



NEW HORIZON
COLLEGE OF ENGINEERING
 Autonomous College, Affiliated to VTU | Approved by AICTE New Delhi & UGC
 Accredited by NAAC with 'A' Grade & Accredited by NBA



Department of Information Science & Engineering

AICTE Sponsored PRERANA Program

Report (Online Mode)

Sub: Online Training Report for online GATE and CAT coaching classes held for ST/SC students under the Prerana Scheme online mode.

Preamble:

New Horizon College of Engineering has been sanctioned a sum of Rs.651667/- (Rupees Six Lakh Fifty One Thousand Six Hundred and Sixty Seven only) under the scheme Prerana funded by AICTE to conduct online classes for ST/SC students for GATE and CAT courses. Subsequently, AICTE has given instruction via the circular dated 14.07.2020 to update the progress report every month and upload the video tutorials in public domain so that the CAT and GATE aspirants outside of our campus can access and learn. As a first step, a Project Monitoring Committee (PMC) at Institutional level was formed as per the guidelines. According to the guidance of the PMC, one faculty from each department was depute as a department coordinator. A meeting was organized with all the SC/ST students of our institute in which the objective of Prerana Scheme was explained clearly. At the end of the motivation program, students from all departments came forward for the course of '**Graduate Aptitude Test in Engineering**' (GATE) and '**Common Admission Test**' (CAT).



Sessions for CAT and GATE:

Due to pandemic of COVID-19, online coaching classes were being conducted every Thursday from September 2020 through online mode using ZOOM for the two entrance exams of CAT and GATE. The event started on 02.09.2020 and ended on 03.12.2020.

As per the instructions from AICTE, 2 classes per week were scheduled online. Students from all departments have been participated for the course of GATE [57 students] and CAT [9 students]. We have now consolidated the CAT and GATE training classes with 32 hours of training for GATE and 28 hours of training for CAT (closure on 26th Nov as the exam for CAT was prior scheduled on 29th Nov 2020). Monthly reports were sent on 19.10.2020 and 12.11.2020 (Refer: to Annexure I and II enclosed). The details of the program trainers are stated below.

CAT Exam Sessions	Department	Name of the Trainer
CAT Exam Sessions	Department of HRD	Aptitude Trainers: Mr Bharath Mr Karthik
	Department Center of life skills and lifelong Learning	Lifeskill Trainers: Mrs Suneetha V Mr Gangadhar Murthy Mr Devranjan Chatterjee Mr B Ramesh
GATE Exam Sessions	Department of Maths	Dr Siddesha

Video material uploads:

The video tutorials of CAT and GATE coaching for the entire semester training are being uploaded in YouTube link (*Links are shown below*). The complete details of the progress report with attendance and the topics covered are displayed below.

Details of online GATE coaching (Sep 2020 – Dec 2020):

SL No	Details of the classes				Topic Covered	No. of SC/ST Students actually Attended
	Date	Time		Duration		
		From	To			
1	03/09/2020	1:50 PM	4:50 PM	3 hours	Matrices, Determinants and Inverse of a matrix	35
2	10/09/2020	1:50 PM	4:50 PM	3 hours	Rank of a matrix and system of linear equations	38
3	24/09/2020	1:50 PM	4:50 PM	3 hours	Eigen values and Eigen vectors	40
4	01/10/2020	1:50 PM	4:50 PM	3 hours	Continuation of Eigen values and Calculus	34
5	08/10/2020	1:50 PM	4:50 PM	3 hours	Calculus: Limit and Continuity	38
6	15/10/2020	1:50 PM	4:50 PM	3 hours	Calculus: Differentiability	35
7	22/10/2020	3:00 PM	4:50 PM	2 hours	Calculus: Questions discussion based on Previous year papers	39
8	05/11/2020	3.00 PM	5.00 PM	2 hours	Calculus: Applications and Integral calculus	41
9	12/11/2020	3.00 PM	5.00 PM	2 hours	Complex Numbers: Ananalytic function	39
10	19/11/2020	3.00 PM	5.00 PM	2 hours	Complex integration	39
11	26/11/2020	3.00 PM	5.00 PM	2 hours	Introduction to probability	39
12	03/12/2020	1:50 PM	4:50 PM	3 hours	Continuation of probability	41

