



सत्यमेव जयते  
Ministry of Education  
Government of India



# SATHEE

An initiative by MoE & IIT Kanpur



# Student Help Booklet

**SATHEE** is a **Free Learning Platform** providing guidance and study resources to students for competitive exams like **Engineering** (JEE), **Medical** (NEET), **Law** (CLAT), **Agriculture** (ICAR), **University Entrance Test** (CUET), as well as for competitive exams preparation like the **Staff Selection Commission** (SSC), **Railway** (RRB), and **Banking** (IBPS)

## What SATHEE provides for free ?



**10000+ hours of video lectures** from IIT Professors/subject experts



Mentorship sessions from the students of IIT, AIIMS and other premiere institute



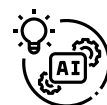
**Test series: All India mock tests, PYQs, topic and subject wise tests**



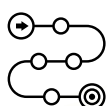
**Daily live doubt** clearing sessions over zoom



Study material available in **English, Hindi and 11 regional Languages**



**AI Based** analytics to track your learning and progress



**Complete mapping** of CBSE/State board syllabus for board exams



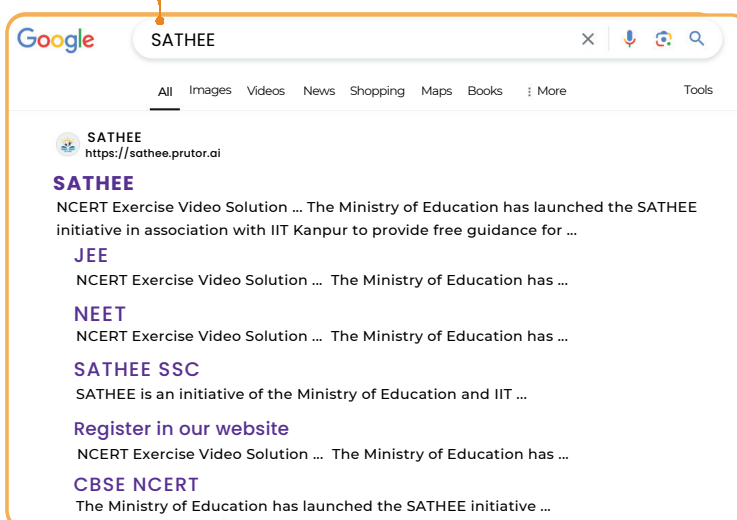
**80,000+ questions** to practice

# STEP 01

## How to access the SATHEE website ?

Search 'SATHEE' or visit <https://sathee.iitk.ac.in/>

or scan this QR



# STEP 02

## Getting started with SATHEE

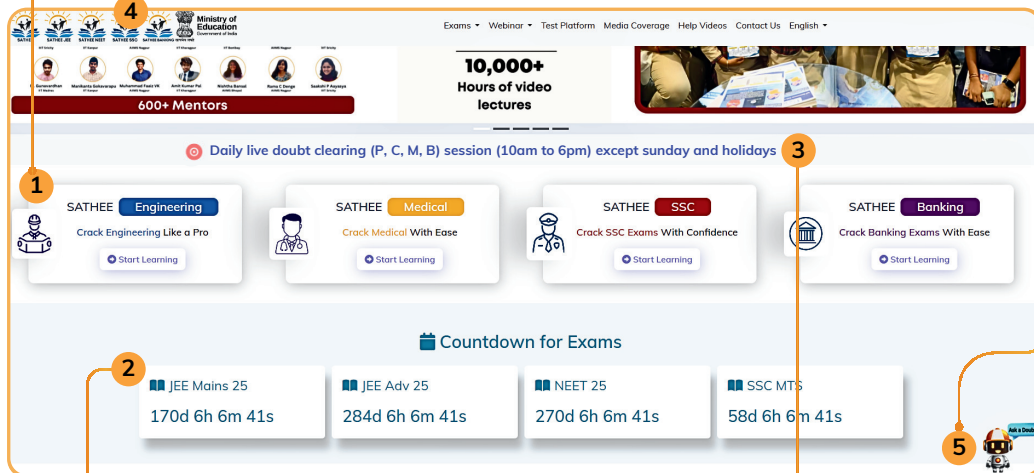
On visiting SATHEE website, you will see this page on your screen

