

Peer-Peer Mentoring Program

Student Learning Center, Hansraj College

Month and Year: March, 2022

Department: Physics and Electronics

Name of the Departmental Program Coordinator: Dr. Ravikant Prasad

S. No	Name of the Mentor	Sem	Number of sessions Mentored	Date and Time (of each session)	Topics covered (in each session)	No. of Mentees attended (per each session)
1	Mr. Ashutosh Joshi	IV	3 session of 1 hours each (3 hours)	12-03-2022; 2:00 pm - 3:00 pm	Rotational Dynamics-I	10
				13-03-2022; 12:00 pm - 1:00 pm	Rotational Dynamics-II	14
2	Mr. Umesh Jangra	IV	3 session of 1 hours each (3 hours)	12-03-2022; 3:00 pm - 4:00 pm	Ordinary Differential Equations-I (First order differential Equations: Variable separable, homogeneous, non-homogeneous, exact DE)	22
				13-03-2022; 11:00 am - 12:00 pm	Ordinary Differential Equations-II (inexact differential equations and Integrating Factors. Application to physics problems)	16
				19-03-2022;	Ordinary	14

				3:00 pm - 4:00 pm	Differential Equations-III (Second order differential equations- homogeneous – non homogeneous equation sol)	
3	Mr. Ajay Yadav	IV	2 session of 1 hours each (2 hours)	19-03-2022; 2:00 pm - 3:00 pm	Special Theory of Relativity-I	10
				20-03-2022; 11:00 am - 12:00 pm	Special Theory of Relativity-II	5
4	Mr. Anur Khurana	IV	1 session of 2 hours each (2 hour)	27-03-2022; 11:00 am - 1:00 pm	Stock Market Investing and Trading	10

Mentor 1: Mr. Ashutosh Joshi

Course: B.Sc (H) Physics

Current Sem: IV

Email id: ashutoshjoshi179@gmail.com



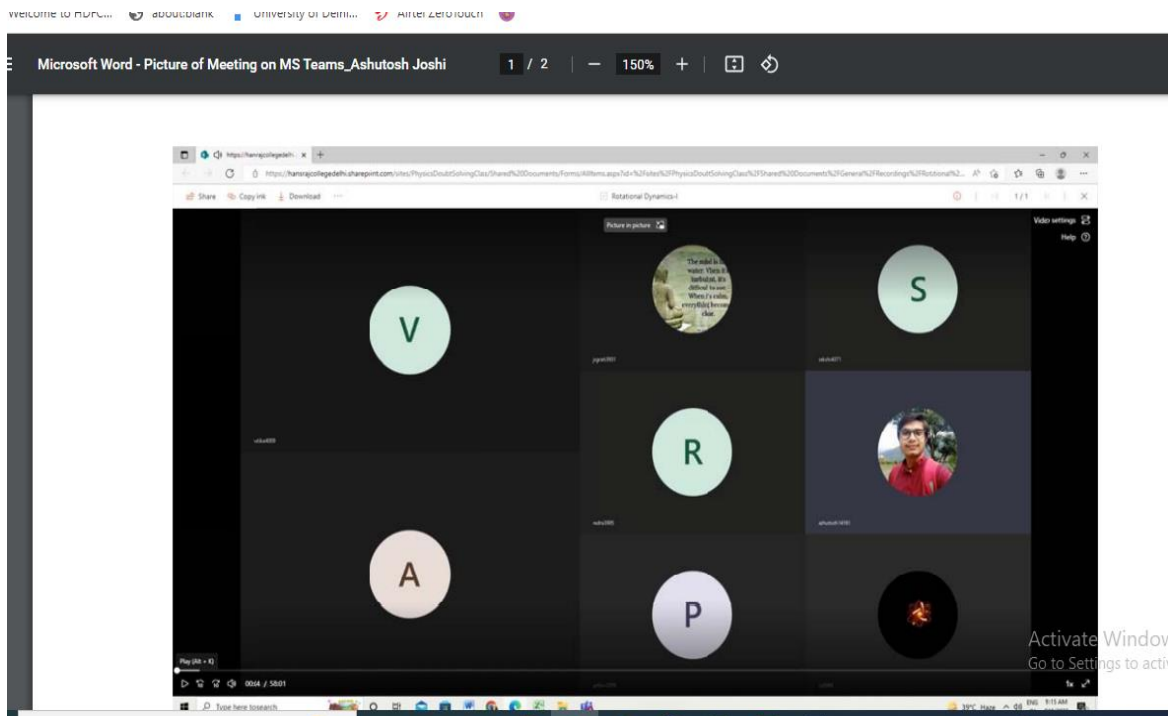
March 3, 2022: Basics of rotation and calculation of moment of inertia was discussed.

