

GATE 2021

GENERAL APTITUDE

धमाकेदार ट्रिक के साथ 🔥🔥

**TIME & WORK -2,
QUESTIONS PRACTICE ON
BASIC CONCEPT**



AVINASH SIR



AVINASH SINGH SIR

GATE | EEE (CE)



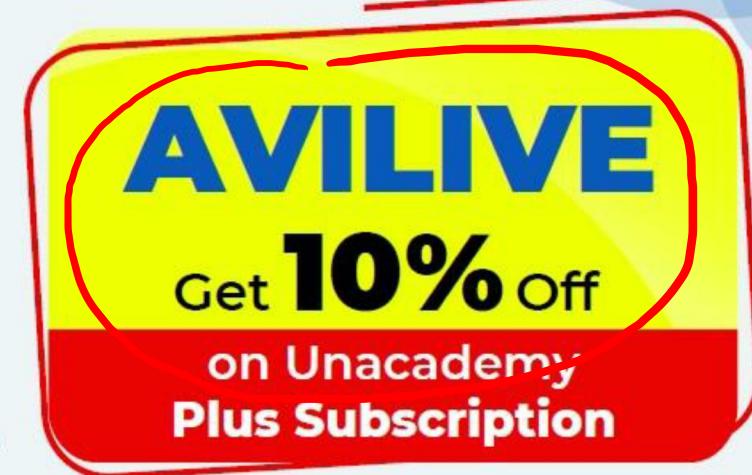
Secured Score 99.86% in
CAT (Quantitative Section)



GATE ESE:
7+ Years Teaching Experience
Mentored 25k+ Students for
GATE, ESE & PSUs



Subjects Taken:
General Aptitude
Engineering Mathematics
Digital Electronics





Study Planner

Customized study plan and track your performance.



Personal Coach

One on one guidance on preparation strategy.



ICONIC



PLUS



Live Classes



Crash Courses



Weekly Tests



Doubt Solving



RIB



English & Hindi



Preparatory Study Material

Specialised notes & practice sets.