Details of online CAT coaching (Sep 2020 – Dec 2020):

SL · N o	Details of the classes				Topic Covered	No. of SC/ST Students actually Attended
	Date	Time		Duration		
		From	To			
1	03/09/2020	1:50 PM	4:50 PM	3 hours	Percentage, Profit and Loss	7
2	10/09/2020	1:50 PM	4:50 PM	3 hours	Number Systems	8
3	24/09/2020	1:50 PM	4:50 PM	3 hours	Averages, Mixtures and Alligations	8
4	01/10/2020	1:50 PM	4:50 PM	3 hours	Time and Work	7
5	08/10/2020	1:50 PM	4:50 PM	3 hours	Permutation and Combination	8
6	15/10/2020	1:50 PM	4:50 PM	3 hours	Simple Equation	7
7	22/10/2020	3:00 PM	4:50 PM	2 hours	Data Sufficiency	8
8	07/11/2020	3:00 PM	4:50 PM	2 hours	Reading Comprehension, Para Jumble	7
9	12/11/2020	3:00 PM	4:50 PM	2 hours	Articles & Preposition Sentence Completion	8
10	19/11/2020	3:00 PM	4:50 PM	2 hours	Vocabulary & Verbal Analogy	8
11	26/11/2020	3:00 PM	4:50 PM	2 hours	Subject Verb Agreements & common errors	7

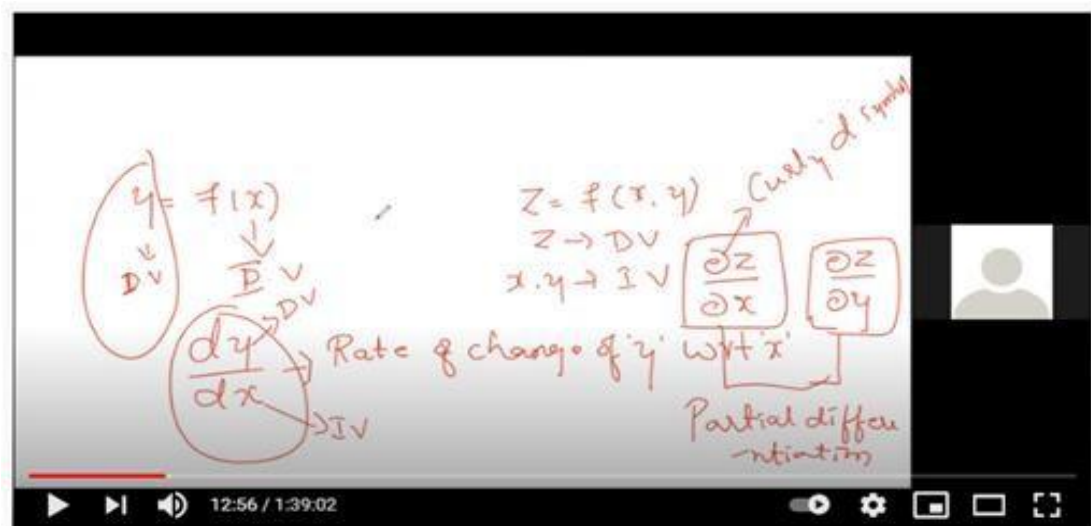
Video links uploaded at YouTube and available in public domain:

