unacademy

Unacademy Unlock

20% off* on IIT JAM subscriptions

August 22 - 26

	Duration	Current Price	What you pay	What you Save
Plus	24 Months	~~₹ 21,780~~	₹ 17,424	₹ 4,356 (20%)
	12 Months	~~₹ 14,974~~	₹ 11,979	₹ 2,995 (20%)
	9 Months	~~₹ 13,475~~	₹ 10,780	₹ 2,695 (20%)
	6 Months	~~₹ 12,252~~	₹ 9,802	₹ 2,450 (20%)
	3 Months	~~₹ 6,807~~	₹ 5,446	₹ 1,361 (20%)

Subscribe Now Use code GPSIR

For more details, contact: **8585858585.**

*T&C apply, as available on the platform.

20

unacademy

Unacademy Unlock

20% off* on CSIR UGC NET subscriptions

August 22 - 26

	Duration	Current Price	What you pay	What you Save
Plus	24 Months	~~₹ 23,100~~	₹ 18,480	₹ 4,620 (20%)
	12 Months	~~₹ 16,748~~	₹ 13,398	₹ 3,350 (20%)
	6 Months	~~₹ 13,398~~	₹ 10,718	₹ 2,680 (20%)
Iconic	24 Months	~~₹ 52,975~~	₹ 42,380	₹ 10,595 (20%)
	12 Months	~~₹ 30,780~~	₹ 24,624	₹ 6,156 (20%)
	6 Months	~~₹ 21,540~~	₹ 17,232	₹ 4,308 (20%)

Subscribe Now Use code _____

*T&C apply, as available on the platform.

20

Gajendra Purohit

Legend in CSIR-UGC NET & IIT-JAM

~ Unlock Code : GPSIR ~ PhD, CSIR NET (Maths) | Youtuber(800K+165K Sub.)/Dr.Gajendra Purohit (Maths), 17+ Yr. Experience, Author

50M Watch mins | **3M** Watch mins (last 30 days) | **44K** Followers | **2K** Dedications

- **TOP EDUCATOR ON UNACADEMY FOR CSIR NET & IIT JAM**
- **YouTuber with 800K Subscribers**
- **AUTHOR OF BEST SELLER BOOK FOR CSIR NET & IIT JAM**

Get 10% Off **Referral Code : GP SIR**

FEE DETAILS FOR IIT JAM SUBSCRIPTION

No cost EMI available on 6 months & above subscription plans

24 months Save 67%	₹ 908 / mo Total ₹ 21,780	
You get 6 months extra for free		Offer expires 15 Jun 2022
✓ 12 months Save 54%	₹ 1,248 / mo Total ₹ 14,974	
You get 6 months extra for free		Offer expires 15 Jun 2022
9 months Save 45%	₹ 1,497 / mo Total ₹ 13,475	
6 months Save 25%	₹ 2,042 / mo Total ₹ 12,252	
3 months Save 17%	₹ 2,269 / mo Total ₹ 6,807	
1 month	₹ 2,723 / mo Total ₹ 2,723	

To be paid as a one-time payment

Have a referral code?

Proceed to pay

Get 10% Off

After Using My Referral Code

GPSIR

Awesome! You get 10% off

No cost EMI available on 6 months & above subscription plans

24 months Save 67%	₹ 817 / mo ~~₹ 21,780~~ ₹ 19,602	
You get 6 months extra for free		Offer expires 15 Jun 2022
✓ 12 months Save 54%	₹ 1,123 / mo ~~₹ 14,974~~ ₹ 13,477	
You get 6 months extra for free		Offer expires 15 Jun 2022
9 months Save 45%	₹ 1,348 / mo ~~₹ 13,475~~ ₹ 12,128	
6 months Save 25%	₹ 1,838 / mo ~~₹ 12,252~~ ₹ 11,027	
3 months Save 17%	₹ 2,042 / mo ~~₹ 6,807~~ ₹ 6,126	

Proceed to pay

Method of Evaluation (P.I.)