USE CODE

AVILIVE

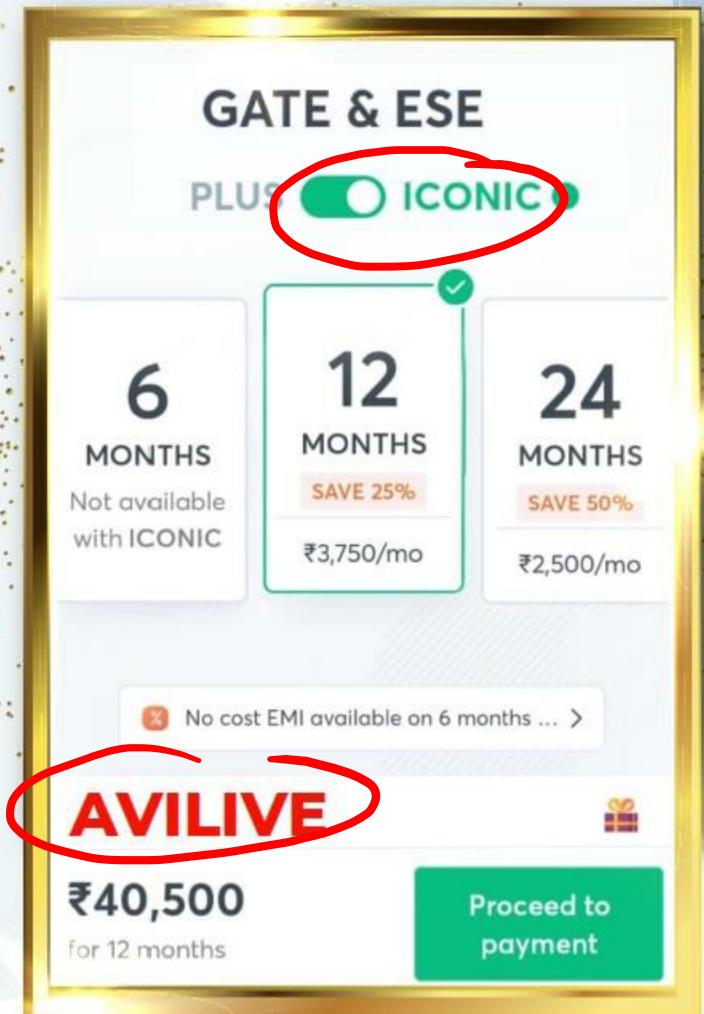
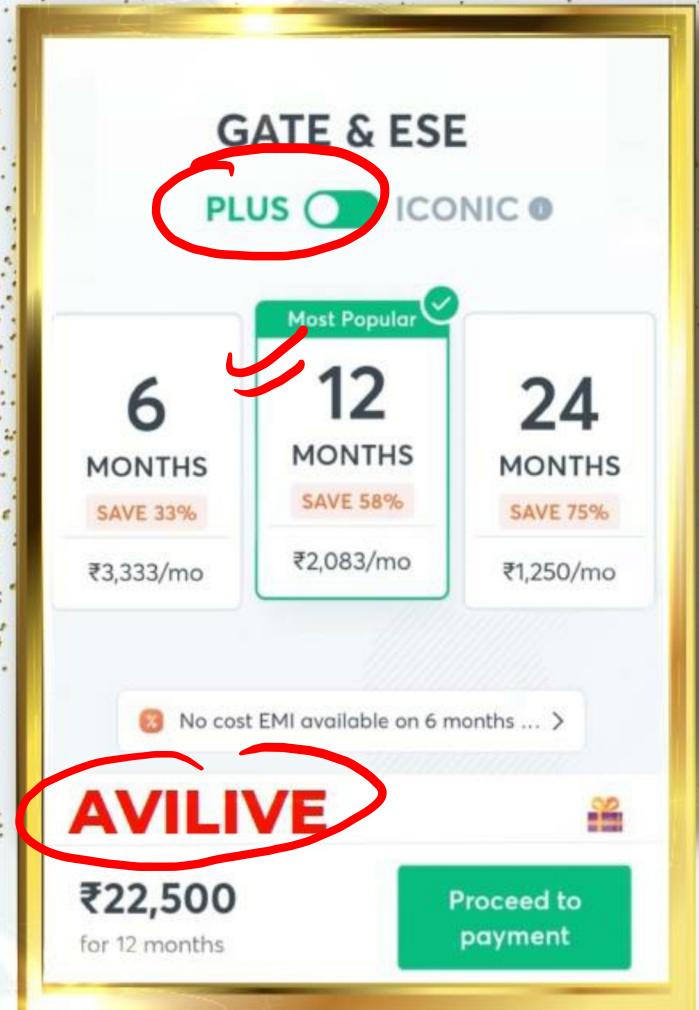
TO GET
MAX DISCOUNT ON

