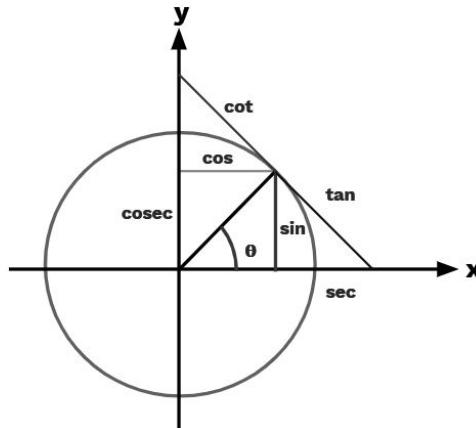


Trigonometric Equations

JPP

1



Sameer Chincholikar



Sameer Chincholikar
B.Tech, M.Tech - IIT-Roorkee

- ✓ **10+** years Teaching experience
- ✓ Taught **1 Million+** Students
- ✓ **100+** Aspiring Teachers Mentored



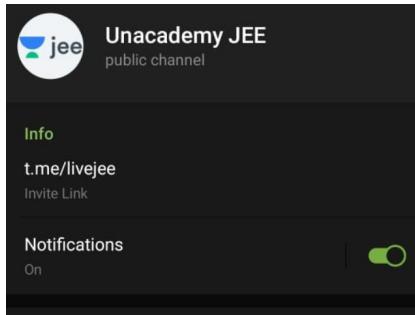
sameer_iitr

 **#JEELiveDaily**





Telegram Channel



Search



Sameer Chincholikar ✅

#1 Educator in Mathematics - IIT JEE

#Follow for JEE Advanced and JEE Main Courses #10+ years of experience online
#Mentor to Aspiring JEE teachers # IIT Roorkee

Follow

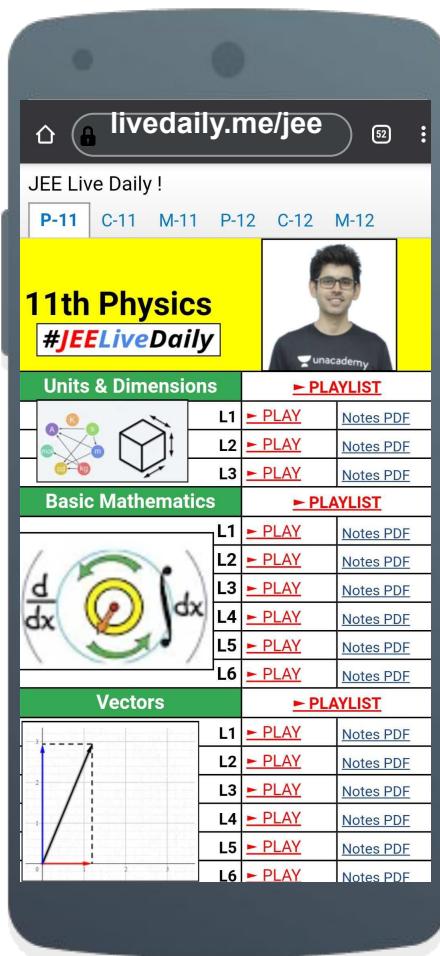
49M Watch mins

2M Watch mins (last 30 days)

79K Followers

10K Dedications





Unacademy Subscription

A shell is fired from a point O at an angle of 60 degrees with a speed of 40 m/s & it strikes a horizontal plane through O at a point A. The gun is fired a second time with the same angle of elevation but a different speed v if it strikes the same point A, then the value of v is
 $9\sqrt{3}$ m/s. At the same instant, on the shell is fired, find v.
 (Take g = 10 m/s²)

Self Inductance

As 'I' changes, 'Φ' changes and emf is induced
 this emf is called **'Self-induced emf'**
 as emf is induced because of **'Φ' of loop itself.**