1 Select the exam you are preparing for

Once you select the exam you will be redirected to exam specific website

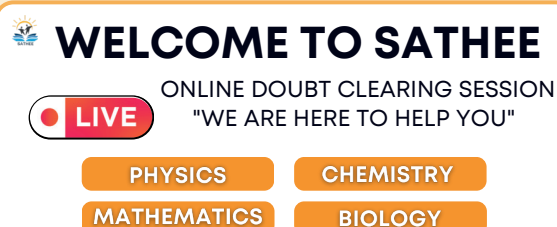
4 Shortcut to switch among exam website

5 Click on this icon to access the AI-Enabled chatbot which will help you with your quires



2 Countdown timer to help you plan for next exam

3 Click on **daily live doubt session**, you will be re-directed to live zoom session where you can ask any doubt you have related to that subject



## STEP 03

# How to enroll in a course ?

1. SATHEE has a tailored program for students from class 9-12th and 12 passout students

2. Click on "Enroll for Free" in the course that suits you the best

3. You will be re-directed to registration page after you select your course

### Start Your Journey With SATHEE Courses Engineering exam preparation courses by IIT Professors/Subject Experts

**JEE MAINS**  
PREPARATION FOR CLASS 11<sup>th</sup>

PHYSICS CHEMISTRY MATHEMATICS

BY IIT PROFESSORS / SUBJECT EXPERTS

**Class 11th**

Structured Lectures for In-depth Learning  
Mock Tests with AI based analysis  
Live Doubt Resolution

Enroll For Free >

**JEE MAINS**  
PREPARATION FOR CLASS 12<sup>th</sup>

PHYSICS CHEMISTRY MATHEMATICS

BY IIT PROFESSORS / SUBJECT EXPERTS

**Class 12th**

Systematic Lectures for Extensive Insight  
Mock Tests with AI based analysis  
Live Doubt Resolution

Enroll For Free >

**JEE MAINS**  
PREPARATION FOR CLASS 12<sup>th</sup>  
PASSOUT

PHYSICS CHEMISTRY MATHEMATICS

BY IIT PROFESSORS / SUBJECT EXPERTS

**Class 12th Passout**

Optimized Learning with structured classes  
Mock Tests with AI based analysis  
Live Doubt Resolution

Enroll For Free >

### Foundation courses by IIT Alumni/Subject Experts

**FOUNDATION COURSE**  
For Class 9<sup>th</sup>  
WITH SATHEE

Lectures by IIT Alumni/Subject Experts

Build a strong fundamental  
Topic-wise Science and Maths lecture  
Live Doubt Resolution

Enroll For Free >

**FOUNDATION COURSE**  
For Class 10<sup>th</sup>  
WITH SATHEE

Lectures by IIT Alumni/Subject Experts

Create a Robust Base  
Topic-wise Science and Maths lecture  
Live Doubt Resolution

Enroll For Free >

## STEP 04

# How to register on the SATHEE platform ?



Ministry of Education  
Government of India



### SATHEE Engineering

(Self Assessment, Test and Help for Entrance Exams)

This is a testing platform designed to help you prepare for engineering exams. The platform contains mock tests and topic wise tests to assess your exam preparation. Register to start using the platform. In case you face any difficulties, please email or WhatsApp us.

Powered by Prutor, Technology developed at IIT Kanpur

### Sign Up/In and start your exam preparation

Sign In [Sign Up](#)

<b>Candidate's Name*</b> Enter your name here	<b>Email Id*</b> Enter your email here	<b>Mobile Number</b> Mobile no. (Preferably Whatsapp)*
<b>Gender*</b> <input type="radio"/> Male <input type="radio"/> Female <input type="radio"/> Other	<b>State*</b> Select State	
<b>District*</b> Select District	<b>City*</b> Enter your of class school city here	
<b>Social Group</b> Select Social Group	<b>School Type*</b> <input type="radio"/> KV <input type="radio"/> JNV <input type="radio"/> Punjab Gov <input type="radio"/> Other	
<b>Enter Class</b> 9th	<b>School Name*</b> Enter school name here	
<b>Register for Course</b> Select Course	<a href="#">Submit</a>	