Date	GATE Coaching video link	CAT Coaching video link
03/09/2020	https://youtu.be/q3hSdONozZI	https://youtu.be/_GAQ1A1W8LQ
10/09/2020	https://youtu.be/rYzipsCWUFC https://youtu.be/OdoeY3UKAKc https://youtu.be/CjkYvZc0S8o	https://youtu.be/kvTLnCfPX98
24/09/2020	https://youtu.be/tfAoY017a30 https://youtu.be/QphW7CSsEd0	https://youtu.be/o3r0UsSFoAU
01/10/2020	https://youtu.be/-dHe-a54KD0	https://youtu.be/hD_XNMJTDB8
08/10/2020	https://youtu.be/iftl-pnqfJN8 https://youtu.be/ppuVlED-Gqs https://youtu.be/dtJNqh6t7_4 https://youtu.be/_xzmxFPoydk	https://youtu.be/uwDqvc4KSn0 https://youtu.be/hpPGl06zS8s
15/10/2020	https://youtu.be/jWWgLIcy6uA https://youtu.be/Zdw2HNRi4g	https://youtu.be/fs3LAACj0GM
22/10/2020	https://youtu.be/kzI2IMTES9k	https://youtu.be/1hLzn3B3Xk4 https://youtu.be/-PSYbld0u8Q https://youtu.be/VXlG2je3N0
05/11/2020	https://youtu.be/nV-qEappgSY	https://youtu.be/V26LMO_Vnmo https://youtu.be/ECerupvNg4E
12/11/2020	https://youtu.be/c-IJ7Jps5_E	https://youtu.be/PCUb4FF31CE
19/11/2020	https://youtu.be/NvAUOZxWEHw https://youtu.be/Uv_1ZxOctmk https://youtu.be/bqCDFiR7N-Y	https://youtu.be/AaSIz5qEK1s https://youtu.be/gLO6jzVl05g https://youtu.be/jTVoRkbYfmA
26/11/2020	https://youtu.be/UnJVvYMnR4E	https://youtu.be/z0K9RXvwW8A
03/12/2020	https://youtu.be/mDL3KhA_InI	NIL

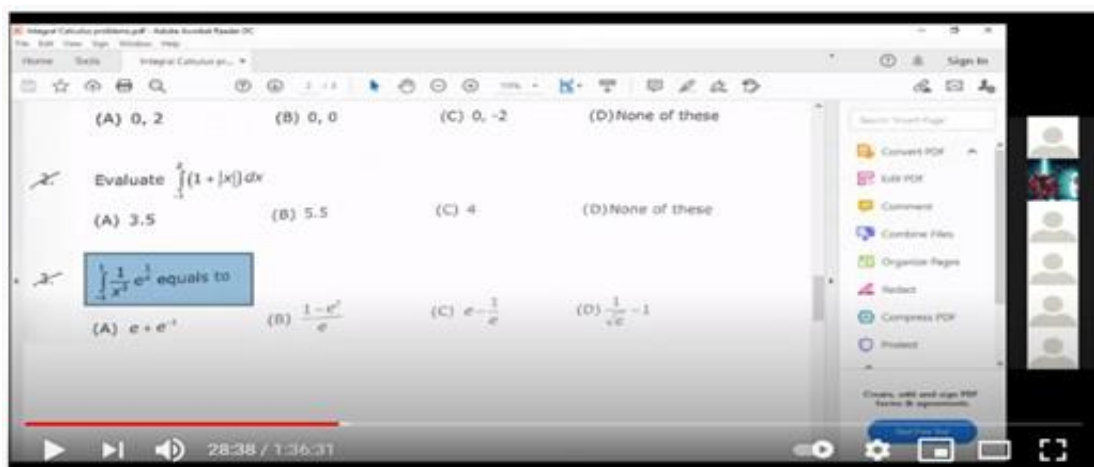
GATE Coaching Snapshot:



5 Nov 2020: Online coaching for GATE Exam Preparation – NHCE AICTE Prerana 20-21



5 Nov 2020: Online coaching for GATE Exam Preparation – NHCE AICTE Prerana 20-21



12 Nov 2020: Online coaching for GATE Exam Preparation – NHCE AICTE Prerana 20-21

$$u = e^x \cos y \quad v = ?$$

$$u \rightarrow \mathbb{R}^2 \rightarrow A$$

$$\frac{\partial u}{\partial x} = \frac{\partial v}{\partial y} \quad \& \quad \frac{\partial u}{\partial y} = -\frac{\partial v}{\partial x}$$

$$e^x \cos y = \frac{\partial v}{\partial y} \rightarrow (1) \quad e^x \sin y = -\frac{\partial v}{\partial x} \rightarrow (2)$$

$$v = e^x \sin y + f(x) \quad v = -e^x \cos y + g(y)$$

$$f(x) = 0, g(y) = 0$$

19 Nov 2020: Online coaching for GATE Exam Preparation – NHCE AICTE Prerana 20-21

COMPLEX INTEGRATION

If function $f(z) = u(x,y) + iv(x,y)$ and $dz = dx + idy$

Therefore, $\int f(z) dz = \int (u dx - v dy) + i \int (v dx + u dy)$

Cauchy's Theorem:
If $f(z)$ is an analytic function and $f'(z)$ is continuous at each point within and on a closed curve c , then $\int f(z) dz = 0$.