Corresponding induced emf

$$\epsilon = -L \frac{di}{dt}$$

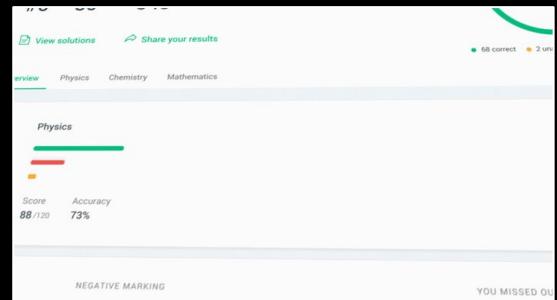
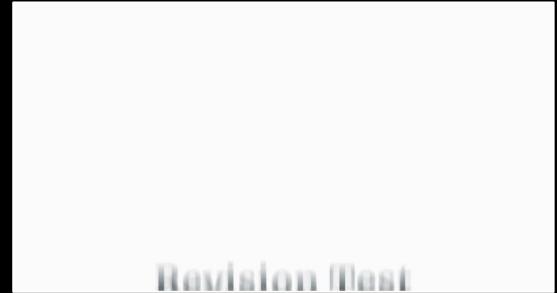
L units : Volt-sec/Ampere
 use code JAYANT to enroll for Plus!

You can only comment during a live class.

$P_{max} = 4$

+ LIVE Class Environment

- + **LIVE Polls & Leaderboard**
- + **LIVE Doubt Solving**
- + **LIVE Interaction**



+ Performance Analysis

- + **Weekly Test Series**
- + **DPPs & Quizzes**

+ India's BEST Educators

Unacademy Subscription

LIVE •

HINDI BATCHES AND YEAR LONG CO...

Course on Functions and Inverse Trigonometric Functions

Starts on Apr 7, 2021 • 24 lessons

Sameer Chincholikar

BATCH

LIVE •

HINDI

Evolve Batch Course for Class 12th JEE Main and Advanced 2022

Starts on Apr 7

Anupam Gupta and 2 more

BATCH

LIVE •

HINDI

Mega Batch Course for Class 12th JEE Main and Advanced 2022

Starts on Apr 6

Narendra Avasthi and 1 more

BATCH

LIVE •

HINDI

Enthuse: Class 12th for JEE Main and Advanced 2022

Starts on Apr 14

Amarnath Anand and 2 more

BATCH

LIVE •

HINDI

Final Rapid Revision Batch for JEE Main 2021

Starts on Apr 6

Manoj Chauhan and 2 more

plus

LIVE •

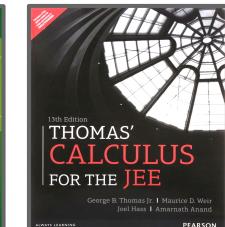
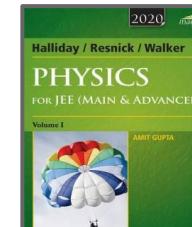
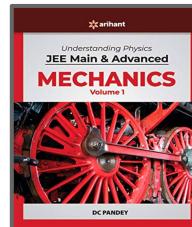
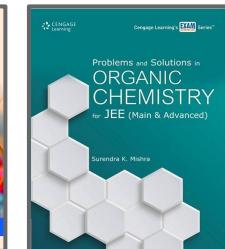
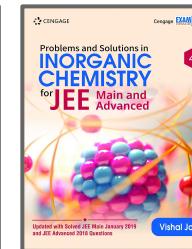
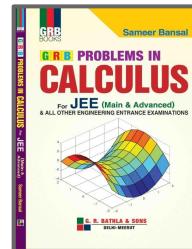
HINDI PHYSICS

Course of 12th syllabus Physics for JEE Aspirants 2022: Part - I

Lesson 1 • Apr 2, 2021 12:30 PM

D C Pandey

If you want to be the **BEST**
“Learn” from the **BEST**





jee

Top Results



Bratin Mondal

100 %ile



Amaiya Singhal
99.97



Adnan
99.95



Ashwin Prasanth
99.94



Tanmay Jain
99.86



Kunal Lalwani
99.81



Utsav Dhanuka
99.75



Aravindan K
Sundaram
99.69



Manas Pandey
99.69



Mihir Agarwal
99.63



Akshat Tiwari
99.60



Sarthak
Kalankar
99.59



Vaishnavi Arun
99.58



Devashish Tripathi
99.52



Maroof
99.50



Tarun Gupta
99.50



Siddharth Kaushik
99.48



Mihir Kothari
99.39



Sahil
99.38



Vaibhav Dhanuka
99.34



Pratham Kadam
99.29



Shivam Gupta
99.46



Shrish
99.28



Yash Bhaskar
99.10



Subhash Patel
99.02



Ayush Kale
98.85



Ayush Gupta
98.67



Megh Gupta
98.59



Naman Goyal
98.48



MIHIR PRAJAPATI
98.16

IIT JEE subscription

PLUS

ICONIC *

- ⌚ India's Best Educators
- ⌚ Interactive Live Classes
- ⌚ Structured Courses & PDFs
- ⌚ Live Tests & Quizzes
- ✖ Personal Coach
- ✖ Study Planner

