that foreign universities and visa granting authorities need to be sure that you will not have communication issues while staying in the country. You need to show a good understanding and strong command of the English language and that is why your overall IELTS scores are so important. Another common doubt students have is whether IELTS is a compulsory exam or not. No, IELTS isn't compulsory in all university admissions. Many universities might not even require IELTS scores for admission purposes. But remember that if you don't give IELTS, your chances of getting the student visa might suffer as the visa officers may not be convinced about your English proficiency without IELTS scores. So it is safer to appear for IELTS and aim to score at least 6 bands overall.

You can take the IELTS exam with the British Council or IDP up to once a week (four times a month). The British Council and IDP global schedule for test dates are 48 days per year.

### **Types of IELTS**

There are two types of IELTS exams: IELTS Academic and IELTS General Training. Listening and speaking sections are the same for both these tests, however, the subject matter for the writing and reading sections are different depending on which test one takes. The Reading, Writing, and Listening sections of the IELTS tests are completed on the same day of the test with no breaks between them. However, the Speaking section can be completed either a week before or after the other tests date. This information test can be taken from your test centre.

### **IELTS Academic Test**

IELTS Academic is taken by those who apply for higher education or professional registration abroad.

## **IELTS General Test**

IELTS General Test is taken by those who wish to migrate to major English speaking countries like Canada, Australia, and the UK. This test is also taken by those who want to enroll in training programs or secondary education or want to gain work experience in a country where English is the main language used for communication.

Explain about the GRE test.

The Graduate Record Examination, or GRE, is an important step in the graduate school or business school application process. The GRE is a multiple-choice, computer-based, standardized exam that is often required for admission to graduate programs and graduate business programs (MBA) globally.

The GRE is developed and administered by testmaker ETS to provide graduate and business schools with common measures for comparing applicants' qualifications and preparedness for graduate-level academic work. Graduate school and business school admissions committees look at your GRE score, along with your academic record and supporting materials, to assess your readiness for the rigors of graduate academic study.

The GRE exam measures your command of basic arithmetic, algebra, geometry, and data analysis as well as college-level vocabulary. More importantly, it measures your ability to analyze and evaluate written material, think critically, and solve problems.

You will receive three scores on the GRE:

- Analytical Writing <<
- Verbal Reasoning <<
- Quantitative Reasoning <<

These scores are generated by the following sections:

- 1 Analytical Writing Assessment section
- 2 Verbal Reasoning sections
- 2 Quantitative Reasoning sections

In addition, you will see one of the following sections:

- Unscored (may be either Verbal Reasoning or Quantitative Reasoning)
- Research (used for ETS research purposes)

The Quantitative Reasoning and Verbal Reasoning sections are each scored on a scale of 130 to 170. The mean score for Verbal Reasoning is 151, and the mean score for Quantitative Reasoning is 153. The Analytical Writing Assessment is scored from 0 to 6 in half-point increments, and the mean score is 4.0.

The Analytical Writing Assessment, or “essay” section, measures whether you can articulate your thoughts and responses to complex ideas in a clear and reasoned way. Formulating a well-supported thesis in response to new and unfamiliar topics and key to doing well on Analytical Writing.

During the two, separately timed tasks in Analytical Writing, you will be asked to “Analyze an Issue” and to “Analyze an Argument.” For the “Analyze an Issue” task, you will read an opinion on a topic of general interest and be given instructions on how to respond to the issue at hand. For the “Analyze an Argument” task, you will need to consider an argument according to instructions given in the prompt.