Meeting Summary				
Total Number of	24			
Meeting Title	General			
Meeting Start Time	3/12/2022, 1:58:50 PM			
Meeting End Time	3/12/2022, 3:03:05 PM			
Meeting Id	07936840-62fb-4909-ae83-			
Full Name	Join Time	Leave Time	Duration	Email
ashutosh14161	3/12/2022, 1:58:50 PM	3/12/2022, 3:03:05 PM	1h 4m	ashutosh14161@hrc.edu.du.ac.in
rudra3995	3/12/2022, 1:59:20 PM	3/12/2022, 3:02:50 PM	1h 3m	rudra3995@hrc.edu.du.ac.in
ca3969	3/12/2022, 2:00:32 PM	3/12/2022, 2:09:13 PM	8m 40s	ca3969@hrc.edu.du.ac.in
sakshi4371	3/12/2022, 2:00:40 PM	3/12/2022, 3:01:51 PM	1h 1m	sakshi4371@hrc.edu.du.ac.in
pallavi3998	3/12/2022, 2:00:54 PM	3/12/2022, 3:02:28 PM	1h 1m	pallavi3998@hrc.edu.du.ac.in
aw4398	3/12/2022, 2:01:03 PM	3/12/2022, 3:02:24 PM	1h 1m	aw4398@hrc.edu.du.ac.in
jagrati3931	3/12/2022, 2:01:08 PM	3/12/2022, 2:11:14 PM	10m 6s	jagrati3931@hrc.edu.du.ac.in
karina4019	3/12/2022, 2:01:38 PM	3/12/2022, 2:01:44 PM	5s	karina4019@hrc.edu.du.ac.in
aryan3906	3/12/2022, 2:02:04 PM	3/12/2022, 2:02:15 PM	11s	aryan3906@hrc.edu.du.ac.in
satendra3917	3/12/2022, 2:02:15 PM	3/12/2022, 2:03:55 PM	1m 40s	satendra3917@hrc.edu.du.ac.in
vatika4009	3/12/2022, 2:02:33 PM	3/12/2022, 2:57:52 PM	55m 18s	vatika4009@hrc.edu.du.ac.in
aman4032	3/12/2022, 2:03:40 PM	3/12/2022, 2:06:11 PM	2m 30s	aman4032@hrc.edu.du.ac.in
aditya4001	3/12/2022, 2:05:14 PM	3/12/2022, 2:22:38 PM	17m 24s	aditya4001@hrc.edu.du.ac.in
harsh14233	3/12/2022, 2:05:33 PM	3/12/2022, 2:05:36 PM	3s	harsh14233@hrc.edu.du.ac.in
sawan3944	3/12/2022, 2:05:50 PM	3/12/2022, 2:06:02 PM	12s	sawan3944@hrc.edu.du.ac.in
mayank3980	3/12/2022, 2:07:17 PM	3/12/2022, 3:02:33 PM	55m 15s	mayank3980@hrc.edu.du.ac.in
su hail3928	3/12/2022, 2:07:37 PM	3/12/2022, 2:18:27 PM	10m 50s	su hail3928@hrc.edu.du.ac.in
su hail3928	3/12/2022, 2:24:26 PM	3/12/2022, 2:33:10 PM	8m 44s	su hail3928@hrc.edu.du.ac.in
umesh14247	3/12/2022, 2:08:08 PM	3/12/2022, 2:11:58 PM	3m 49s	umesh14247@hrc.edu.du.ac.in
umesh14247	3/12/2022, 2:36:28 PM	3/12/2022, 2:50:27 PM	13m 59s	umesh14247@hrc.edu.du.ac.in
avinash4000	3/12/2022, 2:08:09 PM	3/12/2022, 2:25:20 PM	17m 11s	avinash4000@hrc.edu.du.ac.in
ritika4381	3/12/2022, 2:10:48 PM	3/12/2022, 2:12:53 PM	2m 5s	ritika4381@hrc.edu.du.ac.in
priyanshu14237	3/12/2022, 2:10:53 PM	3/12/2022, 2:13:03 PM	2m 10s	priyanshu14237@hrc.edu.du.ac.in
amaragani4361	3/12/2022, 2:12:27 PM	3/12/2022, 3:02:19 PM	49m 52s	amaragani4361@hrc.edu.du.ac.in
mahesh3963	3/12/2022, 2:15:13 PM	3/12/2022, 2:16:42 PM	1m 28s	mahesh3963@hrc.edu.du.ac.in
laldinmawia3923	3/12/2022, 2:34:52 PM	3/12/2022, 2:35:10 PM	18s	laldinmawia3923@hrc.edu.du.ac.in

March 13, 2022: Moment of inertia of some more complex geometry was taught along with some basic numerical's on rotation

Meeting Summary					
Total Number of Participants	16				
Meeting Title	General				
Meeting Start Time	3/13/2022, 12:57:36 PM				
Meeting End Time	3/13/2022, 2:22:16 PM				
Meeting Id	79e01182-38b8-4c4c-b3ed-ec49a769cfd				
Full Name	Join Time	Leave Time	Duration	Email	Role
umesh14247	3/13/2022, 12:57:36 PM	3/13/2022, 2:00:35 PM	1h 2m	umesh14247@hrc.edu.du.ac.in	Presenter
pallavi3998	3/13/2022, 1:00:30 PM	3/13/2022, 2:00:14 PM	59m 44s	pallavi3998@hrc.edu.du.ac.in	Attendee
vatika4009	3/13/2022, 1:02:16 PM	3/13/2022, 2:03:11 PM	1h	vatika4009@hrc.edu.du.ac.in	Attendee
vanshika3960	3/13/2022, 1:02:35 PM	3/13/2022, 1:15:08 PM	12m 33s	vanshika3960@hrc.edu.du.ac.in	Attendee
rudrani4008	3/13/2022, 1:03:20 PM	3/13/2022, 1:04:12 PM	52s	rudrani4008@hrc.edu.du.ac.in	Attendee
rudrani4008	3/13/2022, 1:33:08 PM	3/13/2022, 1:33:24 PM	15s	rudrani4008@hrc.edu.du.ac.in	Attendee
rhishita3910	3/13/2022, 1:03:29 PM	3/13/2022, 2:22:07 PM	1h 18m	rhishita3910@hrc.edu.du.ac.in	Attendee
chirag3935	3/13/2022, 1:03:32 PM	3/13/2022, 1:05:07 PM	1m 34s	chirag3935@hrc.edu.du.ac.in	Attendee
rudra3995	3/13/2022, 1:03:37 PM	3/13/2022, 2:00:27 PM	56m 49s	rudra3995@hrc.edu.du.ac.in	Attendee
sakshi4371	3/13/2022, 1:05:51 PM	3/13/2022, 2:00:14 PM	54m 23s	sakshi4371@hrc.edu.du.ac.in	Attendee
hariom3968	3/13/2022, 1:09:04 PM	3/13/2022, 1:09:47 PM	42s	hariom3968@hrc.edu.du.ac.in	Attendee
nancy3949	3/13/2022, 1:12:05 PM	3/13/2022, 1:20:26 PM	8m 20s	nancy3949@hrc.edu.du.ac.in	Attendee
mahesh3963	3/13/2022, 1:19:00 PM	3/13/2022, 1:19:52 PM	52s	mahesh3963@hrc.edu.du.ac.in	Attendee
kakul4034	3/13/2022, 1:21:33 PM	3/13/2022, 2:00:10 PM	38m 36s	kakul4034@hrc.edu.du.ac.in	Attendee
dikshant3942	3/13/2022, 1:30:04 PM	3/13/2022, 1:30:23 PM	19s	dikshant3942@hrc.edu.du.ac.in	Attendee
anil3943	3/13/2022, 1:56:53 PM	3/13/2022, 1:57:05 PM	11s	anil3943@hrc.edu.du.ac.in	Attendee
RavikantPrasad	3/13/2022, 2:21:57 PM	3/13/2022, 2:22:16 PM	19s	ravikantprasad@hrc.edu.du.ac.in	Organizer

Photographs:



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Rotational Dynamics I

Angular momentum

$\vec{L} = \vec{r} \times \vec{p}$ (momentum vector)

$L = r p \sin \theta$ (angle b/w \vec{r} and \vec{p})