24 months

₹2,100/mo

No cost EMI

+10% OFF ₹50,400



11th / 9, 10

18 months

₹2,363/mo

No cost EMI

+10% OFF ₹42,525



12 months

₹2,888/mo

No cost EMI

+10% OFF ₹34,650



12th / Drop

6 months

₹4,200/mo

No cost EMI

+10% OFF ₹25,200



3 months

₹5,250/mo

+10% OFF ₹15,750



1 month

₹6,300/mo



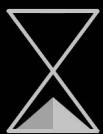
SAMEERLIVE





General solution of θ if, $\sin\left(2\theta + \frac{\pi}{6}\right) + \sin\left(\theta + \frac{5\pi}{6}\right) = 2$ is

- A. $2n\pi + \frac{7\pi}{6}$ B. $2n\pi + \frac{\pi}{6}$ C. $2n\pi - \frac{7\pi}{6}$ D. None of these



The number of values of x in the interval $[0, 3\pi]$ satisfying the equation

$$2 \sin^2 x + 5 \sin x - 3 = 0 \text{ is}$$

- A. 4
- B. 6
- C. 1
- D. 2

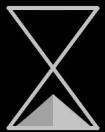
2006 M



Let $S = \{\theta \in [-2\pi, 2\pi] : 2 \cos^2 \theta + 3 \sin \theta = 0\}$. Then the sum of the elements of S is

- A. $13\pi/6$
- B. $5\pi/3$
- C. 2π
- D. None of these

JEE M 2019



The real roots of the equation $\cos^7 x + \sin^4 x = 1$ in the interval $(-\pi, \pi)$ are _____.

IIT-JEE 1997



If $0 \leq x \leq 2\pi$, then the number of real values of x , which satisfy the equation $\cos x + \cos 2x + \cos 3x + \cos 4x = 0$ is

- A. 7
- B. 9
- C. 3
- D. 5

JEE M 2016



If $5(\tan^2 x - \cos^2 x) = 2 \cos 2x + 9$, then the value of $\cos 4x$ is

- A. $-7/9$
- B. $-3/5$
- C. $1/3$
- D. $2/9$

JEE M 2017



If **sum of all the solutions** of the equation

$$8\cos x \cdot \left(\cos\left(\frac{\pi}{6} + x\right) \cdot \cos\left(\frac{\pi}{6} - x\right) - \frac{1}{2} \right) = 1 \text{ in } [0, \pi] \text{ is } k\pi,$$