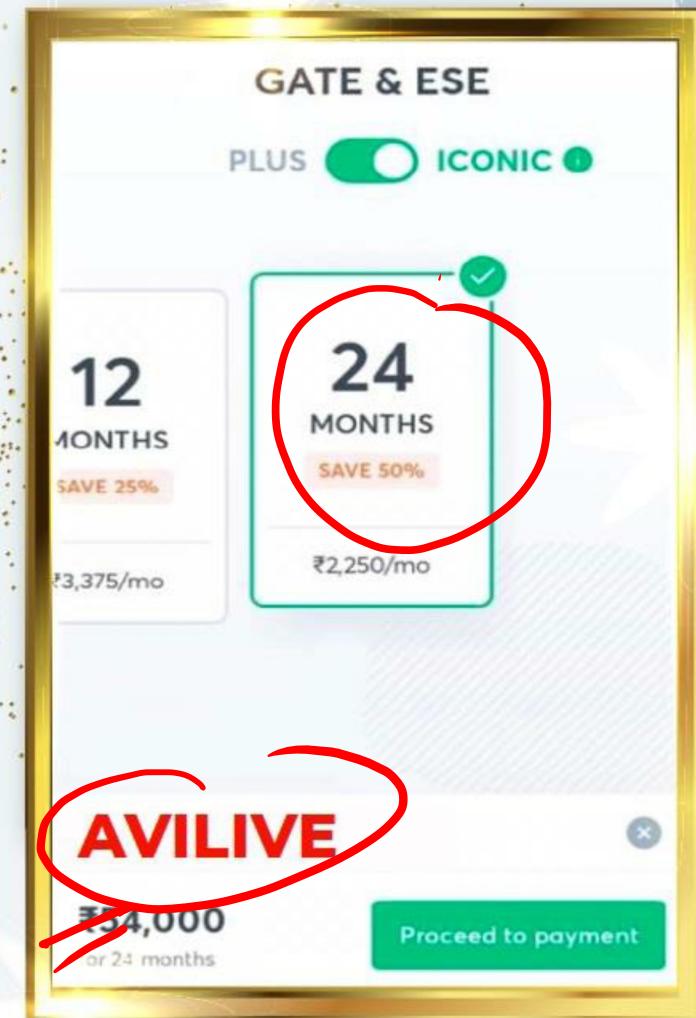
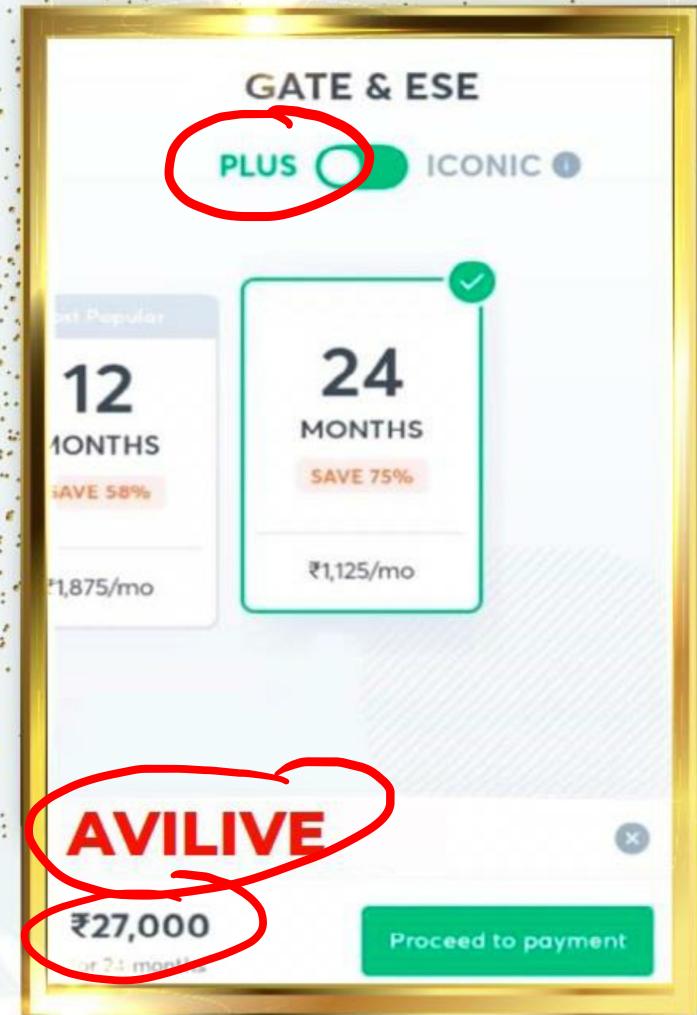

plus
Subscription

Complete Package To CRACK GATE/ESE

The image displays a grid of 15 educational modules for GATE/ESE preparation, arranged in three rows of five. Each module includes the Unacademy logo and the name of the instructor.