$= (r \sin \theta) p = r_{\perp} p$

$= r (p \sin \theta) = r p_L$

Angular momentum about B:-

$L = (BP)(p) = l \times m \omega \sin \alpha$

$L = m l^2 \omega \sin \alpha$

Diagram showing a triangle with vertices A, B, and C. A point P is on the line segment AC. A vector \vec{r} is drawn from B to P. A vector \vec{p} is drawn from P. A dashed line represents the perpendicular distance $r \sin \theta$ from B to the line containing \vec{p} . The angle between \vec{r} and \vec{p} is θ . The angle between the line segment BP and the line containing \vec{p} is α . The length of BP is l . The length of the perpendicular is $l \sin \alpha$. The length of the segment AP is $l \cos \alpha$. The velocity of P is $v = (AP)\omega = (l \cos \alpha)\omega$. The momentum of P is $p = m v = m l \omega \cos \alpha$. The angular momentum about B is $L = (BP)(p) = (l \sin \alpha)(m l \omega \cos \alpha) = m l^2 \omega \sin \alpha \cos \alpha$.

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Rotational Dynamics I

Angular momentum

Diagram showing a pulley system with two masses m_1 and m_2 hanging from a pulley. The pulley is fixed to a ceiling. The masses are connected by a string. The pulley has a radius r . The masses are moving with acceleration a . The forces acting on the masses are gravity $m_1 g$ and $m_2 g$. The tension in the string is T . The net force on the masses is $F = m_1 g - m_2 g$. The total mass is $m_1 + m_2$. The acceleration is $a = \frac{m_1 g - m_2 g}{m_1 + m_2} = \left(\frac{m_1 - m_2}{m_1 + m_2} \right) g$.

Diagram showing a pulley system with two masses m_1 and m_2 hanging from a pulley. The pulley is fixed to a ceiling. The masses are connected by a string. The pulley has a radius r . The masses are moving with acceleration a . The forces acting on the masses are gravity $m_1 g$ and $m_2 g$. The tension in the string is T . The net force on the masses is $F = m_1 g - m_2 g$. The total mass is $m_1 + m_2$. The acceleration is $a = \frac{m_1 g - m_2 g}{m_1 + m_2} = \left(\frac{m_1 - m_2}{m_1 + m_2} \right) g$.

Diagram showing a pulley system with two masses m_1 and m_2 hanging from a pulley. The pulley is fixed to a ceiling. The masses are connected by a string. The pulley has a radius r . The masses are moving with acceleration a . The forces acting on the masses are gravity $m_1 g$ and $m_2 g$. The tension in the string is T . The net force on the masses is $F = m_1 g - m_2 g$. The total mass is $m_1 + m_2$. The acceleration is $a = \frac{m_1 g - m_2 g}{m_1 + m_2} = \left(\frac{m_1 - m_2}{m_1 + m_2} \right) g$.

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Mentor 2: Mr. Umesh Jangra

Course: B.Sc (H) Physics

Current Sem: IV

Email id: umeshkumarramgarh555@gmail.com



March 12, 2022 - Started the very first class with introduction and discussed the scope and need of Ordinary differential equations in Physics. The agenda was to make mentees familiar with First order differential Equations: Variable separable, homogeneous, non-homogeneous, exact DE . 2-3 Problems on every topic were discussed including mentees queries regarding the topic. At the end of the class, classwork and PPT were shared and some problems from previous year question papers were to practice.

Meeting Summary						
Total Number of Participants	22					
Meeting Title	General					
Meeting Start Time	3/12/2022, 3:00:07 PM					
Meeting End Time	3/12/2022, 4:17:39 PM					
Meeting Id	321b1fea-ee8c-4861-9f68-d5373307643b					
Full Name	Join Time	Leave Time	Duration	Email	Role	
umesh14247	3/12/2022, 3:00:07 PM	3/12/2022, 4:01:35 PM	1h 1m	umesh14247@hrc.edu.du.ac.in	Presenter	
rudra3995	3/12/2022, 3:01:21 PM	3/12/2022, 4:01:22 PM	1h	rudra3995@hrc.edu.du.ac.in	Attendee	
kakul4034	3/12/2022, 3:01:31 PM	3/12/2022, 4:01:07 PM	59m 36s	kakul4034@hrc.edu.du.ac.in	Attendee	
vikas4016	3/12/2022, 3:01:36 PM	3/12/2022, 3:02:32 PM	55s	vikas4016@hrc.edu.du.ac.in	Attendee	
amrutha3955	3/12/2022, 3:01:46 PM	3/12/2022, 3:19:21 PM	17m 34s	amrutha3955@hrc.edu.du.ac.in	Attendee	
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aditya4001	3/12/2022, 3:02:34 PM	3/12/2022, 3:02:44 PM	9s	aditya4001@hrc.edu.du.ac.in	Attendee	
aditya4001	3/12/2022, 3:03:54 PM	3/12/2022, 3:04:16 PM	21s	aditya4001@hrc.edu.du.ac.in	Attendee	
aditya4001	3/12/2022, 3:05:40 PM	3/12/2022, 3:19:22 PM	13m 41s	aditya4001@hrc.edu.du.ac.in	Attendee	
aditya4001	3/12/2022, 3:22:58 PM	3/12/2022, 3:24:39 PM	1m 41s	aditya4001@hrc.edu.du.ac.in	Attendee	
pallavi3998	3/12/2022, 3:02:38 PM	3/12/2022, 4:01:15 PM	58m 37s	pallavi3998@hrc.edu.du.ac.in	Attendee	
amaragani4361	3/12/2022, 3:02:43 PM	3/12/2022, 4:01:43 PM	59m	amaragani4361@hrc.edu.du.ac.in	Attendee	
mayank3980	3/12/2022, 3:02:48 PM	3/12/2022, 4:01:26 PM	58m 38s	mayank3980@hrc.edu.du.ac.in	Attendee	
sangeeta3924	3/12/2022, 3:05:25 PM	3/12/2022, 4:01:33 PM	56m 8s	sangeeta3924@hrc.edu.du.ac.in	Attendee	
vatika4009	3/12/2022, 3:05:26 PM	3/12/2022, 4:01:02 PM	55m 35s	vatika4009@hrc.edu.du.ac.in	Attendee	
ashutosh14161	3/12/2022, 3:06:23 PM	3/12/2022, 3:08:32 PM	2m 8s	ashutosh14161@hrc.edu.du.ac.in	Attendee	
aman4032	3/12/2022, 3:08:23 PM	3/12/2022, 3:09:28 PM	1m 4s	aman4032@hrc.edu.du.ac.in	Attendee	
suhail3928	3/12/2022, 3:08:40 PM	3/12/2022, 3:16:10 PM	7m 29s	suhail3928@hrc.edu.du.ac.in	Attendee	
suhail3928	3/12/2022, 3:34:55 PM	3/12/2022, 4:17:39 PM	42m 44s	suhail3928@hrc.edu.du.ac.in	Attendee	
yash4042	3/12/2022, 3:16:36 PM	3/12/2022, 3:28:18 PM	11m 41s	yash4042@hrc.edu.du.ac.in	Attendee	
priyanshu3966	3/12/2022, 3:18:46 PM	3/12/2022, 3:19:12 PM	25s	priyanshu3966@hrc.edu.du.ac.in	Attendee	
somveer4003	3/12/2022, 3:20:22 PM	3/12/2022, 4:01:37 PM	41m 15s	somveer4003@hrc.edu.du.ac.in	Attendee	
aw4398	3/12/2022, 3:23:08 PM	3/12/2022, 3:33:47 PM	10m 39s	aw4398@hrc.edu.du.ac.in	Attendee	
dinesh3952	3/12/2022, 3:26:09 PM	3/12/2022, 3:26:35 PM	26s	dinesh3952@hrc.edu.du.ac.in	Attendee	
muhammed3922	3/12/2022, 3:40:59 PM	3/12/2022, 3:41:31 PM	31s	muhammed3922@hrc.edu.du.ac.in	Attendee	