The Verbal section of the GRE tests your ability to analyze written material, as well as relationships among component parts of sentences, including words and concepts. Verbal Reasoning questions appear in several formats:

### **TEXT COMPLETION**

Text Completion (TC) questions ask you to fill in the blank to complete sentences. Variations include 1-, 2-, and 3-blank questions. You’ll encounter approximately six of these in each Verbal section, and you should aim to complete each in about 1–1.5 minutes. To master these, you’ll need to build your vocabulary as well as develop your skill at using context clues from the sentence to make predictions for the blanks. There is no partial credit: you must answer correctly for all blanks to receive points for these questions

### **SENTENCE EQUIVALENCE**

Sentence Equivalence (SE) questions require you to fill in a single blank with two choices that create two coherent sentences that are logically similar in meaning. You will encounter approximately four SE questions in each Verbal section. Aim to complete each in about 1 minute. As with TC questions, you’ll need to work on building your vocabulary and identifying context clues in order to master SE questions

## **READING COMPREHENSION**

Reading Comprehension (RC) questions are based on passages of one or more paragraphs that develop an explanation or argument on a topic. RC questions require you to understand central ideas presented in the text and the structure of a text, as well as to research details in the passage and draw valid inferences from it. RC questions require strategic reading and paraphrasing skills. Each Verbal section will contain approximately 10 RC questions associated with five different passages, and you should aim to spend an average of 1–3 minutes on reading a passage and 1 minute per question.

The Quant section of the GRE tests your basic quantitative skills, as well as your ability to reason and solve problems with quantitative methods. You'll see questions covering basic arithmetic, algebra, geometry, and data analysis. These topics are typically covered in high school. You will not see trigonometry, calculus, or any other high-level math.

## **QUANTITATIVE COMPARISON**

Quantitative Comparison (QC) questions ask you to compare two quantities—Quantity A and Quantity B—and to identify the relationship between the two. You'll likely see about 7–8 of these in each Quant section. To master these, be familiar with the QC answer choices and with shortcut methods that allow you to compare rather than calculate.

## **PROBLEM SOLVING**

The most common Problem Solving (PS) questions are standard multiple-choice questions, with five choices and one correct answer. Variants include questions that ask you to select one or more answers from a list of choices (multiple-choice all-that-apply) and questions that ask you to enter your answer in a box (numeric entry.) To master PS questions, be familiar with the math concepts that are tested as well as strategies that allow you to approach solving efficiently.

There are also a handful (typically three per section) of Problem Solving questions associated with one or more charts. These Data Interpretation (DI) questions work like other PS Qs, but it's important to note that gleaning the information correctly from the graphs is the key to answering them.

The computer-delivered GRE is administered year-round in Prometric™ testing centers and on select test dates at other testing centers. The paper-delivered GRE is administered at certain testing centers on a limited number of dates. Seating for GRE is on a first-come, first-serve basis, and some testing center locations can fill up well in advance of the popular fall testing time. You can see a full list of testing centers, test dates, and seat availability on the ETS site. It is highly recommended that you register for your preferred GRE test date early so you can select a date that will allow enough time for ETS to process your scores and send them to the institutions you'll be applying to. This can take from 10 to 15 days. During popular testing times, seats in Prometric™ testing centers can be limited. You can take the computer-delivered GRE once every 21 days, up to five times within any continuous rolling 12-month period (365 days).

**What are the steps involved in visa process.**

**Visa** is a kind of official document or certificate of endorsement on your passport indicating that you are allowed to enter, leave and stay in a specific country for a specified period of time or permanently. It can be a separate certificate with a stamp marked on your passport. Visas are issued by the immigration authorities of a foreign country after checking and verifying all your credentials properly. Once, you get a visa means you are permitted to enter a country and stay there for a specific period of time. However, the permission received through visa is temporary and subject to approval from the immigration officer at the entry point.

**Single entry Visas** remains valid only for one visit to a particular country while Multiple Entry Visas permit any number of visits to a particular country within its validity tenure.

**Business Visa** is issued to applicants for short term visits to conduct overseas business negotiations.

**Tourists Visas** are mainly for the purpose of traveling from one country to another.

**Residence Visa** gives permits extended stay at a particular country. But, it does not give permission to take up employment in that country.