- FLUID MECHANICS** by Mrigank Sir
- STRENGTH OF MATERIALS** by Abhishek Sir
- DESIGN OF STEEL STRUCTURE** by Babulal Sir
- GEOTECHNICAL ENGINEERING** by Abhishek Sir
- REINFORCED CEMENT CONCRETE (RCC)** by Aishwary Sir
- RCC** by Kshitij Sir
- OPEN FLOW CHANNEL** by Mrigank Saurav Sir
- IRRIGATION ENGINEERING** by Chetan Sir
- STRUCTURAL ANALYSIS** by Aishwary Sir
- SURVEYING** by Kshitij Sachan Sir
- GEOTECHNICAL ENGINEERING** by Aishwary Sir
- ENVIRONMENTAL ENGG** by Mrigank Saurav Sir
- ENGINEERING HYDROLOGY** by Chetan Sir
- HIGHWAY ENGINEERING** by Kshitij Sachan Sir





Analytical Aptitude

- Venn Diagram
- Syllogism
- Series
- Coding & Decoding
- Odd Man out
- Distance & Direction
- Blood Relation
- Seating Arrangements
- Clock & Calendar

Quantitative Aptitude

- Number System
- Sequence & Series
- Ratio & Proportion
- Time, Speed & Distance
- Percentage
- Profit, Loss & Discount
- Average
- Allegation & Mixture
- Time & Work
- Powers, exponents and logarithms
- Algebra
- Permutation & Combination
- Probability
- Data Interpretation
- Mensuration and geometry

Spatial Aptitude

- Shape Matching - Two Dimensional
- Visual Comparison – Two Dimensional
- Group Rotation – Two Dimensional
- Combining Two Dimensional Shapes
- Cube Views in Three Dimensions
- Cubes in Two and Three Dimensions
- Other Solids in Two and Three Dimensions
- Block Counting in Three Dimensions
- Two-Dimensional Mirror Reflections
- Paper folding and Cutting

The difference between the sum of the first $2n$ natural numbers and the sum of the first n odd numbers is

[GATE 2020, CH, BT]

(A) $2^n - n$

(B) $n^2 - n$

(C) $2^n + n$

(D) $n^n + n$

$n^2 + n$

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON



Home Work Question

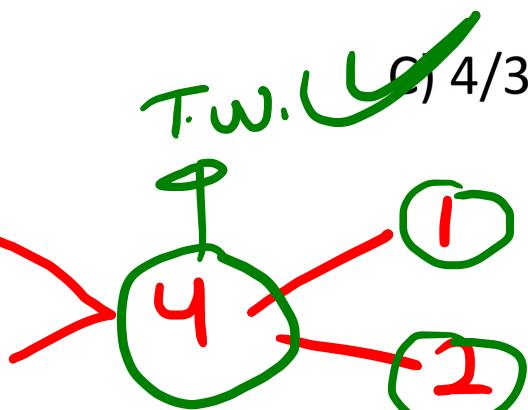
It would take one machine 4 hours to complete a production order and another machine 2 hours to complete the same order. If both machine work simultaneously at their respective constant rates, the time taken to complete the same order is _____ hours.

[GATE-2019, EC]

A) 2/3

B) 3/4

$$M_1 \rightarrow 4$$
$$M_2 \rightarrow 2$$



D) 7/3

$$3$$
$$T = \frac{4}{3}$$

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON

 **plus**
Subscription

LCM Fast Calculation

$$\frac{3}{4} > 12$$

$$\frac{2}{6} > 6$$

$$\frac{9}{12} > 24$$

~~24, 48, - - -~~

Least Common multiple

$$\begin{aligned} \frac{3}{4} &> 3 \times 4 \times 5 \\ &= 60 \\ \frac{2}{3} &> 12 \end{aligned}$$

$$\begin{aligned} \frac{5}{8} &> 40 \\ \frac{10}{10} &\circledcirc \text{ } \cancel{10}, \cancel{20}, \cancel{30}, \cancel{40}, \cancel{50} \end{aligned}$$

$$\begin{aligned} \frac{12}{15} &> 60 \\ \frac{20}{20} &\circledcirc \text{ } \cancel{20}, \cancel{40}, \cancel{60}, \cancel{80}, \dots \end{aligned}$$