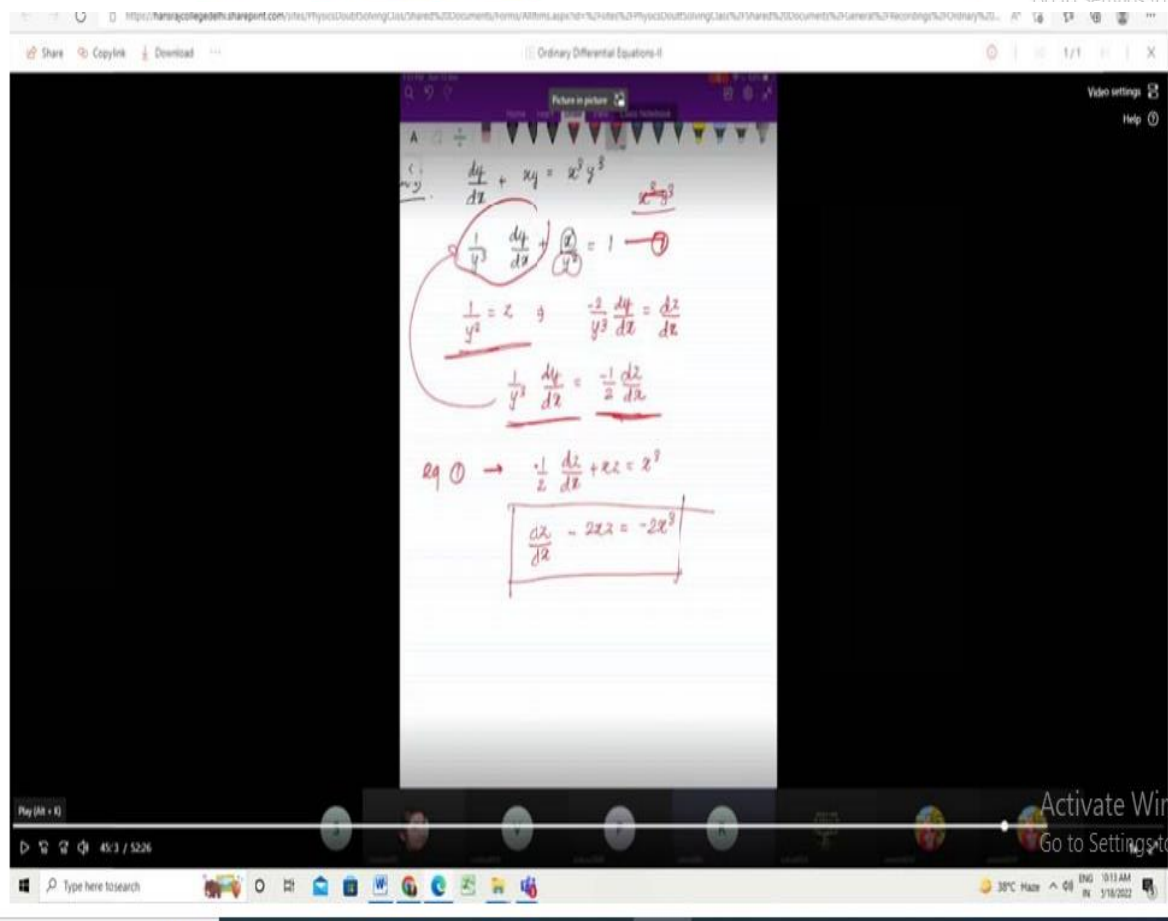
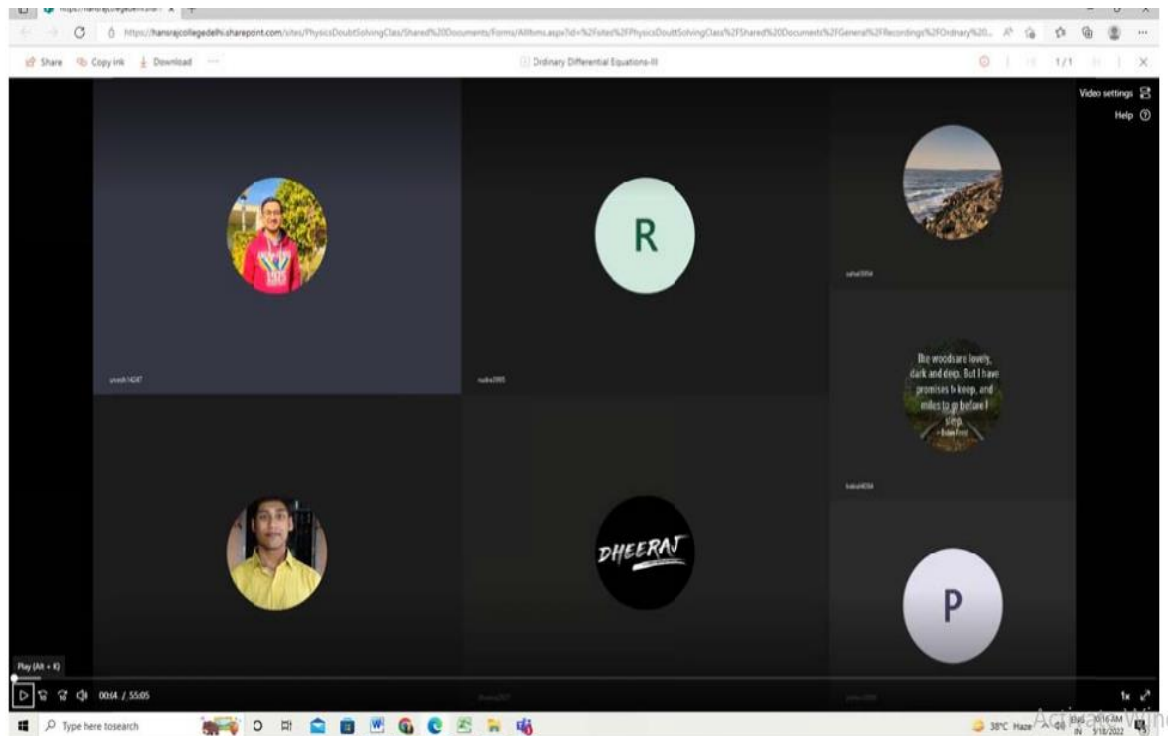
March 13, 2022: In the next class, inexact differential equations and Integrating Factors were discussed. Application: physics problems of differential equations were taught. Doubts from previous class and problems were taken. It was a much interactive session.