**Work Visa permits** to you stay and take up employment in a particular country for a specific period of time. This type of visa is also known as work permit visa.

**How to Apply for a Visa?**

You can apply for a visa both **online** and **offline**. In case of offline visa application, usually

you need to download the application form and fill it with required details. Then, you have to submit the filled application form supported by all required credentials at your concerned visa application center. Different countries may have different application procedures for applying for visas. Many countries may not accept offline visa application. Also, the cost involved in applying for a visa also differ from countries to countries.

### **How to Check My Visa Status Online?**

Visa status check can be done online. In order to check your visa status online, you need to visit the visa status enquiry section of a particular consulate and keep certain information handy with you. To know your passport visa status, you may be required to put the following information:

- Application ID
- Passport number

You can also track your visa status by visiting a third party website and entering your passport number and date of birth. It is very easy to track your visa status by using your passport number.

### **How to Apply for Visa**

The visa application process differs from country to country. Each country has its own set of rules when it comes to accepting visa applications. Normally, an applicant needs to go through the following steps to obtain a visa:

- **Step 1:** Select the type of visa you are applying for.
- **Step 2:** Next, check your eligibility.
- **Step 3:** Fill the online application form entering all required information.
- **Step 4:** And finally appear for the visa interview along with all required documents at a select embassy.

The Visa apply form is available both online and offline. In case, you opt for a manual process, you need to download the application form and submit it to the concerned consulate of a nation, provided the facility is available. All nations may not accept offline visa applications. In any case, a person has to appear for visa interview personally.

Like different visa application procedures maintained by different countries, the cost involved in visa application varies from country to country.

## **Apply For Visa Online**

- These days many countries accept online visa application forms. When it comes to online visa application, what you need to do is to fill all required information in the visa application form and get all supporting documents handy with you so that you can produce them as and when you need or at the time of your physical visa interview. The online visa application form is available on the official embassy website of a country.
- For example, you can **apply for a visa online in India**. Before applying online, make sure you would be able to provide all required documents needed by the country on the date of your visa interview. Applicants can apply for Indian Visa Online by using Online India Visa Registration. In order to do so, you should have access to need to a system equipped with either Chrome or Internet Explorer 7.0 and above and Acrobat Reader. There, all dates should be filled in the following format DD/MM/YYYY. Also, an applicant's passport should be valid for at least 6 months at the time of submission of online visa application.
- The rules and regulations involved in visa application are subject to changes. So, it's important you check with the embassy website of a particular country you want to visit before you start applying for a visa. Visa application procedure may vary within the same country based on the embassy you are attending.

## **Information to be Provided with Visa Application Form**

Normally, a visa applicant needs to fill an application form which is mostly available at the embassy website of his/her destination country and enter all required information. You may be required to furnish the following information with your visa application form:

- Name of the applicant.
- Date of birth.
- Passport number.
- Profession
- Dates of travel/stay at your destination country.
- Contact address in the destination country.

Apart from the aforesaid information, you may be asked to furnish further information.

Student visa is a kind of official document issued to students to help them enter different countries and pursue education. It is a type of non-immigrant visa and any prospective student who wants to pursue higher education in another country should get a student visa for that country. A student visa is a must to study abroad.

It is a multiple entry visa and remains valid till the time of completion of your study abroad.



## **Student Visa Types**

There are different types of student visas and based on your circumstances you can choose a one. In Australia, there are 7 different types of student visas whereas the USA offers 3 different types of student visas including F1, M1 and J1 Visa. F1 Visa is issued to students planning to engage in academic studies in the USA at an approved school or accredited US University or colleges.

M1 is issued for those who want to engage in vocational activities or trainings at US Universities. And A J-1 visa is issued to professor, research scholars, and exchange visitors who take part in educational programs participating that promote cultural exchange. The USA student visa a type of non-immigrant visa.