LCM Fast Calculation

$$\begin{array}{r} 6 \\ \cancel{36} \\ 10 \\ \cancel{60} \\ 15 \cancel{90} \end{array}$$

$90, 180, 270, 360, \dots$

$$\left. \begin{array}{r} 6 \\ 10 \\ 15 \end{array} \right\} \quad \begin{array}{r} 6 \times 30 \\ = 180 \end{array}$$

$$\begin{array}{r} 3 \\ \cancel{30} \\ 6 \\ \cancel{60} \\ 9 \cancel{90} \end{array} \quad \begin{array}{r} 10 \times 18 \\ = 180 \end{array}$$

$$\begin{array}{r} 2 \cancel{24} \\ 5 \cancel{60} \\ 12 \cancel{12} \\ - \end{array} \quad \begin{array}{r} 12 \times 10 \\ = 120 \end{array}$$

$$\begin{array}{r} 2 \\ \cancel{18} \\ 6 \cancel{54} \\ 8 \cancel{9} \end{array} \quad \begin{array}{r} 9 \times 18 \end{array}$$

**

1) A can do a work in 36 days and B in 32 days. if they work on it together for 12 days, then what fraction of work is left?

$m-\Sigma$

A) $\frac{7}{24}$

$A \rightarrow 36$

$B \rightarrow 32$

T

B) $\frac{9}{32}$

T.W.

n
8

C) $\frac{11}{36}$

D) $\frac{14}{72}$

4×72

288

work = 1

$A \rightarrow 36 \rightarrow \frac{1}{36}$

$B \rightarrow 32 \rightarrow \frac{1}{32}$

$\frac{12}{36}$

$\frac{12}{32}$

$A+B \rightarrow 12$

12 after \rightarrow

$17 \times \frac{1}{2}$

$288 - 17 \times 12$

288

$\frac{7}{24}$

$\left(\frac{1}{3} + \frac{3}{8} \right)$

$= \frac{17}{24}$

$1 - \frac{17}{24} = \frac{7}{24}$

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON

plus
Subscription

2) Working together A and B can do a job in 40 days, B and C in 36 days and all three together in 24 days in how many days can B alone do the job?

~~A) 90~~ ~~B) 60~~ ~~C) 100~~ D) 72

$\cancel{A+B \rightarrow 40}$ $\cancel{B+C \rightarrow 36}$ $\cancel{A+B+C \rightarrow 24}$ $T_w \rightarrow 360$ 4×90 10 15

$$\begin{array}{r} A+2B+C \rightarrow 19 \\ A+B+C \rightarrow 15 \\ \hline B \rightarrow 4 \end{array}$$

10
9
6

$$T_B = \frac{360}{4} = 90 \text{ Day}$$

$R_B + 4 \text{ unit/Day}$

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON

 **plus**
Subscription

**

3) A & B together can do a work in 72 days, B & C together in 120 days, C & A together in 90 days. In how many days they together will complete the total work

A) 30

B) 60
T

$$A+B \rightarrow 72$$

$$B+C \rightarrow 120$$

$$C+A \rightarrow 90$$

C) 100

~~A + B + C → 12~~

D) 75

T.W.