Meeting Summary					
Total Number of Participants	16				
Meeting Title	General				
Meeting Start Time	3/13/2022, 12:57:36 PM				
Meeting End Time	3/13/2022, 2:22:16 PM				
Meeting Id	79e01182-38b8-4c4c-b3ed-ec49a769cfde				
Full Name	Join Time	Leave Time	Duration	Email	Role
umesh14247	3/13/2022, 12:57:36 PM	3/13/2022, 2:00:35 PM	1h 2m	umesh14247@hrc.edu.du.ac.in	Presenter
pallavi3998	3/13/2022, 1:00:30 PM	3/13/2022, 2:00:14 PM	59m 44s	pallavi3998@hrc.edu.du.ac.in	Attendee
vatika4009	3/13/2022, 1:02:16 PM	3/13/2022, 2:03:11 PM	1h	vatika4009@hrc.edu.du.ac.in	Attendee
vanshika3960	3/13/2022, 1:02:35 PM	3/13/2022, 1:15:08 PM	12m 33s	vanshika3960@hrc.edu.du.ac.in	Attendee
rudrani4008	3/13/2022, 1:03:20 PM	3/13/2022, 1:04:12 PM	52s	rudrani4008@hrc.edu.du.ac.in	Attendee
rudrani4008	3/13/2022, 1:33:08 PM	3/13/2022, 1:33:24 PM	15s	rudrani4008@hrc.edu.du.ac.in	Attendee
rhishita3910	3/13/2022, 1:03:29 PM	3/13/2022, 2:22:07 PM	1h 18m	rhishita3910@hrc.edu.du.ac.in	Attendee
chirag3935	3/13/2022, 1:03:32 PM	3/13/2022, 1:05:07 PM	1m 34s	chirag3935@hrc.edu.du.ac.in	Attendee
rudra3995	3/13/2022, 1:03:37 PM	3/13/2022, 2:00:27 PM	56m 49s	rudra3995@hrc.edu.du.ac.in	Attendee
sakshi4371	3/13/2022, 1:05:51 PM	3/13/2022, 2:00:14 PM	54m 23s	sakshi4371@hrc.edu.du.ac.in	Attendee
hariom3968	3/13/2022, 1:09:04 PM	3/13/2022, 1:09:47 PM	42s	hariom3968@hrc.edu.du.ac.in	Attendee
nancy3949	3/13/2022, 1:12:05 PM	3/13/2022, 1:20:26 PM	8m 20s	nancy3949@hrc.edu.du.ac.in	Attendee
mahesh3963	3/13/2022, 1:19:00 PM	3/13/2022, 1:19:52 PM	52s	mahesh3963@hrc.edu.du.ac.in	Attendee
kakul4034	3/13/2022, 1:21:33 PM	3/13/2022, 2:00:10 PM	38m 36s	kakul4034@hrc.edu.du.ac.in	Attendee
dikshant3942	3/13/2022, 1:30:04 PM	3/13/2022, 1:30:23 PM	19s	dikshant3942@hrc.edu.du.ac.in	Attendee
anil3943	3/13/2022, 1:56:53 PM	3/13/2022, 1:57:05 PM	11s	anil3943@hrc.edu.du.ac.in	Attendee
RavikantPrasad	3/13/2022, 2:21:57 PM	3/13/2022, 2:22:16 PM	19s	ravikantprasad@hrc.edu.du.ac.in	Organizer

March 19, 2022: In the third session Homogeneous and non-homogeneous differential equations of Order 2 were discussed. Operator method, variation of parameter methods were taught with introduction of complementary and particular integral concept. Problems were discussed on every single topic. Notes were shared in the group after class.