Fill in all the details and click on submit

A password reset link will be sent to your mail

Click on the link and reset the password

Sign in with your email and password

You are now ready to start

# STEP 05

# Navigating the student dashboard

After signing in you will have dashboard on your screen. The dashboard is divided in different parts like **Learning, Test and Reports**. The Student dashboard has all the features you require for better Exam preparation. Go to the **Learn** Tab to access the learning material

## LEARN

**1 Start Your Journey With SATHEE Courses**  
Engineering exam preparation courses by IIT Professors/Subject Experts

**JEE MAINS PREPARATION FOR CLASS 11**  
BY IIT PROFESSORS / SUBJECT EXPERTS  
Class 11th  
Structured Lectures for In-depth Learning  
Mock Tests with AI based analysis  
Live Doubt Resolution  
[Watch Now >](#)

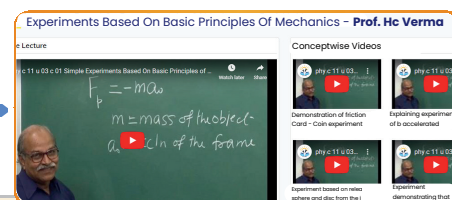
**JEE MAINS PREPARATION FOR CLASS 12**  
BY IIT PROFESSORS / SUBJECT EXPERTS  
Class 12th  
Systematic Lectures for Extensive Insight  
Mock Tests with AI based analysis  
Live Doubt Resolution  
[Watch Now >](#)

**JEE MAINS PREPARATION FOR CLASS 12 PASSOUT**  
BY IIT PROFESSORS / SUBJECT EXPERTS  
Class 12th Passout  
Optimized Learning with structural classes  
Mock Tests with AI based analysis  
Live Doubt Resolution  
[Watch Now >](#)

**01 UNITS AND MEASUREMENTS XI**  
Units of measurement, system of units, SI units, fundamental...  
Accuracy And Precision of Measuring Instruments...  
Dimensions Of Physical Quantities, Dimensional Analysis ...

**02 MOTION IN A STRAIGHT LINE XI**  
Simple Experiments Based On Basic Principles Of Mechanics...

Experiments Based On Basic Principles Of Mechanics - Prof. Hc Verma



Click on "Recorded Lectures" to access video lectures by IIT Professors

- All Courses
- LEARN
  - 1 Recorded Lectures**
  - 2 Crash Courses
  - 3 Foundation Courses
  - 4 Ncert Tutorial
  - 5 Webinar
- TEST
- REPORTS
  - Topic Wise
  - Live Lectures
- Contact Us

**2 45 days Crash Course for JEE Mains**

**Crash Course**  
FOR JEE APPETIZER  
IN ENGLISH  
JEE Mains 2024 English  
In-depth and consized learning  
Comprehensive Mock Test  
[Enroll For Free >](#)

**क्रैश कोर्स**  
हिंदी में  
JEE Mains 2024 Hindi  
In-depth and consized learning  
Comprehensive Mock Test  
[Enroll For Free >](#)

**ಕ್ರೈಶ್ ಕೋರ್ಸ್**  
ಇಂಗ್ಲಿಷ್  
JEE Mains 2024 Kannada  
In-depth and consized learning  
Comprehensive Mock Test  
[Enroll For Free >](#)

**ক্ৰাশ কোর্স**  
বাংলায়  
JEE Mains 2024 Bengali  
In-depth and consized learning  
Comprehensive Mock Test  
[Enroll For Free >](#)

**ഇടക്കാല പഠനം**  
മലയാളത്തിൽ  
JEE Mains 2024 Malayalam  
In-depth and consized learning  
Comprehensive Mock Test  
[Enroll For Free >](#)

**क्रैश कोर्स**  
मराठी मध्ये  
JEE Mains 2024 Marathi  
In-depth and consized learning  
Comprehensive Mock Test  
[Enroll For Free >](#)

Click on "Crash Course" for short term courses covering essential topics in English, Hindi and 11 Regional Languages

**3 Foundation courses by IIT Alumni/Subject Experts**

**FOUNDATION COURSE For Class 9<sup>th</sup> WITH SATHEE**  
Build a strong fundamental  
Topic-wise Science and Maths lecture  
Live Doubt Resolution  
[Watch Now >](#)