= 360
 6×60

5

3

4

$$2A+2B+2C \rightarrow 5+3+4$$

$$2(A+B+C) \rightarrow 12$$

$$A+B+C \rightarrow 6$$

12
20
120
15
90

$$T = \frac{360}{6} = 60 \text{ Days}$$

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON

plus
Subscription

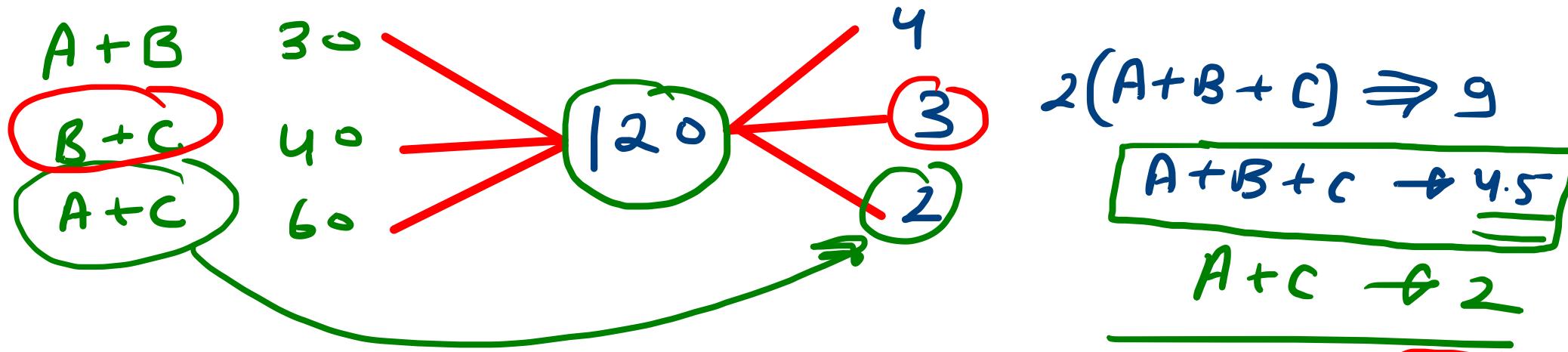
~~XXX~~

- 4) A and B can do a piece of work in 30 days, B and C can do it in 40 days. A and C can do it in 60 days. In how many days can B alone do it?
- A) 80 B) 120 C) 240 D) 48

$$T_A = \frac{120}{1.5} = \frac{120}{\cancel{15}} = \cancel{120}$$

[UPPCL-2016]

~~D) 48~~



$$\begin{aligned} A+B+C &\rightarrow 4.5 \\ B+C &\rightarrow 3 \\ A &\rightarrow 1.5 \end{aligned}$$

$$T_B = \frac{120}{2.5} = 48$$

$$\begin{aligned} B &\rightarrow 2.5 \\ n_B &= 4.5 \text{ unit/day} \end{aligned}$$

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON

 **plus**
Subscription

5) A does 50% of the work in 16 days. B can do 1/4th of the work in 24 days. In how many days they together will complete the total work?

A) 20 days

B) 25 days

C) 24 days

D) 26 days

M-II

$A \Rightarrow$ $\frac{50\%}{25\%} \rightarrow 16 \text{ Day}$
 $\frac{75\%}{24 \text{ Day}}$

$B \Rightarrow$ $\frac{25\%}{100\%} \rightarrow 24 \text{ Day}$
 $\frac{100\%}{24 \text{ Day}}$

M.I

$A + 32 \rightarrow 4$
 $B + 96 \rightarrow 12$

$32 \times 3 = 96$

$A + B \rightarrow 4$

$\frac{96}{4} = 24$

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON

 **plus**
Subscription

~~6)~~ When Ram and Mohan work together, they complete a work in 4 days. If Ram alone can complete this work in 12 days then in how many days Mohan alone can complete this work?