Likewise, India offers multi-travel student visa to genuine students to pursue studies in India. India also issues provisional student visa based on the provisional nature of your admission in Indian institutions.

## **Student Visa Fees**

The terms and conditions, and fees of a Student Visa offered by various nations differ from one to another. So, it is important you check with your destination consulate to know the recent fees applicable on a particular type of student visa. You can pay your visa fees online by using NEFT and other online modes of transactions.

## **Student Visa Eligibility**

The eligibility conditions of student visa differ from countries to countries. Besides, the same country may set slightly different set of eligibility conditions for different nations. Your course of study and the type of school you plan to attend determine the exact type of visa you need. Besides, it needs to be approved by your academic institution abroad.

The following eligibility conditions apply when you apply for a Student Visa:

- Visa application should be accepted and approved by the school authority.
- You need to prove that you have enough money to pay for your tuition fees and bear the cost of living for yourself and any family members who accompany you to a particular destination.
- Having a good past academic record and history
- Must be able to qualify the character requirements.
- You fulfill health requirements set by the destination country and your ability to purchase health insurance cover, if needed.

## **Documents to be shown during Student Visa Interview**

The following documents to be shown at the time of student visa interview:

- Valid passport/ previously issued passports.
- Recent passport size photograph.
- Visa application fee receipts.
- DS-160 confirmation page (in case of US Student Visa).
- VFS appointment letter.
- SEVIS receipt and I-120 (in case of US Student Visa).

\*\*\* You may be asked to produce additional documents by your concerned embassy.

## **How to Apply for Student Visa**

Student visa application may vary from country to country. You need to follow certain steps while applying for a student visa. So, before you apply, read the instructions provided by the embassy of your destination country where you intend to apply. You can apply for a student visa both online and offline. Certain countries may accept offline applications for student visa. In that case, you need to download the application form and fill it with all required information and send to the consulate of your destination country.

You can also apply for it online by entering all relevant information. The Student visa application form is available online and it is fastest and easiest way to apply for a student visa. If you are an Indian student and want to pursue studies in USA, you need to first apply to Student and Exchange Visitor Program (SEVP) certified schools and get approved by them. Then, you need to complete the visa application form known as the DS 160 needs to be completed online.

After successfully completing the online form, you will receive an application ID number and password. It will help you access the confirmation page of the DS-160.

Once your visa type is decided and you complete the DS-160 form, pay the visa fees. Normally, an Indian student needs to pay Rs. 10880/- for F1, M1 and J1 visa types. However, this amount is subject to change.

Once the visa application fees is paid and you fulfill all US student visa requirements, you are ready to schedule your visa interview appointment. You need to book two appointments - one for the Visa Application Center (VAC) and the other for the visa interview at the particular Embassy.

### **Student Visa Extension**

You can apply for an extension of your student visa, if your visa expires before you complete your studies in a particular country. It is important you know the expiry date on your study permit and make sure you apply quite ahead of your visa expiry date. For example, if you are studying in Australia and your visa is about to expire before completion of your studies, you can apply for visa extension directly.

### **Explain about the Scholarships for Master's program.**

#### **SCHOLARSHIPS**

Studying in the US can be affordable if you plan well in advance, so you can apply to a range of scholarships offered by the American universities and colleges before deadlines. Open to meritorious international students to help them fund their studies, these financial aids can be partial or fully paid, depending on the criteria, course and the institution. Many scholarships and bursaries are also offered by the American government, and various private and public establishments as well. When applying to any of these scholarships, make sure you check the criteria carefully, along with the application closing date.

What is the criteria for applying to scholarships to study in the US for Indian students

The most important criterion for most scholarships is a good academic score, however, it also depends on factors such as your chosen destination, subject and level. In some scholarships, factors like extracurricular activities, and volunteering can also be used to advantage. Keep in mind that every scholarship has its eligibility criteria. While in some, a mere application may suffice, while for others you may have to fulfil several other conditions. For instance, in research-centric programs, you may have to submit written assignments. Do not hesitate to contact the university admission centre if you have any doubts.