**FOUNDATION COURSE For Class 10<sup>th</sup> WITH SATHEE**  
Create a Robust Base  
Topic-wise Science and Maths lecture  
Live Doubt Resolution  
[Watch Now >](#)

Click on "Foundation Courses" to access video lectures for students of class 9th and 10th by IIT and AIIMS Students

**4 Physics**

**Physics NCERT Tutorials**  
Ananya P. Mukherjee  
IIT Kanpur  
Physics  
NCERT-Focused Foundational Lectures  
NCERT Exercises with Solutions  
Live Doubt Resolution  
[Watch Now >](#)

**Physics NCERT Tutorials**  
Shreyank Goel  
IIT Kanpur  
Physics  
NCERT-Focused Foundational Lectures  
NCERT Exercises with Solutions  
Live Doubt Resolution  
[Watch Now >](#)

**Physics NCERT Tutorials**  
Shuvadij Chosh  
IIT Kanpur  
Physics  
NCERT-Focused Foundational Lectures  
NCERT Exercises with Solutions  
Live Doubt Resolution  
[Watch Now >](#)

Click on "NCERT Tutorials" to access video lectures based on NCERT textbooks by IIT and AIIMS Students

**5 Webinars**  
JEE का तोड़

**JEE का तोड़**  
Anjali Negi  
Dept. of Physics  
IIT Kanpur  
[Watch Now >](#)

**JEE का तोड़**  
Apoorv Tandon  
Dept. of Computer Science  
IIT Kanpur  
[Watch Now >](#)

**JEE का तोड़**  
Raghav Madaan  
Dept. of Electrical Engg.  
IIT Kanpur  
[Watch Now >](#)

**JEE का तोड़**  
Yogesh Nain  
Dept. of Electrical Engg.  
IIT Kanpur  
[Watch Now >](#)

Click on "Webinar" for mentorship sessions and Solve with Me sessions by IIT and AIIMS Students

# Comprehensive material along with video lectures

When you open the recorded lectures, you find many more resources and tools to help you with deep understanding of that topic

1 ← Go Back

Physics 11

**Units And Measurement**

Motion In A Straight Line

Motion In Plane

Laws Of Motion

Work Energy And Power

Systems of Particles And Rotational Motion

## Units And Measurement

### 1.1 INTRODUCTION

Measurement of any physical quantity involves comparison with a unit. The result of a measurement of a physical quantity is express of physical quantities appears to be very large, we need only a limit interrelated with one another. The units for the fundamental or base quantities can be expressed as combinations of the base units. Such these units, both the base units and derived units, is known as

### 1.2 THE INTERNATIONAL SYSTEM OF

Click on "NCERT and Reference Books Material" for foundational knowledge of the topic

6 Chapter 01 Units and Measurements

Multiple Choice Questions (MCQs)

1. The number of significant figures in 0.06900 is

(a) 5 (c) 2

(b) 4 (d) 3

Show Answer

Click on "Exemplar Problems" to practice better

7 Related Problems with solution

Problem 1: The speed of sound in air at a certain temperature

Solution: To convert meters per second to kilometers

[1 m/s = 3.6 km/h]

Click on "Related Problems with Solutions" to increase your problem solving skills

2 Previous Year Questions (PYQ)

Previous Year Questions

- 2017
- 2018
- 2019
- 2023

Physics

Chemistry

Click on "PYQ" to know the questions came from that topic in previous exams

Units of measurements, systems of units, SI units, fundamental.. - Prof. Sanjeev Sanghi

Complete Lecture

Conceptwise Videos

1 NCERT and Reference Books Material

2 Previous Year JEE Exams Problems

3 Shortcut Methods

4 Concepts to Remember

5 Exercises From NCERT

6 Exemplar Problems

7 Related Problem with Solution

8 Notes from the JEE Toppers

9 Formulas to Remember

10 Mind Maps

3 Shortcut Methods

1. Know Common Conversions by Heart
  - Memorize common unit conversions such as 1 meter =
2. Use Scientific Notation
  - When working with very large or very small numbers, u
3. Leverage Dimensional Analysis
  - When you need to derive a formula or check the validit you identify incorrect answers quickly.
4. Shortcut for Square and Cube Units