Meeting Summary					
Total Number of Participants	14				
Meeting Title	General				
Meeting Start Time	3/19/2022, 2:56:24 PM				
Meeting End Time	3/19/2022, 4:00:13 PM				
Meeting Id	db4a2b27-636e-4d21-bce0-28c92779cef5				
Full Name	Join Time	Leave Time	Duration	Email	Role
umesh14247	3/19/2022, 2:56:24 PM	3/19/2022, 3:59:07 PM	1h 2m	umesh14247@hrc.edu.du.ac.in	Presenter
kakul4034	3/19/2022, 3:01:16 PM	3/19/2022, 4:00:13 PM	58m 57s	kakul4034@hrc.edu.du.ac.in	Attendee
pallavi3998	3/19/2022, 3:01:21 PM	3/19/2022, 3:59:06 PM	57m 45s	pallavi3998@hrc.edu.du.ac.in	Attendee
amaragani4361	3/19/2022, 3:01:23 PM	3/19/2022, 3:25:31 PM	24m 8s	amaragani4361@hrc.edu.du.ac.in	Attendee
dheeraj3927	3/19/2022, 3:01:40 PM	3/19/2022, 3:01:47 PM	7s	dheeraj3927@hrc.edu.du.ac.in	Attendee
dheeraj3927	3/19/2022, 3:02:48 PM	3/19/2022, 3:08:05 PM	5m 16s	dheeraj3927@hrc.edu.du.ac.in	Attendee
rudra3995	3/19/2022, 3:03:06 PM	3/19/2022, 3:59:09 PM	56m 2s	rudra3995@hrc.edu.du.ac.in	Attendee
sahal3954	3/19/2022, 3:04:22 PM	3/19/2022, 3:56:23 PM	52m	sahal3954@hrc.edu.du.ac.in	Attendee
vatika4009	3/19/2022, 3:06:02 PM	3/19/2022, 3:59:25 PM	53m 22s	vatika4009@hrc.edu.du.ac.in	Attendee
ajay14177	3/19/2022, 3:07:03 PM	3/19/2022, 3:07:40 PM	37s	ajay14177@hrc.edu.du.ac.in	Attendee
aryan3906	3/19/2022, 3:10:56 PM	3/19/2022, 3:11:45 PM	48s	aryan3906@hrc.edu.du.ac.in	Attendee
tamanna3911	3/19/2022, 3:12:25 PM	3/19/2022, 3:12:57 PM	31s	tamanna3911@hrc.edu.du.ac.in	Attendee
sangeeta3924	3/19/2022, 3:17:55 PM	3/19/2022, 3:22:07 PM	4m 11s	sangeeta3924@hrc.edu.du.ac.in	Attendee
suhail3928	3/19/2022, 3:46:46 PM	3/19/2022, 3:49:45 PM	2m 59s	suhail3928@hrc.edu.du.ac.in	Attendee
rokee3993	3/19/2022, 3:52:30 PM	3/19/2022, 3:54:01 PM	1m 31s	rokee3993@hrc.edu.du.ac.in	Attendee

Photographs



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Ordinary Differential Equations-I

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39.2%

Handwritten notes on a whiteboard:

$y(x+1) = e^x + C$

Ans: $\frac{dy}{dx} = \frac{x+2y-3}{2x+\frac{y}{2}-5}$

put $x = x+h$
and $y = y+k$

find $\frac{dy}{dx}$

$h+2k-3=0$ — (1)
 $2h+k-5=0$ — (2)

Homogeneous is $x \& y$

$y = xz$

* Second Order Diff. Eqⁿ :-

⊙ Homogeneous Eqⁿ with constant coeff :-

$$\frac{d^2y}{dx^2} + \alpha \frac{dy}{dx} + \beta y = 0$$

There will be 2 solutions y_1 and y_2 .
The most general solⁿ is :-

$$y(x) = a_1 y_1(x) + a_2 y_2(x) \quad \text{or}$$

$$y(x) = a_1 y_1(x) + a_2 y_2(x)$$

⊙ Non Homogeneous second order diff. eqn :-

$$\frac{d^2y}{dx^2} + \alpha \frac{dy}{dx} + \beta y = f(x)$$

Mentor 3: Mr. Ajay Yadav

Course: B.Sc (H) Physics

Current Sem: IV

Email id: ajjusayadav2004@gmail.com



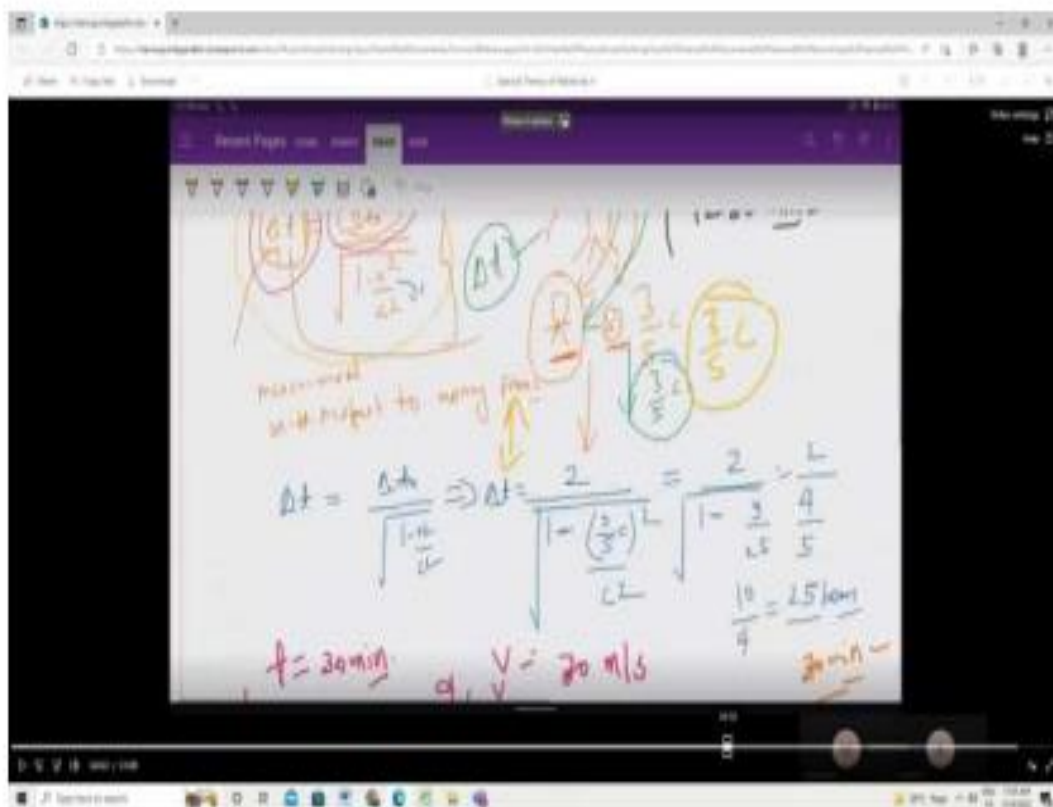
March 19, 2022: Starting of my first class with my juniors. I discussed few topics of special theory of relativity like Michelson Morle experiment, time dilation, length contraction etc. And some basic theory part that is in Special Theory of Relativity. In the end they put their doubts and I gave my best to resolve their doubts. I too learnt something new from their doubts.