then k is equal to

JEE M 2018

- A. $13\pi/9$
- B. $8\pi/9$
- C. $20\pi/9$
- D. $2\pi/3$

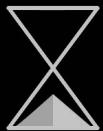


Number of solutions of the equation

$\tan x + \sec x = 2 \cos x$ lying in the interval $[0, 2\pi]$ is

- A. 0
- B. 1
- C. 2
- D. 3

IIT-JEE 1993



The general solution of

$$\sin x - 3 \sin 2x + \sin 3x = \cos x - 3 \cos 2x + \cos 3x \text{ is}$$

A. $n\pi + \frac{\pi}{8}$

B. $\frac{n\pi}{2} + \frac{\pi}{8}$

C. $(-1)^n \frac{n\pi}{2} + \frac{\pi}{8}$

D. $2n\pi + \cos^{-1} \frac{3}{2}$

IIT-JEE 1989



#JEELiveDaily Schedule



11th



Namo Sir | Physics

6:00 - 7:30 PM



Ashwani Sir | Chemistry

7:30 - 9:00 PM



Sameer Sir | Maths

9:00 - 10:30 PM

12th



Jayant Sir | Physics

1:30 - 3:00 PM



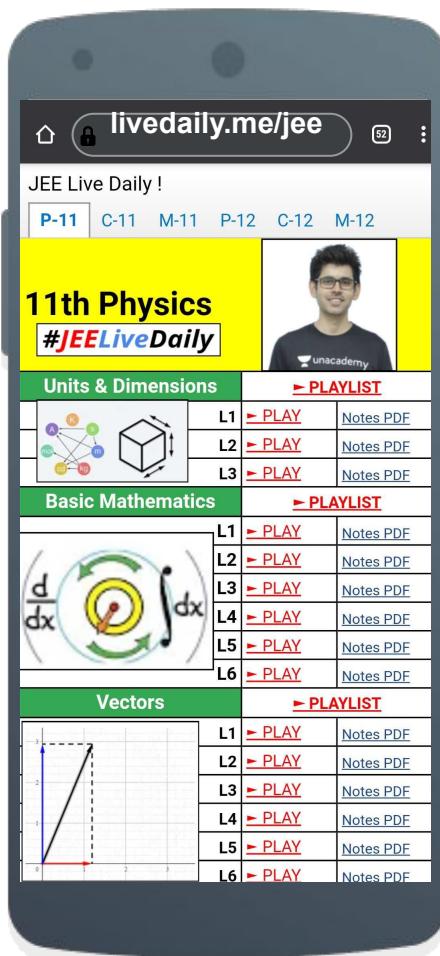
Anupam Sir | Chemistry

3:00 - 4:30 PM



Nishant Sir | Maths

4:30 - 6:00 PM



Unacademy Subscription

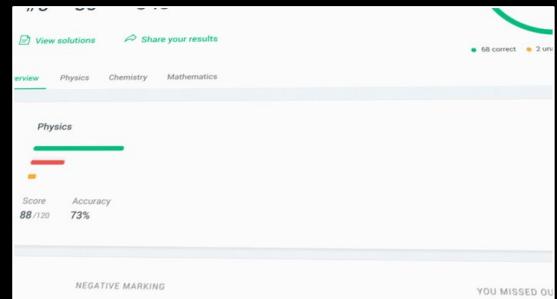
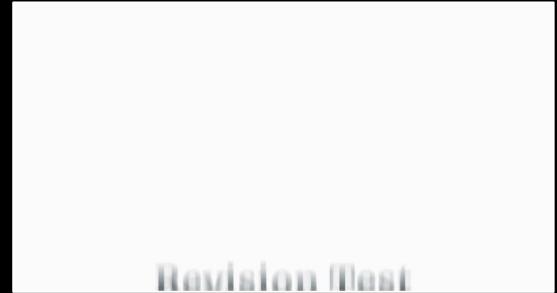
The first screenshot shows a live class interface with a teacher video feed, student names (Brijesh, Sagar, Sonwab), and a question about projectile motion.

The second screenshot shows a physics exercise titled "Self Inductance". It includes a diagram of a circular loop with current I , text explaining self-induced emf, and the formula $e = -L \frac{di}{dt}$.

The third screenshot is a handwritten note showing a rectangular loop with vertices labeled P_{left} and $P_{right} = 4$.

LIVE Class Environment

- + **LIVE Polls & Leaderboard**
- + **LIVE Doubt Solving**
- + **LIVE Interaction**



Performance Analysis

- + **Weekly Test Series**
- + **DPPs & Quizzes**

+ India's BEST Educators

Unacademy Subscription



LIVE •

HINDI BATCHES AND YEAR LONG CO...