Note 1: Line integral of a function $f(z)$ which is analytic in the region is independent of the path joining any two points of that region.

Note 2: If $f(z)$ is analytic in the region between two simple closed curves c_1 and c_2 , then $\int_{c_1} f(z) dz = \int_{c_2} f(z) dz$

Cauchy's Integral Formula:
If $f(z)$ is analytic within and on a closed curve and if a is any point within c , then

26 Nov 2020: Online coaching for GATE Exam Preparation – NHCE AICTE Prerana 20-21

$$u = x^2 y z + x y z^2 + x y z^3 \quad u \rightarrow D^3$$

$$x, y, z \rightarrow I^3$$

$$\frac{\partial u}{\partial x} = 2xyz + yz + yz^3$$

$$\frac{\partial u}{\partial y} = x^2 z + xz + xz^3$$

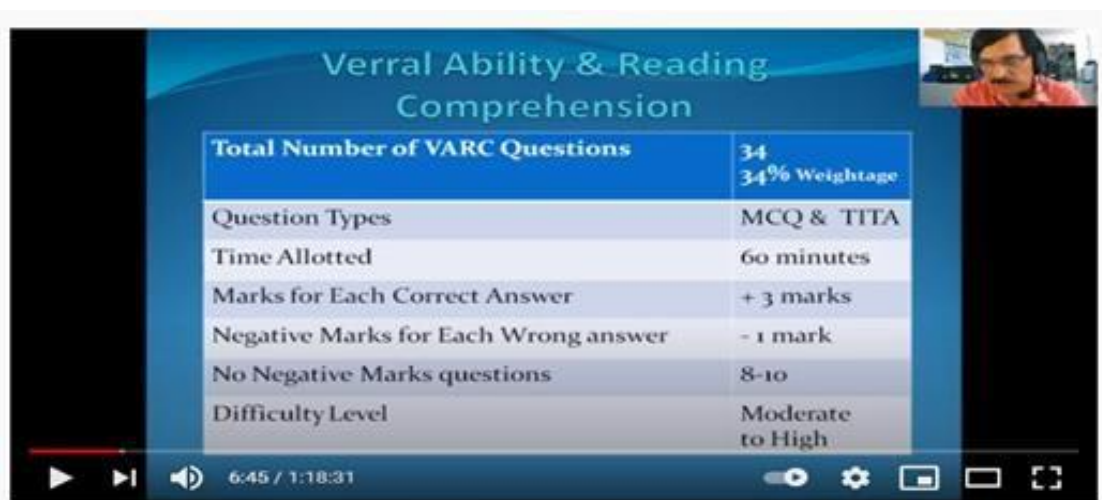
$$\frac{\partial u}{\partial z} = x^2 y + xy + 3xy z^2$$

3 Dec 2020: Online coaching for GATE Exam Preparation – NHCE AICTE Prerana 20-21

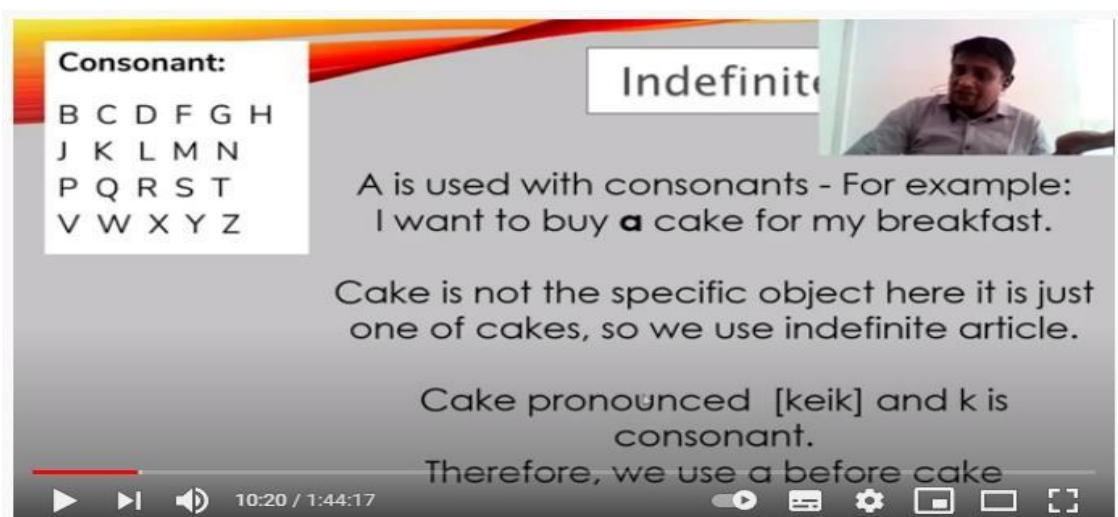
CAT Coaching Snapshot:



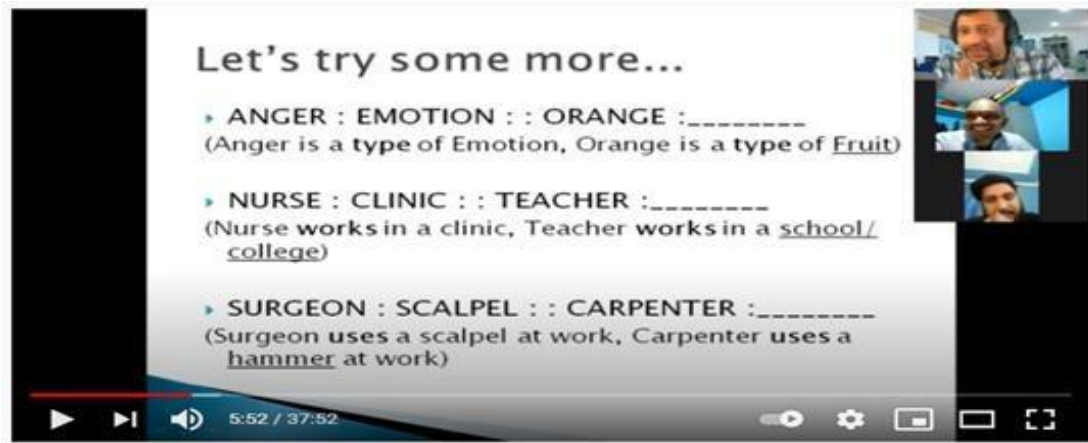
7 Nov 2020: Online coaching for CAT Exam Preparation – NHCE AICTE Prerana 20-21



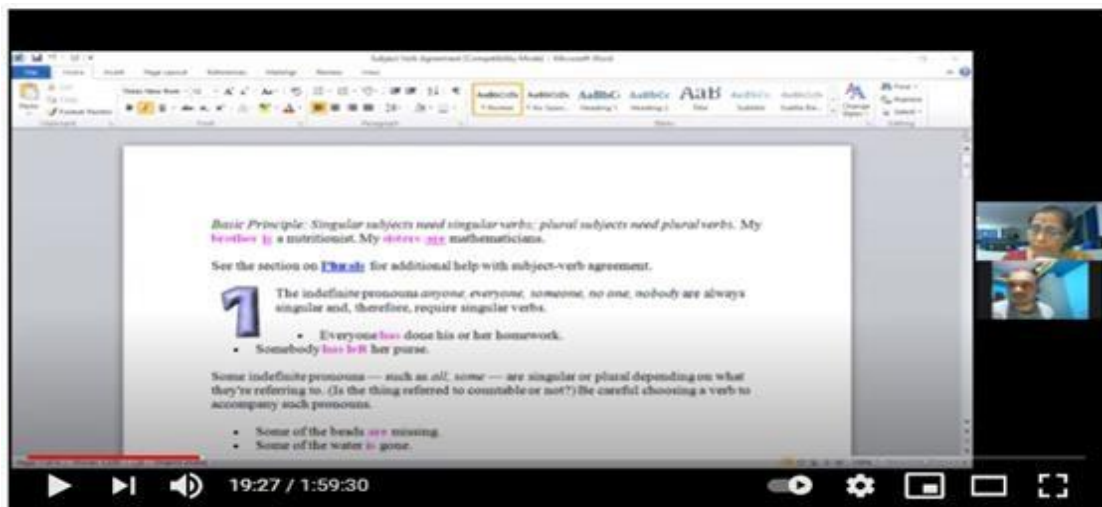
7 Nov 2020: Online coaching for CAT Exam Preparation – NHCE AICTE Prerana 20-21