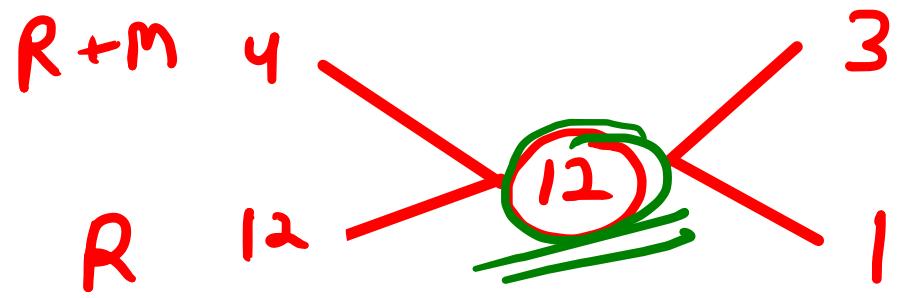
A) 10 days

B) 8 days

C) 6 days

[RRB-2014(JE), BILASPUR]

D) 16 days



$$(R+M)_1 \rightarrow 3$$

\downarrow
 \downarrow
1 2

$$T_m = \frac{12}{2} = 6 \text{ day}$$

$M_m = 2 \text{ unit/day}$

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON


Subscription

7) Ajeet can do a job 10 days. Raman can do the same job in 20 days. They together start doing the job but after 4 days Raman leaves. How many more days will be required by Ajeet to complete this job alone?

- A) 4
- B) 2
- C) 5
- D) 3

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON



~~Home Work Question~~

It takes two hours for a person X to mow the lawn. Y can mow the same lawn in four hours.
How long (in minutes) will it take X and Y, if they work together to mow the lawn?

A) 60

B) 80

C) 90

D) 120

[GATE-2019, 1 MARK (CS, CE)]

USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON

 **plus**
Subscription



Avinash Singh

Teaching isn't my job, it's my passion

16 Watch mins

16 Watch mins (last 30 days)

0 Followers

5:00 PM

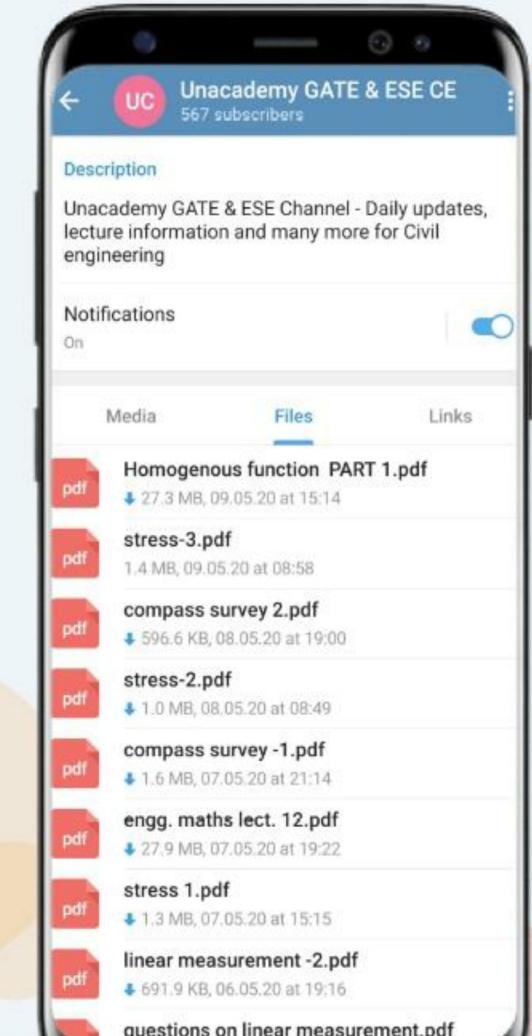
GATE/PSUs/FESE
AE/JE

Follow Me on  unacademy

<https://unacademy.com/@unacademy-user-LKWBX7PD3KPG>



<https://t.me/unacademygatece>



USE CODE

AVILIVE

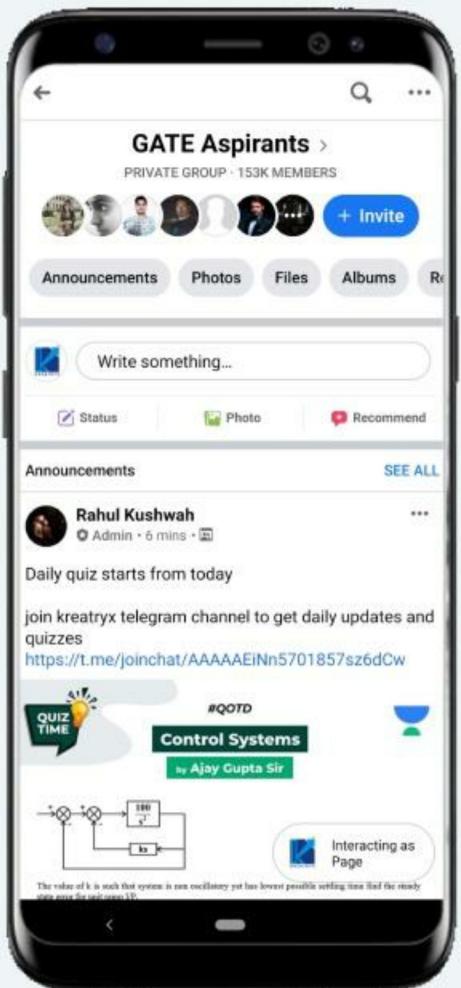
TO GET
MAX DISCOUNT ON

 plus
Subscription



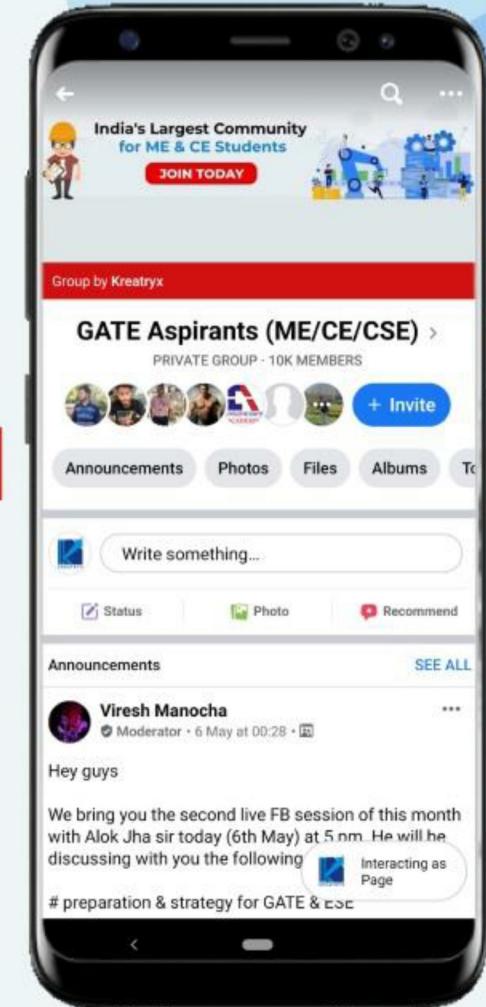
GATE Aspirants

150K+ Members



GATE Aspirants (ME,CE,CSE)

10K+ Members



USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON

plus
Subscription

India's No. 1 Study Channels

Kreatryx GATE
EE,ECE,IN



Unacademy GATE
ME,PI,XE



Unacademy
GATE CE



Unacademy
GATE Telugu



Unacademy
SSC JE



Unacademy
Computer Science



Unacademy GATE
Questions



Electrical
Junction



Engineering
Pathshala



GS Terminal -
RRB, SSC



USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON

plus
Subscription



Thank You



SUBSCRIBE



USE CODE

AVILIVE

TO GET
MAX DISCOUNT ON

plus
Subscription