Course on Functions and Inverse Trigonometric Functions

Starts on Apr 7, 2021 • 24 lessons

Sameer Chincholikar



BATCH

LIVE •

HINDI

Evolve Batch Course for Class 12th JEE Main and Advanced 2022

Starts on Apr 7

Anupam Gupta and 2 more



BATCH

LIVE •

HINDI

Mega Batch Course for Class 12th JEE Main and Advanced 2022

Starts on Apr 6

Narendra Avasthi and 1 more



BATCH

LIVE •

HINDI

Enthuse: Class 12th for JEE Main and Advanced 2022

Starts on Apr 14

Amarnath Anand and 2 more



BATCH

LIVE •

HINDI

Final Rapid Revision Batch for JEE Main 2021

Starts on Apr 6

Manoj Chauhan and 2 more



plus

LIVE •

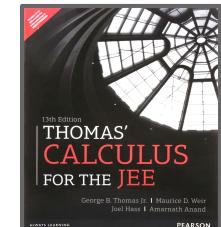
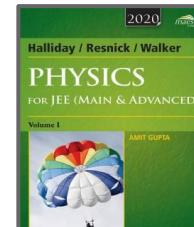
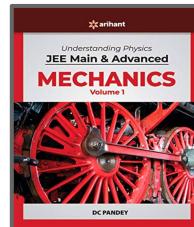
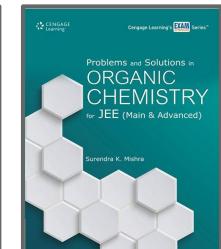
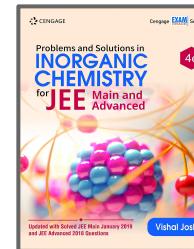
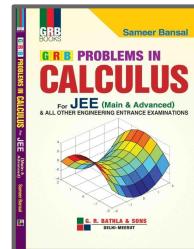
HINDI PHYSICS