Meeting Summary		18			
Total Number of					
Meeting Title					
Meeting Start Time					
Meeting End Time					
Meeting Id		f5b2841b-0b79-416a-93c3-			
Full Name	Join Time	Leave Time	Duration	Email	Role
ajay14177	3/19/2022, 1:57:53 PM	3/19/2022, 3:05:53 PM	1h 7m	ajay14177@hrc.edu.du.ac.in	Presenter
amaragani4361	3/19/2022, 1:58:18 PM	3/19/2022, 3:01:14 PM	1h 2m	amaragani4361@hrc.edu.du.ac.in	Attendee
sudepto3964	3/19/2022, 1:59:53 PM	3/19/2022, 3:05:55 PM	1h 6m	sudepto3964@hrc.edu.du.ac.in	Attendee
vanshika3960	3/19/2022, 2:03:08 PM	3/19/2022, 3:05:53 PM	1h 2m	vanshika3960@hrc.edu.du.ac.in	Attendee
chirag3935	3/19/2022, 2:04:28 PM	3/19/2022, 2:05:09 PM	41s	chirag3935@hrc.edu.du.ac.in	Attendee
umesh14247	3/19/2022, 2:06:11 PM	3/19/2022, 2:13:05 PM	6m 53s	umesh14247@hrc.edu.du.ac.in	Attendee
umesh14247	3/19/2022, 2:20:09 PM	3/19/2022, 2:21:22 PM	1m 12s	umesh14247@hrc.edu.du.ac.in	Attendee
umesh14247	3/19/2022, 2:42:37 PM	3/19/2022, 2:43:50 PM	1m 12s	umesh14247@hrc.edu.du.ac.in	Attendee
saurabh3976	3/19/2022, 2:07:48 PM	3/19/2022, 2:16:33 PM	8m 44s	saurabh3976@hrc.edu.du.ac.in	Attendee
vatika4009	3/19/2022, 2:10:31 PM	3/19/2022, 3:05:51 PM	55m 20s	vatika4009@hrc.edu.du.ac.in	Attendee
suhail3928	3/19/2022, 2:15:29 PM	3/19/2022, 2:20:05 PM	4m 35s	suhail3928@hrc.edu.du.ac.in	Attendee
sakshi4371	3/19/2022, 2:18:44 PM	3/19/2022, 2:36:54 PM	18m 10s	sakshi4371@hrc.edu.du.ac.in	Attendee
sakshi4371	3/19/2022, 2:40:09 PM	3/19/2022, 2:42:32 PM	2m 23s	sakshi4371@hrc.edu.du.ac.in	Attendee
aashu4363	3/19/2022, 2:20:42 PM	3/19/2022, 2:21:52 PM	1m 10s	aashu4363@hrc.edu.du.ac.in	Attendee
aryan3906	3/19/2022, 2:23:15 PM	3/19/2022, 2:23:32 PM	17s	aryan3906@hrc.edu.du.ac.in	Attendee
abhishek3457	3/19/2022, 2:32:51 PM	3/19/2022, 2:33:26 PM	35s	abhishek3457@hrc.edu.du.ac.in	Attendee
harsh3965	3/19/2022, 2:33:47 PM	3/19/2022, 2:33:53 PM	5s	harsh3965@hrc.edu.du.ac.in	Attendee
sangeeta3924	3/19/2022, 2:35:48 PM	3/19/2022, 2:38:29 PM	2m 40s	sangeeta3924@hrc.edu.du.ac.in	Attendee
sangeeta3924	3/19/2022, 2:59:46 PM	3/19/2022, 3:00:18 PM	31s	sangeeta3924@hrc.edu.du.ac.in	Attendee
hariom3968	3/19/2022, 2:38:17 PM	3/19/2022, 2:39:27 PM	1m 9s	hariom3968@hrc.edu.du.ac.in	Attendee
aw4398	3/19/2022, 2:39:27 PM	3/19/2022, 2:43:22 PM	3m 54s	aw4398@hrc.edu.du.ac.in	Attendee
kabir3981	3/19/2022, 2:44:41 PM	3/19/2022, 2:44:57 PM	16s	kabir3981@hrc.edu.du.ac.in	Attendee
kabir3981	3/19/2022, 2:48:39 PM	3/19/2022, 2:49:07 PM	28s	kabir3981@hrc.edu.du.ac.in	Attendee

March 20, 2022: In the second session, I had discussed some numerical's based on Michelson Morle experiment, length contraction, and time dilation. Almost 10 - 12 problems were discussed in the class. In the end I had given some practice problems to my junior's.

Meeting Summary					
Total Number of Participants	8				
Meeting Title	General				
Meeting Start Time	3/20/2022, 11:01:16 AM				
Meeting End Time	3/20/2022, 12:03:28 PM eab25f3e-5506-43a7-bad7-f812bdd8ba51				
Meeting Id	f812bdd8ba51				
Full Name	Join Time	Leave Time	Duration	Email	Role
ajay14177	3/20/2022, 11:01:16 AM	3/20/2022, 12:03:28 PM	1h 2m	ajay14177@hrc.edu.du.ac.in	Presenter
mahesh3963	3/20/2022, 11:12:24 AM	3/20/2022, 12:03:25 PM	51m 1s	mahesh3963@hrc.edu.du.ac.in	Attendee
dheeraj3927	3/20/2022, 11:16:22 AM	3/20/2022, 11:16:29 AM	7s	dheeraj3927@hrc.edu.du.ac.in	Attendee
billu3941	3/20/2022, 11:16:49 AM	3/20/2022, 11:17:13 AM	24s	billu3941@hrc.edu.du.ac.in	Attendee
su hail3928	3/20/2022, 11:17:02 AM	3/20/2022, 11:21:36 AM	4m 33s	su hail3928@hrc.edu.du.ac.in	Attendee
amaragani4361	3/20/2022, 11:17:22 AM	3/20/2022, 11:17:50 AM	27s	amaragani4361@hrc.edu.du.ac.in	Attendee
aditya4001	3/20/2022, 11:18:11 AM	3/20/2022, 11:19:36 AM	1m 25s	aditya4001@hrc.edu.du.ac.in	Attendee
mohit4024	3/20/2022, 11:22:50 AM	3/20/2022, 11:23:07 AM	16s	mohit4024@hrc.edu.du.ac.in	Attendee

Photographs:



Mentor 4: Mr. Anur Khurana

Course: B.Sc (H) Physics

Current Sem: IV

Email id: anurkhurana12303@gmail.com



March 27, 2022: Basics of Stock market investing and trading was discussed. Defining the levels (Support and resistance) and do's and don't in the market trading was explained.

