



Pi Craft

JEE Main + JEE Advanced

IIT-JEE Preparation Guide

A clear route to the IITs, NITs and top engineering institutes: pattern, syllabus map, roadmap, tips and official practice.

thepicraft.com · Concept is the power

2

Stages

JEE Main, then JEE Advanced

3 hrs

Per paper

Computer-based, all papers

75

JEE Main questions

25 each in Physics, Chemistry, Maths

+4 / -1

Marking

For JEE Main questions

Exam pattern

Two stages. Plan for both from day one.



JEE Main

Conducted by

National Testing Agency (NTA), usually twice a year

Mode

Computer-based test, 3 hours

Paper 1 (B.E. / B.Tech)

75 questions, 300 marks: Physics, Chemistry and Mathematics (25 each)

Question types

Multiple-choice and numerical-value questions

Marking

+4 for correct, -1 for incorrect

Leads to

NITs, IIITs and GFTIs, and the gateway to JEE Advanced



JEE Advanced

Conducted by

One of the IITs, on a rotating basis

Who can appear

Top qualifiers of JEE Main, as per the brochure

Papers

Two papers of 3 hours each, both compulsory

Question types

Vary every year: single and multiple correct, numerical, matching

Leads to

IITs through JoSAA counselling

Syllabus at a glance

Tap a subject to see its chapters.



Mathematics

13 chapter groups

Sets, relations and functions

Complex numbers and quadratic equations

Matrices and determinants

Permutations and combinations

Binomial theorem

Sequences and series

Trigonometry

Limits, continuity and differentiability

Integral calculus

Differential equations

Coordinate geometry

Vector algebra and 3D geometry

Statistics and probability



Physics

11 chapter groups

Units and measurements

Kinematics and laws of motion

Work, energy and power

Rotational motion and gravitation

Properties of matter and thermodynamics

Oscillations and waves

Electrostatics and current electricity

Magnetism, EMI and AC

Optics

Modern physics

Experimental skills



Chemistry

12 chapter groups

Mole concept and atomic structure

Chemical bonding

Thermodynamics and equilibrium

Solutions and electrochemistry

Chemical kinetics

Periodic table and p, d, f block elements

Coordination compounds

General organic chemistry

Hydrocarbons and haloalkanes

Alcohols, phenols and ethers

Aldehydes, ketones and acids

Amines, biomolecules and polymers

Always confirm dates, eligibility and pattern in the latest official notification.

Your roadmap

1

Build the base

Finish Class 11 and 12 concepts with NCERT first. Do not skip Chemistry NCERT lines.

2

Go deep

Topic by topic: theory, solved examples, then graded problem sets.

3

Practise by chapter

Solve previous-year questions chapter-wise and note the repeated patterns.

4

Test like the exam

Full-length timed mocks on the exam interface, followed by a proper analysis.

5

Revise and refine

Formula sheets, an error log and short daily revision until the exam.

Preparation tips



NCERT first

Chemistry especially: inorganic and organic facts come straight from the textbook.



Keep an error log

Write every mistake, its cause and the fix. Re-read it weekly.



Learn from past papers

Chapter-wise previous-year questions show what the exam really asks.



Train your speed

Practise numerical-value questions with a timer. Accuracy first, then speed.



Balance all three subjects

Do not let one subject carry the others. Weak chapters decide ranks.



Analyse every mock

A mock without analysis is wasted. Tag mistakes: concept, calculation, time.



Protect sleep and health

A rested mind solves faster. Keep a fixed routine.



Plan for Advanced early

Advanced rewards depth. Keep a few tough problems in every study session.

Practice and mock tests



Previous papers

Solve official papers topic by topic from the sites below.



Timed mocks

Take full-length mocks and analyse every attempt.



Cutie Pi

Stuck? Ask your AI tutor in plain words.

Official resources

Go straight to the official source.



JEE Main (NTA)

Information bulletin, syllabus, previous papers and answer keys.



JEE Advanced

Brochure, syllabus and the archive of previous papers.



JoSAA counselling

Seat allocation for IITs, NITs, IIITs and GFTIs.



NCERT textbooks

Official textbooks, the base for school-level and CUET preparation.



National Testing Agency

Official notices, information bulletins and the Abhyas practice platform.

Questions answered

▼ Is JEE Main enough for the IITs?

No. IITs admit through JEE Advanced, which you can attempt after qualifying in JEE Main. NITs, IIITs and GFTIs admit through JEE Main rank.

▼ Where do I find previous papers?

On the official JEE Main and JEE Advanced websites listed in the resources section.

▼ How many hours should I study?

It depends on your class and schedule. Consistency and analysis matter more than long, irregular days.

This guide is an original Pi Craft overview prepared from public information. Always confirm dates, eligibility and pattern in the latest official notification. Pi Craft is an independent educational initiative and is not affiliated with, or endorsed by, any examination body or government organisation.