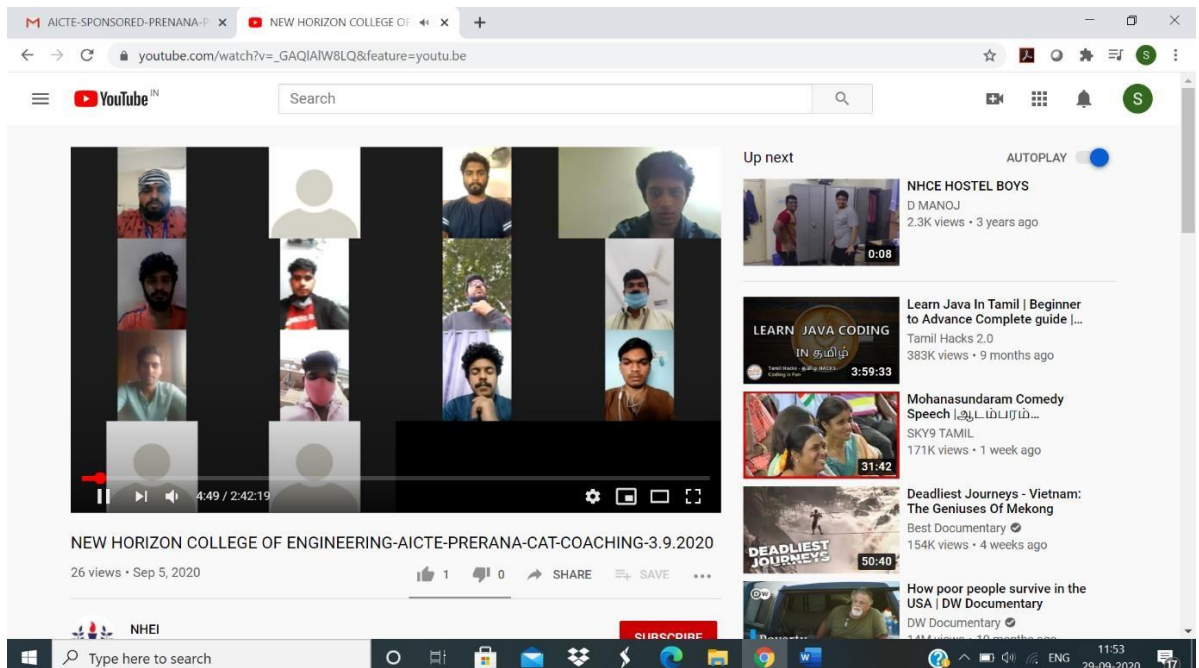
12 Nov 2020: Online coaching for CAT Exam Preparation – NHCE AICTE Prerana 20-21