Click on "Shortcut Methods" to enhance your recall

9 Fundamental Units

S.No.	Physical Quantity	SI Unit	Symbol
1	Length	Metre	m
2	Mass	Kilogram	Kg
3	Time	Second	s
4	Electric Current	Ampere	A

Click on "Formulas to Remember" to recall important formulas

8 Units of Measurement - Systems of Units

Reference: NCERT Physics, Class 11, Chapter 2 ("Units and Measurements")

Subtopics:

1. Measurement and Units
  - Concept of measurement and its significance.
  - Different types of physical quantities and their units.
  - Need for standardization of units.
2. Systems of Units

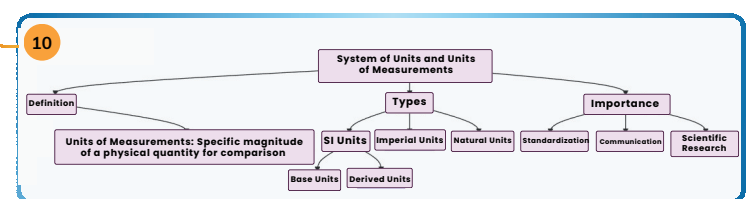
Click on "Notes from JEE toppers" for concise recap

4 Units-Of-Measurement-Systems-Of-Units-Si-Units

### Units of Measurement

1. Length:
  - 1 meter (m) = 100 centimeters (cm)
  - 1 meter (m) = 1000 millimeters (mm)
2. Mass:

Click on "Concept to Remember" to know the important topic



Click on "Mind Maps" to visualize, organize, connect, and remember information effectively

**STEP 06**

# Navigating the student dashboard for Test

To access the test Series on SATHEE, go to the **“Test”** tab on student dashboard, you will see **Mock Test** and **Subject Wise Tests** options (as shown in image below)

## TEST

**1 Mock Test** **Currently Open Test**

Test	Attempt here
Mock Test 1	<a href="#">Click Here</a>
Mock Test 2	<a href="#">Click Here</a>
Mock Test 3	<a href="#">Click Here</a>
Mock Test 4	<a href="#">Click Here</a>
Mock Test 5	<a href="#">Click Here</a>
Mock Test 6	<a href="#">Click Here</a>
Mock Test 7	<a href="#">Click Here</a>

Click on **“Mock Test”** to access real time exam like pattern and questions to make you exam ready

**All Courses**

**LEARN**

**TEST**

**1 Mock Test**

**2 Subject wise test**

**2 Subject-Wise Tests**

**PHYSICS**

Physics Test

**CHEMISTRY**

Chemistry Test

**MATHEMATICS**

Mathematics Test

**BIOLOGY**

Biology Test

Click on **“Subject wise Test”** and choose the subject you want to take the test of

Attempt the test

**Physics Topicwise Test Ongoing**

Test	
Specific Heat Capacity and Thermodynamical Processes	<a href="#">Click Here</a>
Photon, Photoelectric Effect X-rays and Davisson-Germer	<a href="#">Click Here</a>
Time Period, Frequency, Simple Pendulum and Spring	<a href="#">Click Here</a>
Young's Double Slit Experiment	<a href="#">Click Here</a>
Radioactivity	<a href="#">Click Here</a>
Calorimetry and Heat Transfer	<a href="#">Click Here</a>
Capacitors, Grouping of Capacitor	<a href="#">Click Here</a>

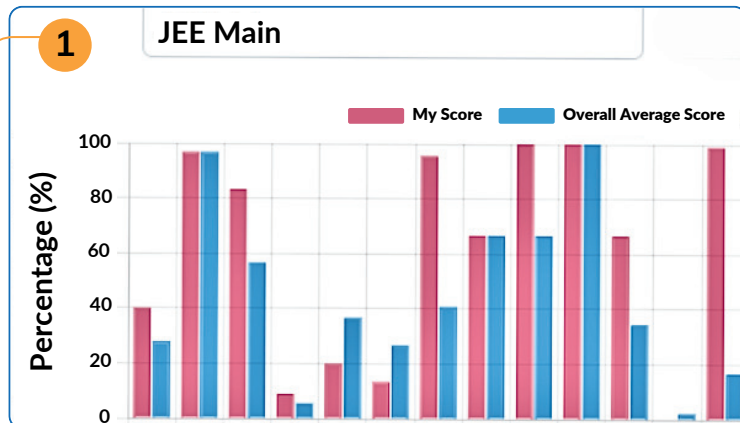
- After selecting the subject you will have the list of topics of that subjects
- Select the topic to begin the test