### **What amount of money is available through scholarships**

The amount of money available and the type of award varies between institutions. Certain research programs may provide up to 100% of the tuition fee besides covering a part of your living expenditures. You may experience higher competition when you apply for government scholarships in comparison to the university scholarships. So, we suggest you start with the procedure about 8-12 months before your preferred intake begins.

Here are some popular scholarship programs you can apply to study in the US as an

Indian student:

S.No.	Name of the scholarship	Description
1	<b>Fulbright-Nehru Fellowships (Government-funded)</b>	<ul style="list-style-type: none"> <li>• Applicable for international students who are applying to master's or PhD programs; this scholarship covers tuition fee, accident and sickness coverage as per US guidelines, airfare, and living costs</li> <li>• You will receive a monthly stipend to support your course in case of PhD. However, for other levelsof education the grant and duration may differ</li> <li>• It covers only J-1 visa support</li> </ul>

(Source:<http://www.usief.org.in/Fellowships/Fulbright-Nehru-Master-Fellowships.aspx>  
<http://www.usief.org.in/Fellowships/Fulbright-Nehru-Postdoctoral-Research-Fellowship.aspx>)

**• Hubert Humphrey**

This program is a part of the Fullbright program, and aims to bring an accomplished young and mid-career professional from a developing

**To study anywhere:**

- InlaksShivdasani Foundation Scholarships – Scholarships for Indian students to study abroad in North America or Europe. Applicants must be under 30 and reside in India at the time of application. For undergraduate and postgraduate study. Other restrictions apply.

**To study in Asia:**

- Aichi Scholarship Program for Asian Students in Japan – Various scholarships for Indian students studying at graduate level in Aichi Prefectural government-approved manufacturing programs in Japan.
- DST A\*STAR Call for Singapore-India Joint Research Grants – Grants for Indian researchers within the fields of science and technology to study in Singapore. Sponsored by the Indian government and A\*Star Singapore.
- Hinrich Full MA Scholarship in International Journalism at HKBU – Open to citizens from India, Cambodia, Indonesia, Vietnam and Philippines, offering scholarships to study the Masters of Arts in International Journalism program at Hong Kong Baptist University in Hong Kong.

- HM King's and HM Queen's Scholarships for Asian Students in Thailand – Thai government scholarships for Indian citizens to study in Thailand at master's level within engineering and technology, management or environment and development at the Asian Institute of Technology (AIT).

- Silk-Road Scholarship Program at Seoul National University – Scholarships for Indian students to study abroad in South Korea at Seoul National University, on graduate-level humanities or social science programs.

**To study in Australia:**

- University of Adelaide Ashok Khurana Scholarship for Indian Students – Scholarships available for Indian students who are undertaking postgraduate study in selected fields at the University of Adelaide.

- India Global Leaders Scholarship – Full-tuition international scholarships for Indian students studying a coursework master's degree or undergraduate degree within the Faculty of Business, Economics and Law at the University of Queensland in Australia. Excludes MBAs.

- University of New South Wales (UNSW Sydney) Future of Change India Scholarship – A scholarship for an Indian citizen who has been accepted to study an undergraduate or postgraduate degree at UNSW Sydney. As part of your application you'll need to submit a short video of you discussing how the scholarship will help you reach your goals.

- University of Queensland Postgraduate Coursework Scholarships – Another set of scholarships from the University of Queensland, this fund is open to students from India or Latin America to undertake coursework-based postgraduate study in biology-related subjects.

**To study in Europe:**

**Ireland**

**UCD Global Graduate Scholarships for Indian Students in Ireland – Funding opportunities for Indian students at graduate level studying at University College Dublin in Ireland. The**

**Netherlands**

- Orange Tulip Scholarship – Grants are available for Indian students to study in the Netherlands at bachelors or master's level at selected participating universities.