Case 4: When $Q = e^{ax}V$, where V is a function of x

$$\frac{e^{ax}V}{f(D)} = e^{ax}\frac{V}{f(D+a)}$$

Q1 A particular solution of the differential equation

$y''' - 3y'' + 3y' - y = e^x \cos 2x$ is

(a) $-\frac{1}{8}e^x \sin 2x$

(b) $\frac{1}{8}e^x \sin 2x$

(c) $\frac{1}{8}e^x \cos 2x$

(d) $e^x \sin 2x$

Case 5: To find the P.I. for $Q = x^n \sin ax$ or $Q = x^n \cos ax$

Write

$$\frac{1}{f(D)} x^n \sin ax = \text{Imaginary Part (IP) in } e^{iax} \frac{1}{f(D+ia)} x^n$$

And $$\frac{1}{f(D)} x^n \cos ax = \text{Real Part (RP) in } e^{iax} \frac{1}{f(D+ia)} x^n$$

Q2. A particular integral of the differential equation

$$\frac{d^2y}{dx^2} - 2\frac{dy}{dx} = e^{2x}\sin x \text{ is}$$

(a) $\frac{e^{2x}}{10}(3\cos x - 2\sin x)$ (b) $-\frac{e^{2x}}{10}(3\cos x - 2\sin x)$

(c) $-\frac{e^{2x}}{5}(2\cos x + \sin x)$ (d) $\frac{e^{2x}}{5}(2\cos x - \sin x)$

Q3. The general solution of the differential equation

$$y''(x)-4y'(x)+8y(x)=10e^{x}\cos x$$

(a) $e^{2x}\left(k_1\cos 2x+k_2\sin 2x\right)+e^{x}\left(2\cos x+\sin x\right)$

(b) $e^{2x}\left(k_1\cos 2x+k_2\sin 2x\right)+e^{x}\left(2\cos x-\sin x\right)$

(c) $e^{-2x}\left(k_1\cos 2x+k_2\sin 2x\right)-e^{x}\left(2\cos x-\sin x\right)$

(d) $e^{-2x}\left(k_1\cos 2x+k_2\sin 2x\right)+e^{x}\left(2\cos x+\sin x\right)$

TARGETED AUDIENCE

- IIT-JAM
- M.Sc. Entrance Exam

COMPLETE COURSE ON

MATHEMATICS

FOR IIT-JAM 2022

TOPICS TO BE COVERED

- REAL ANALYSIS
- FUNCTION OF ONE & TWO VARIABLE
- LINAER ALGEBRA
- MODERN ALGEBRA

TOPICS TO BE COVERED

- SEQUENCE & SERIES
- INTEGRAL CALCULUS
- VECTOR CALCULUS
- DIFFERENTIAL EQUATION

FEE DETAILS FOR IIT JAM SUBSCRIPTION

No cost EMI available on 6 months & above subscription plans

24 months Save 67%	₹ 908 / mo Total ₹ 21,780	
You get 6 months extra for free		Offer expires 15 Jun 2022
✓ 12 months Save 54%	₹ 1,248 / mo Total ₹ 14,974	
You get 6 months extra for free		Offer expires 15 Jun 2022
9 months Save 45%	₹ 1,497 / mo Total ₹ 13,475	
6 months Save 25%	₹ 2,042 / mo Total ₹ 12,252	
3 months Save 17%	₹ 2,269 / mo Total ₹ 6,807	
1 month	₹ 2,723 / mo Total ₹ 2,723	

To be paid as a one-time payment

Have a referral code?

Proceed to pay

Get 10% Off

After Using My Referral Code

GPSIR

Awesome! You get 10% off

No cost EMI available on 6 months & above subscription plans

24 months Save 67%	₹ 817 / mo ~~₹ 21,780~~ ₹ 19,602	
You get 6 months extra for free		Offer expires 15 Jun 2022
✓ 12 months Save 54%	₹ 1,123 / mo ~~₹ 14,974~~ ₹ 13,477	
You get 6 months extra for free		Offer expires 15 Jun 2022
9 months Save 45%	₹ 1,348 / mo ~~₹ 13,475~~ ₹ 12,128	
6 months Save 25%	₹ 1,838 / mo ~~₹ 12,252~~ ₹ 11,027	
3 months Save 17%	₹ 2,042 / mo ~~₹ 6,807~~ ₹ 6,126	

Proceed to pay

FOUNDATION COURSE OF

MATHEMATICS

FOR CSIR-NET

Q.4. Solve $(D^2 - 2D + 1)y = \sin x + x^2 e^x$.

(a) $(c_1 + c_2 x)e^x + \left(\frac{1}{2}\right)\cos x + \left(\frac{1}{12}\right)x^4 e^x$

(b) $(c_1 + c_2 x)e^{-x} + \left(\frac{1}{2}\right)\cos x - \left(\frac{1}{12}\right)x^4 e^x$

(c) $(c_1 + c_2 x)e^{-x} + \left(\frac{1}{2}\right)\cos x + \left(\frac{1}{12}\right)x^4 e^x$

(d) None of these

Q.5. Let p(x) be the particular integral of

$(D^2 + 1)y = e^x \cos x + \sin 3x$ then p(0)

(a) $-\frac{119}{730}$

(b) $\frac{119}{730}$

(c) $\frac{19}{730}$

(d) None of these

Q.6. Let p(x) be the particular solution integral of the equation

$(D^2 + 4)y = x\sin x$, then $p\left(\frac{\pi}{2}\right)$.