**STEP**  
**07**

# Navigating the student dashboard for Analytics

To access the analytics on SATHEE, go to the **Report** tab on student dashboard, you will see **Performance Analysis**, **Topic-Wise Analysis**, and **Attempted Quiz** options (as shown in image below)

## ANALYTICS



Click on **“Performance Analysis”** to review test results with detailed performance insight and comparison

### REPORTS

- 1** Performance Analysis
- 2** Topic-Wise Analysis
- 3** Attempted Quiz

**2** Knowledge Tree

Unattempted Incorrect Correct

Subject	Unattempted	Incorrect	Correct
<b>Physics</b>	49%	89%	
Physical world, Units and Measurements	53%	100%	
Unit of Physical Quantities			
Dimensions of Physical Quantities	50%	100%	
Errors in Measurements & Experimental physics	66%	100%	
Miscellaneous (Mixed concepts) problems			
<b>Motion in a Straight Line</b>	58%	83%	
Distance, Displacement & Uniform Motion			
Non-uniform Motion	87%	100%	

Click on **“Attempted Quiz”** to track and review quizzes you have attempted

**3** Example





Example	Attempted
D-Block Elements	Attempted
F-Block Elements	Attempted
Factorials and Permutations	Not Attempted
Area Under Curve	Not Attempted
Family of lines	Not Attempted

Click on **“Topic-Wise Analysis”** to see percentage score, accuracy and number of questions that were attempted in the test

## STEP 08

# Navigating the student dashboard for Live Classes

### Topic Wise Live Lectures

-  Physics
-  Chemistry
-  Mathematics
-  Live Classes



**Physics Lecture JEE 2024-25**

Chapter: Kinematics

Physics For JEE-Main 2024 | Kinematics by MD Faaz VK, AIIMS Nagpur | EN | Day 1

**Physics For JEE Main 2024**

**KINEMATICS**

Let's Begin Now!!!

Starts on: 21st Nov 2023, Tuesday

MD Faaz VK  
AIIMS Nagpur

Chapter: Laws of Motion Part- 2

Laws of Motion Part- 2

PHYSICS FOR JEE-MAIN 2024  
45 DAYS CRASH COURSE

**LAW OF MOTION PART- 2**

Param Soni  
IIT Kanpur

Chapter: Electro Magnetic Induction

Electro Magnetic Induction

PHYSICS FOR JEE-MAIN 2024  
45 DAYS CRASH COURSE

**ELECTRO MAGNETIC INDUCTION**

To access Live Lectures go to “**Topic Wise Live Lectures**” and click on the subject that you want to attend the class of

## STEP 09

# Accessing the additional resources

### Engineering Preparation

Physics 11th  
Physics 12th  
Chemistry 11th  
Chemistry 12th  
Mathematics 11th  
Mathematics 12th  
JEE Previous Year Questions  
JEE Tutorial Sessions

### NCERT Books & Solutions

NCERT Books for JEE  
NCERT Solutions for JEE  
NCERT Exemplar for JEE

### Important Resources

Physics Formulas  
Chemistry Formulas  
Mathematics Formulas  
Useful Articles

### Other Resources

Media Coverage  
Help Videos

### Syllabus

JEE Syllabus

### Mentorship

Mentorship for JEE

### NCERT Exercise Video Solution

NCERT Exemplar Video Solutions  
NCERT Exercise Video Solutions

Scroll down to the bottom of the page, you will find additional resources like **PYQ of JEE/NEET, JEE/NEET Tutorial Sessions, NCERT Books with Solution, JEE/NEET Syllabus, Important formulas** and **Notes** to help you with your preparation

Scan for



Mobile App

Also available on 



+91-8882336432



<https://sathee.iitk.ac.in>



[prutor@iitk.ac.in](mailto:prutor@iitk.ac.in)

Scan for



Website