**France**

- Campus France Charpak Scholarship – A scholarship for an Indian national to study in

France at master's level. You should be 30 or under and be a current student or currently employed in India. There is also a Raman Charpak Scholarship available for PhD students to carry out part of their research work at a French institution for up to six months.

## **UK**

- British Council GREAT scholarships for Indian Students – A selection of scholarships are offered by the British Council, to support Indian students applying to study abroad in the UK.
- Charles Wallace India Trust Scholarships – For Indian students who wish to study in the UK. Open to doctoral students, research students and visiting fellows.
- Heriot Watt SML International Merit Scholarships for Indian Students – Open to Indian students at postgraduate level studying at Heriot Watt University in the UK on a taught program within the School of Energy, Geoscience, Infrastructure and Society.
- LSE Commonwealth Shared Scholarship Scheme (CSSS) – Five awards are available to international students from commonwealth countries (including India) to study at postgraduate level at the London School of Economics and Political Science (LSE).
- Ms. Agatha Harrison Memorial Fellowship at St. Antony's College – Indian government fellowship offered to Indian students pursuing study at the University of Oxford's St. Antony's College in the field of history, economics and political science. Only available to high-achieving postgraduate research students.
- Oxford and Cambridge Society of India (OCSI) Scholarships – Open to Indian students at any degree level to study at Oxford University or the University of Cambridge in the UK.
- Saltire Scholarships – Scholarships for students from Canada, the US, India and China to study in Scotland at any degree level.
- Sir Ratan Tata Fellowships for South Asian Students at LSE – Scholarships for social science students from South Asia to study at the London School of Economics (LSE) in the UK within the LSE Asia Research Centre (ARC).

- Sussex India Scholarships – Opportunities to gain funding at the University of Sussex in the UK for Indian students at master’s degree level.
- **University of Bournemouth Business School Dean’s Scholarships for Masters Students** – A total of five scholarships for international students to study a taught master’s program at Bournemouth University in the UK. Open to students from Russia, Turkey, Nigeria, China, India, and South Korea for a 50 percent tuition fee reduction.
- University of Lincoln India Scholarship – Scholarships are available for high-achieving Indian postgraduate students, offered in the form of £5,000 tuition fee reductions.
- **University of Oxford Felix Scholarships for Indian Students** – Graduate-level funding opportunities for Indian students studying at the University of Oxford.
- University of Sheffield – A range of scholarships for undergraduate and postgraduate Indian students who show strong academic potential.
- **University of Southampton LLM International Scholarships** – International scholarships to study law at postgraduate level at the UK’s University of Southampton. Open to all students from outside of the European Union.
- UWE International Scholarships – UWE Bristol University in the UK is offering undergraduate and postgraduate tuition fee discount scholarships for students from several countries, including India.

More scholarships to study in the UK are available here.

**To study in the US:**

- Asian Women in Business Scholarship Fund – Offering female Asian students the chance to receive funding for an undergraduate business degree taken at an accredited US university.
- Chicago Booth School of Business – The Ramakrishnan Family Scholarship and Akhtarali H. Tobaccowala Fellowship are both available for Indian students who apply to study a full-time MBA at the school.
- Cornell University Tata Scholarship – Scholarships for Indian citizens who have been accepted to study an undergraduate program at Cornell University.
- Fulbright-Nehru Research Fellowships – Offering funding to outstanding Indian students wishing to pursue study at any level within an accredited US institution. See individual scholarships for specific criteria.



- S.N. Bose Scholars Student Exchange Program for Indian Students – Opportunities for Indian researchers at master’s level or higher to study a selected program in the field of science and technology at a university in the US.
- Stanford Reliance Dhirubhai Fellowships for Indian students – Scholarships for Indian students to study at Stanford Graduate School of Business on the MBA program. To be eligible students must return to India within two years of completing their studies.