Meeting Summary

Total Number of

Participants

30

Meeting Title General

Meeting Start Time 3/27/2022, 11:00:31 AM

Meeting End Time 3/27/2022, 11:53:31 AM
c0be0de7-5ae1-4052-b238-

Meeting Id d034e4aefd71

Full Name	Join Time	Leave Time	Duration	Email	Role
kabir3981	3/27/2022, 11:00:31 AM	3/27/2022, 11:01:00 AM	29s	kabir3981@hrc.edu.du.ac.in	Attendee
kabir3981	3/27/2022, 11:02:22 AM	3/27/2022, 11:05:29 AM	3m 6s	kabir3981@hrc.edu.du.ac.in	Attendee
kabir3981	3/27/2022, 11:30:17 AM	3/27/2022, 11:30:30 AM	13s	kabir3981@hrc.edu.du.ac.in	Attendee
vikalp4037	3/27/2022, 11:00:32 AM	3/27/2022, 11:02:53 AM	2m 21s	vikalp4037@hrc.edu.du.ac.in	Attendee
vikalp4037	3/27/2022, 11:05:56 AM	3/27/2022, 11:06:01 AM	5s	vikalp4037@hrc.edu.du.ac.in	Attendee
vikalp4037	3/27/2022, 11:11:31 AM	3/27/2022, 11:11:43 AM	12s	vikalp4037@hrc.edu.du.ac.in	Attendee
dikshant3942	3/27/2022, 11:00:43 AM	3/27/2022, 11:04:05 AM	3m 21s	dikshant3942@hrc.edu.du.ac.in	Attendee
dikshant3942	3/27/2022, 11:19:55 AM	3/27/2022, 11:22:04 AM	2m 9s	dikshant3942@hrc.edu.du.ac.in	Attendee
anur14222	3/27/2022, 11:01:04 AM	3/27/2022, 11:30:33 AM	29m 28s	anur14222@hrc.edu.du.ac.in	Presenter
hariom3968	3/27/2022, 11:01:07 AM	3/27/2022, 11:33:17 AM	32m 10s	hariom3968@hrc.edu.du.ac.in	Attendee
hariom3968	3/27/2022, 11:34:30 AM	3/27/2022, 11:35:31 AM	1m 1s	hariom3968@hrc.edu.du.ac.in	Attendee
rohit4017	3/27/2022, 11:02:19 AM	3/27/2022, 11:28:29 AM	26m 9s	rohit4017@hrc.edu.du.ac.in	Attendee
vatika4009	3/27/2022, 11:03:57 AM	3/27/2022, 11:04:17 AM	19s	vatika4009@hrc.edu.du.ac.in	Attendee
arjun3905	3/27/2022, 11:04:27 AM	3/27/2022, 11:04:34 AM	7s	arjun3905@hrc.edu.du.ac.in	Attendee
shweta4029	3/27/2022, 11:05:29 AM	3/27/2022, 11:35:26 AM	29m 57s	shweta4029@hrc.edu.du.ac.in	Attendee
amaragani4361	3/27/2022, 11:06:26 AM	3/27/2022, 11:12:47 AM	6m 20s	amaragani4361@hrc.edu.du.ac.in	Attendee
amaragani4361	3/27/2022, 11:15:02 AM	3/27/2022, 11:22:30 AM	7m 28s	amaragani4361@hrc.edu.du.ac.in	Attendee
amaragani4361	3/27/2022, 11:26:13 AM	3/27/2022, 11:35:07 AM	8m 53s	amaragani4361@hrc.edu.du.ac.in	Attendee
suhail3928	3/27/2022, 11:07:39 AM	3/27/2022, 11:28:07 AM	20m 28s	suhail3928@hrc.edu.du.ac.in	Attendee
rokee3993	3/27/2022, 11:07:41 AM	3/27/2022, 11:09:27 AM	1m 46s	rokee3993@hrc.edu.du.ac.in	Attendee
dinesh3952	3/27/2022, 11:08:26 AM	3/27/2022, 11:35:15 AM	26m 49s	dinesh3952@hrc.edu.du.ac.in	Attendee

avinash4000	3/27/2022, 11:09:27 AM	3/27/2022, 11:11:20 AM	1m 53s	avinash4000@hrc.edu.du.ac.in	Attendee
sanjay14243	3/27/2022, 11:10:24 AM	3/27/2022, 11:16:36 AM	6m 11s	sanjay14243@hrc.edu.du.ac.in	Attendee
abhishek3987	3/27/2022, 11:11:19 AM	3/27/2022, 11:12:35 AM	1m 15s	abhishek3987@hrc.edu.du.ac.in	Attendee
naman3939	3/27/2022, 11:12:45 AM	3/27/2022, 11:12:57 AM	11s	naman3939@hrc.edu.du.ac.in	Attendee
aryan3906	3/27/2022, 11:14:18 AM	3/27/2022, 11:15:34 AM	1m 16s	aryan3906@hrc.edu.du.ac.in	Attendee
aditya14273	3/27/2022, 11:14:39 AM	3/27/2022, 11:21:52 AM	7m 13s	aditya14273@hrc.edu.du.ac.in	Attendee
jatin14242	3/27/2022, 11:20:30 AM	3/27/2022, 11:22:44 AM	2m 14s	jatin14242@hrc.edu.du.ac.in	Attendee
rohit3961	3/27/2022, 11:20:39 AM	3/27/2022, 11:22:22 AM	1m 42s	rohit3961@hrc.edu.du.ac.in	Attendee
swapnil14219	3/27/2022, 11:29:44 AM	3/27/2022, 11:30:18 AM	33s	swapnil14219@hrc.edu.du.ac.in	Attendee
ashutosh14200	3/27/2022, 11:30:06 AM	3/27/2022, 11:30:30 AM	23s	ashutosh14200@hrc.edu.du.ac.in	Attendee
vaibhav3992	3/27/2022, 11:30:30 AM	3/27/2022, 11:30:49 AM	18s	vaibhav3992@hrc.edu.du.ac.in	Attendee
aadarsh7605	3/27/2022, 11:32:42 AM	3/27/2022, 11:32:59 AM	17s	aadarsh7605@hrc.edu.du.ac.in	Attendee
umesh14247	3/27/2022, 11:32:56 AM	3/27/2022, 11:33:22 AM	26s	umesh14247@hrc.edu.du.ac.in	Attendee
jisshant	3/27/2022, 11:32:59 AM	3/27/2022, 11:33:34 AM	34s	jisshant7663@hrc.edu.du.ac.in	Attendee
vikas14262	3/27/2022, 11:33:00 AM	3/27/2022, 11:53:31 AM	20m 30s	vikas14262@hrc.edu.du.ac.in	Attendee
harsh14230	3/27/2022, 11:33:28 AM	3/27/2022, 11:33:34 AM	5s	harsh14230@hrc.edu.du.ac.in	Attendee
abdullah14164	3/27/2022, 11:34:12 AM	3/27/2022, 11:35:32 AM	1m 19s	abdullah14164@hrc.edu.du.ac.in	Attendee