NANOTECHNOLOGY

INTRODUCTION

Nanotechnology is the engineering of functional systems at the molecular scale. It is the branch of technology that deals with dimensions and tolerances of less than 100 nanometres, especially the manipulation of individual atoms and molecules. In its original sense, 'nanotechnology' refers to the projected ability to construct items from the bottom up, using techniques and tools being developed today to make complete, high performance products. Nanotechnology is a research field engaged in finding out new structures and studying the properties of nano particles.

SKILL SET

- Good background of Physics and Chemistry.
- An open, enquiring and scientific bent of mind.
- Sound analytical skills.
- Natural propensity for research work.
- Hard-work and Patience
- Burning desire to work.

TOP COLLEGES

- **S.R.M University: Department of Physics and Nanotechnology, U.P**

  Course: B-tech (Nanotechnology)
  Entrance Exam: SRMJEEE
  Mode: Online

  Eligibility: Candidates who have attempted Physics, Chemistry and Mathematics in 10+2.

  SRMJEEE Paper Pattern:
  Physics- 35 questions
  Chemistry- 35 questions

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Mathematics- 35 questions

Negative marking- '1' for every wrong answer.

- **University of Petroleum and Energy Studies, Dehradun**

Course: B.Tech Mechanical Engineering with Specialization in Material Science & Nano Technology

Eligibility:

Examination Pathway- admissions through UPESEAT (Upto 80% of Seats)

Non Examination Pathway - admissions through Board Merit / JEE Mains Score (Upto 20% of Seats)

Minimum 60% marks at Higher & Senior Secondary level (10th & 12th)

Minimum 60% aggregate in Physics, Chemistry & Mathematics at Senior Secondary level (12^{th})

SCHEME OF TEST :

Sections	**No.of Ques**
Mathematics	50
Physics	50
Chemistry	50
English Language Comprehension	30
Current Affairs Awareness	20
Total no. of Questions	**200**

- **Guru Gobind Singh Indraprastha University, New Delhi**

Course: B.Tech (Nanotechnology)

Entrance Exam: IPU CET

Eligibility: Candidate must have passed in Class 12 of 10+2 pattern of CBSE or equivalent with a minimum aggregate of 55% marks in Physics, Chemistry and Mathematics IPUCET B.Tech Question **paper pattern**

Subjects	**Weightage**
Physics	33.33%
Chemistry	33.33%
Mathematics	33.33%

- **Amity University, Noida**

Course: B.Tech + M.Tech. - Nanotechnology (Dual Degree)

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Duration: 4 years

Eligibility: min. 60% in class X & XII with min. 60% in PCM/PCB for Non Sponsored and 55% for Sponsored category.

Admission Process: JEE Score

JOB PROSPECTS

- Electronics/semiconductor industry
- Materials science including textiles, polymers, packaging
- Auto and aerospace industries
- Sporting goods
- Biotechnology
- Medical fields and pharmaceuticals
- Environmental monitoring, control, and remediation
- Food science including quality control and packaging
- Forensics
- University and federal lab research
- Military and national security
- Energy capture and storage
- Cosmetics

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