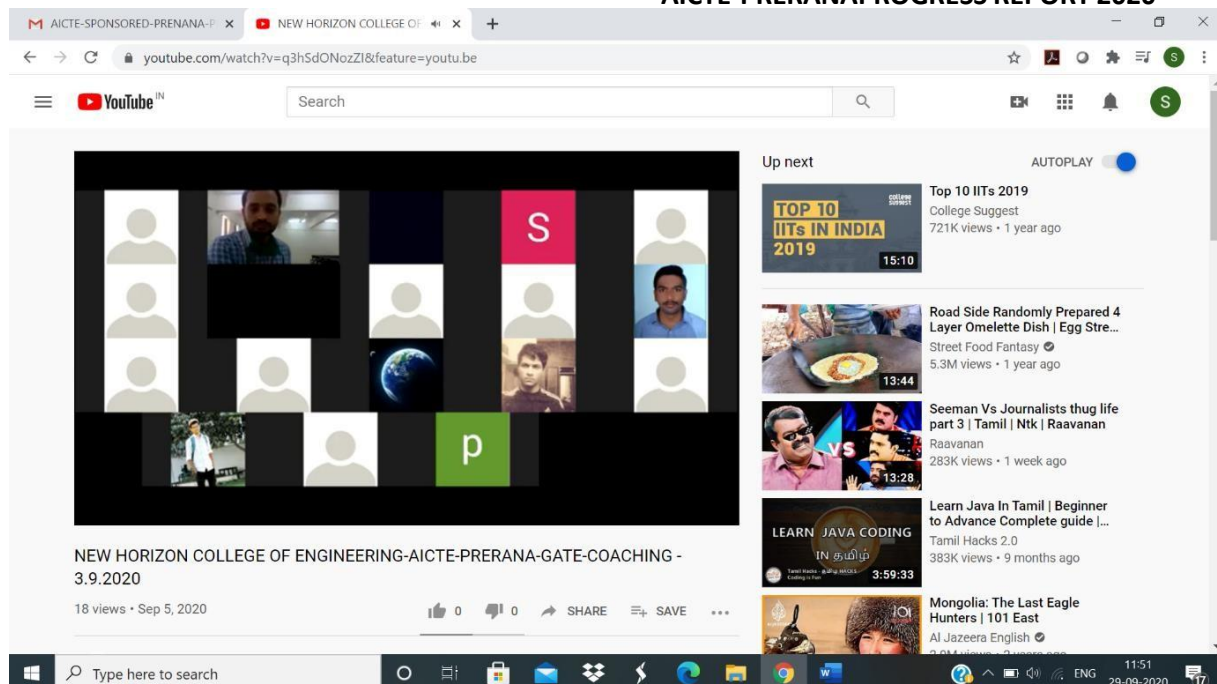


19 Nov 2020: Online coaching for CAT Exam Preparation – NHCE AICTE Prerana 20-21



26 Nov 2020: Online coaching for CAT Exam Preparation – NHCE AICTE Prerana 20-21





List of Participants - GATE

NAME	USN
VIGNESH KUMAR.S	1NH17ME121
ANIRUDDHA JAISWAL	1NH17ME008
V BHARGAV	1NH17ME756
ABHISHEK NAYAKA M	1NH17ME703
MANOJ B N	1NH17ME049
RANJITH V	1NH18ME415
SHIV RAJ G	1NH18ME416
R SUJAY	1NH17ME075
SANDEEP M	1NH17ME088
MANOJ NAIK	1NH17ME726
AVINASH T	1NH18ME426
ANJAPPA NM	1NH18ME425
DIVYA C	1NH17CS040
LAKSHMI M.S	1NH17CS065
PRAVEEN C	1NH17CS100
BEBI	1NH18CS402
DIVYA C	1NH17CS040
LAKSHMI M.S	1NH17CS065
PRAVEEN C	1NH17CS100
BEBI	1NH18CS402
ANKITHA.M	1NH17EE005
D NIKHIL KUMAR	1NH17EE010
KISHORE KUMAR S	1NH17EE719
MEGHANA I L	1NH17EE724

GNANESH NAYAK K V	1NH18EE402
HITISH G	1NH17EE019
SHANKAR CHAVAN	1NH18EE405
JAGADEESH	1NH18EE415
RAHUL RAJKUMAR	1NH18EE418

List of Participants –CAT

NAME	USN
Jeya Raj	1NH17AU015
Naveen Raj	1NH17AU029
Manik Kalsotra	1NH18AU403
AKASH K R	1NH17IS006
DIVYASHREE	1NH17IS035
HAMSA P O	1NH17IS039
PREETHI S	1NH17IS072
TEJASWINI S D	1NH17IS118
SHEKAR T.V	1NH18CS417

Summary:

We express our sincere gratitude for the grant sanctioned by AICTE to conduct online classes for ST/SC students for GATE and CAT courses. Students from all departments participated and were benefitted in the course of GATE [57 students] and CAT [9 students] coaching. As per the guidelines, we have enclosed the Annexure I and II (monthly reports sent on dates via email), Circular to conduct online classes. Our sincere thanks again for the continuous support provided for the student beneficial activities.