(a) $\pi/3$ (b) $-\pi/6$

(c) $\pi/2$ (d) $\pi/6$

Q7. If y(t) is a solution of the differential equation $y'' + 4y = e^{2t}$ then $\lim_{t \to \infty} e^{-t} y(t)$ is equal to

(a) 2/3
(b) 2/5
(c) 2/7
(d) 2/9

unacademy CSIR-UGC NET Search Login

Educator Profile

Gajendra Purohit

#5 Educator in CSIR-UGC NET

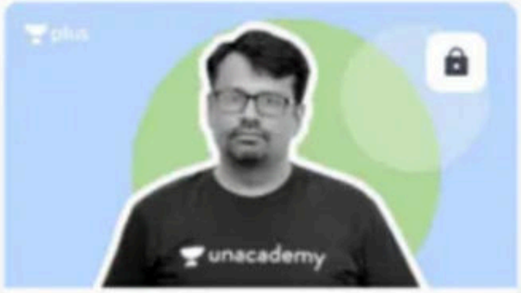
Dr.Gajendra Purohit PhD, CSIR NET (Maths) | Youtuber(330K+30k Sub.)/Dr.Gajendra Purohit (Maths), 17+ Yr. Experience, Author of Bestseller

Follow

11M Watch mins | **1M** Watch mins (last 30 days) | **22k** Followers | **1k** Dedications

CSIR-UGC NET

SEE ALL



HINDI MATHEMATICAL SCIENCES

Course on Linear Algebra, Partial Diff. Equation & Calculus

Starts on Mar 1, 2021 • 24 lessons

Gajendra Purohit

HINDI MATHEMATICAL SCIENCES

Course on Complex Analysis & Integral Equation

Starts on Jan 14, 2021 • 16 lessons

Gajendra Purohit

HINDI MATHEMATICAL SCIENCES

Foundation Course on Mathematics for CSIR 2021

Starts on Dec 7, 2020 • 20 lessons

Gajendra Purohit

Educator highlights

- Works at **Pacific Science College**
- Studied at **M.Sc., NET, PhD(Algebra), MBA(Finance), BEd**
- PhD, NET | Plus Educator For CSIR NET | Youtuber (260K+Subs.) | Director Pacific Science College |
- Lives in **Udaipur, Rajasthan, India**
- Unacademy Educator since

FEE DETAILS FOR IIT JAM SUBSCRIPTION

No cost EMI available on 6 months & above subscription plans

24 months Save 67%	₹ 908 / mo Total ₹ 21,780	
You get 6 months extra for free		Offer expires 15 Jun 2022
✓ 12 months Save 54%	₹ 1,248 / mo Total ₹ 14,974	
You get 6 months extra for free		Offer expires 15 Jun 2022
9 months Save 45%	₹ 1,497 / mo Total ₹ 13,475	
6 months Save 25%	₹ 2,042 / mo Total ₹ 12,252	
3 months Save 17%	₹ 2,269 / mo Total ₹ 6,807	
1 month	₹ 2,723 / mo Total ₹ 2,723	

To be paid as a one-time payment

Have a referral code?

Proceed to pay

Get 10% Off

After Using My Referral Code

GPSIR

Awesome! You get 10% off

No cost EMI available on 6 months & above subscription plans

24 months Save 67%	₹ 817 / mo ~~₹ 21,780~~ ₹ 19,602	
You get 6 months extra for free		Offer expires 15 Jun 2022
✓ 12 months Save 54%	₹ 1,123 / mo ~~₹ 14,974~~ ₹ 13,477	
You get 6 months extra for free		Offer expires 15 Jun 2022
9 months Save 45%	₹ 1,348 / mo ~~₹ 13,475~~ ₹ 12,128	
6 months Save 25%	₹ 1,838 / mo ~~₹ 12,252~~ ₹ 11,027	
3 months Save 17%	₹ 2,042 / mo ~~₹ 6,807~~ ₹ 6,126	

Proceed to pay

THANK YOU VERY MUCH EVERYONE

GET THE UNACADEMY PLUS SUBSCRIPTION SOON.

TO GET 10% DISCOUNT IN TOTAL SUBSCRIPTION AMOUNT

USE REFERRAL CODE: GPSIR