Course of 12th syllabus Physics for JEE Aspirants 2022: Part - I

Lesson 1 • Apr 2, 2021 12:30 PM

D C Pandey

If you want to be the **BEST**
“Learn” from the **BEST**





jee

Top Results



Bratin Mondal

100 %ile



Amaiya Singhal
99.97



Adnan
99.95



Ashwin Prasanth
99.94



Tanmay Jain
99.86



Kunal Lalwani
99.81



Utsav Dhanuka
99.75



Aravindan K
Sundaram
99.69



Manas Pandey
99.69



Mihir Agarwal
99.63



Akshat Tiwari
99.60



Sarthak
Kalankar
99.59



Vaishnavi Arun
99.58



Devashish Tripathi
99.52



Maroof
99.50



Tarun Gupta
99.50



Siddharth Kaushik
99.48



Mihir Kothari
99.39



Sahil
99.38



Vaibhav Dhanuka
99.34



Pratham Kadam
99.29



Shivam Gupta
99.46



Shrish
99.28



Yash Bhaskar
99.10



Subhash Patel
99.02



Ayush Kale
98.85



Ayush Gupta
98.67



Megh Gupta
98.59

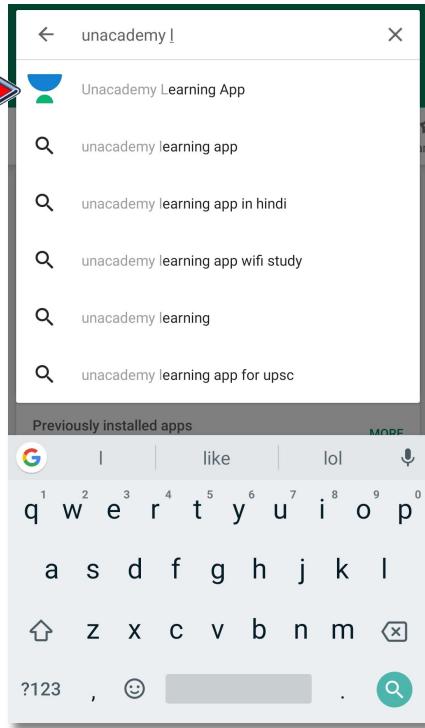


Naman Goyal
98.48

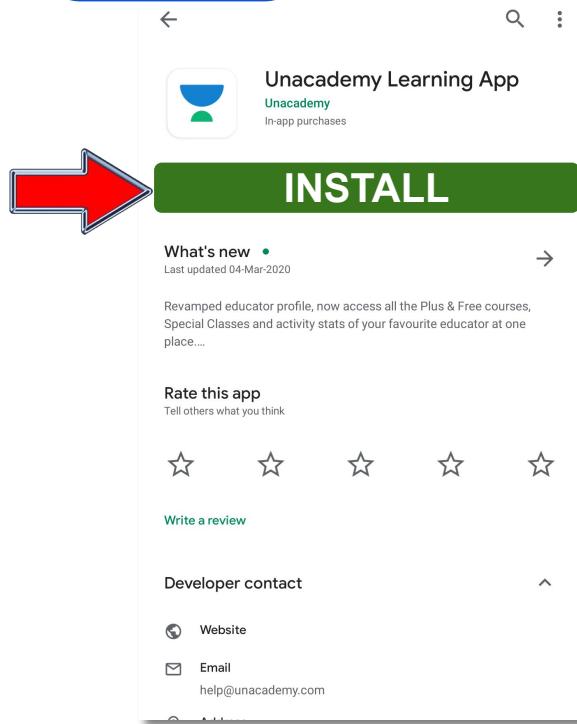


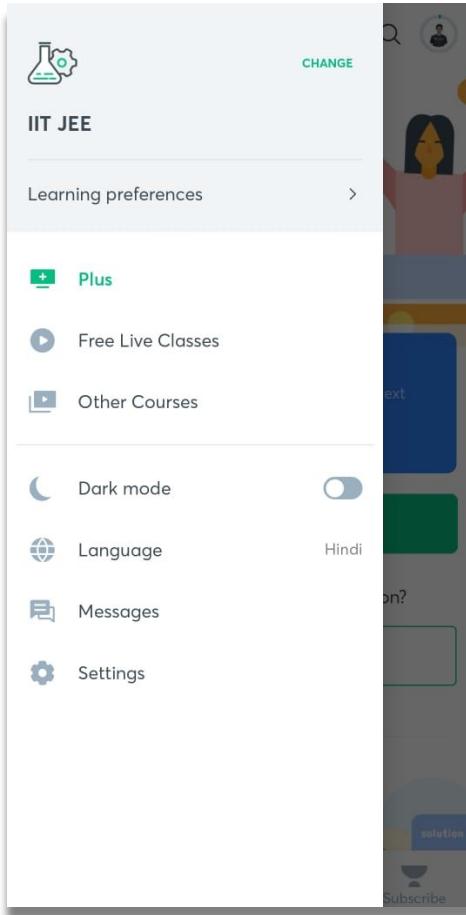
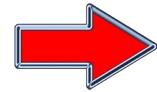
MIHIR PRAJAPATI
98.16

Step 1



Step 2





X

IIT JEE subscription

PLUS ICONIC *

- India's Best Educators
- Interactive Live Classes
- Structured Courses & PDFs
- Live Tests & Quizzes
- Personal Coach
- Study Planner

24 months ₹2,100/mo >
No cost EMI +10% OFF ₹50,400

18 months ₹2,363/mo >
No cost EMI +10% OFF ₹42,525

12 months ₹2,888/mo >
No cost EMI +10% OFF ₹34,650

6 months ₹4,200/mo >
No cost EMI +10% OFF ₹25,200

3 months ₹5,250/mo >
+10% OFF ₹15,750

1 month ₹6,200/mo >

11th / 9, 1012th / Drop

SAMEERLIVE





EMERGE 3.0 BATCH

JEE Main & Advanced 2023

Started on 12th May



Upcoming Batches in **May**



Spark 3.0 Batch : JEE Main & Advanced 2023

Starts on **26th May 2021**

Emerge Batch (Class 11th) : JEE Main & Advanced 2023

Starts on **26th May 2021**

Emerge Batch (Class 11th) : JEE Main & Advanced 2023

Starts on **26th May 2021**

Emerge Batch (Class 11th) : JEE Main & Advanced 2023

Starts on **27th May 2021**

Bull Eye Batch (Class 11th) : JEE Main & Advanced 2023

Starts on **26th May 2021**

Sanjivani Batch : MHT-CET 2021

Started on **26th May 2021**





UNACADEMY
COMBAT

**Every Sunday |
11 am Onwards**
**Win Scholarships
worth 4 Cr+**

**IIT JEE T-20
Test Series**

**May 25, 26, 27, 28 |
6:30 PM Onwards**

**Win Daily Amazon vouchers
and Scholarship worth
Rs 3 CR***

Enroll Now for FREE

Use Code - SAMEERLIVE

Thank You

+ SUBSCRIBE



@sameer_iitr



#JEE^{Live} Daily



Download Now !