

Module 3

Module	Topics (1 Hr each)	PPT	Video links	e materials	Date and duration
Module 3				https://drive.google.com/drive/	
	Vapour Power Cycles: Carnot vapour power cycle, .	PPT 1	https://youtu.be/4EZp7qNnwKY	folders/0B2iQyWujygWFfkJvMzRJWUpCQIB3QkZVVXh1Y3c5NW1BZUJ0dTNuMmU3TkpaVEY2d	26-03-2020
				WICS2M	
	drawbacks as a reference cycle	PPT 1		https://drive.google.com/drive/	27-03-2020
	Simple Rankine cycle, description, T-S diagram, analysis for performance	PPT 1		folders/0B2iQyWujygWFfkJvMzRJWUpCQIB3QkZVVXh1Y3c5NW	28-03-2020
	Comparison of Carnot and Rankine cycles.	PPT 1		1BZUJ0dTNuMmU3TkpaVEY2dWICS2M	30-03-2020
	Effects of pressure and temperature on Rankine cycle performance.	PPT 2		https://drive.google.com/drive/folders/0B2iQyWujygWFfkJvMzRJWUpCQIB3QkZVVXh1Y3c5NW1BZUJ0dTNuMmU3TkpaVEY2d WICS2M	31-03-2020
	Effects of pressure and temperature on Rankine cycle performance.	PPT 2		https://drive.google.com/drive/folders/0B2iQyWujygWFfkJvMzRJWUpCQIB3QkZVVXh1Y3c5NW1BZUJ0dTNuMmU3TkpaVEY2d WICS2M	01-04-2020
	Actual vapour power cycles.	PPT 2	https://youtu.be/QiBSqWM69q		02-04-2020
			g		
	Ideal and practical regenerative Rankine cycles,	PPT 2			03-04-2020
	open and closed feed water heaters	PPT 3			https://drive.google.com/drive/
Reheat Rankine cycle.	PPT 3	https://www.youtube.com/watch?v=O2FwEIKg3ts	folders/0B2iQyWujygWFfkJvMzRJWUpCQIB3QkZVVXh1Y3c5NW1BZUJ0dTNuMmU3TkpaVEY2d WICS2M	06-04-2020	

			5NW	
Characteristics of an Ideal working fluid in vapour power cycles	PPT 3		1BZUJ0dTNuMmU3TkpaVE Y2d WICS2M	07-04-2020
Numerical problems	PPT 4	https://youtu.be/WMGyzUCqR	https://drive.google.com/drive/folders/0B2iQyWujygWFfkjvMzRJWUpCQIB3QkZVVXh1Y3c5NW 1BZUJ0dTNuMmU3TkpaVE Y2d WICS2M	08-04-2020
		PO		
Online class for doubt clearance (Zoom)				09-04-2020
Numerical problems	PPT 4	https://youtu.be/WMGyzUCqR		10-04-2020
		PO		
Numerical problems and solutions	PPT 5			
Numerical problems and solutions	PPT 5			13-04-2020
Quiz			https://drive.google.com/drive/folders/0B2iQyWujygWFfnctQ3RuWkIibk9wZndINk05MI9sRVZC eWNRlThrVlpPRFIVc2tjdzF nVH M	14-04-2020
Refrigeration Cycles: Vapour compression refrigeration system; description, analysis,	PPT 1	https://youtu.be/o4JI7xS_EQs	https://drive.google.com/drive/folders/0B2iQyWujygWFfkjvMzRJWUpCQIB3QkZVVXh1Y3c5NW 1BZUJ0dTNuMmU3TkpaVE Y2d WICS2M	15-04-2020
refrigerating effect.Capacity, power required units of refrigeration, COP	PP T 1	https://youtu.be/o4JI7xS_EQs		16-04-2020
Refrigerants and their desirable properties, alternate	PP T 1	https://youtu.be/o4JI7xS_EQs		17-04-2020

Refrigerants				
Air cycle refrigeration; reversed Carnot cycle, reversed Brayton cycle	PPT 2		https://drive.google.com/drive/folders/0B2iQyWujygWFfkjvMzRJWUpCQIB3QkZVVXh1Y3c5NW1BZUJ0dTNuMmU3TkpaVEY2dWICS2M	20-04-2020
Assignmnet 1	PPT 3		https://drive.google.com/drive/folders/0B2iQyWujygWFfkjvMzRJWUpCQIB3QkZVVXh1Y3c5NW1BZUJ0dTNuMmU3TkpaVEY2dWICS2M	21-04-2020
Numerical problems	PPT 4			22-04-2020
Numerical problems	PPT 4			23-04-2020
vapour absorption refrigeration system.	PPT 4		https://drive.google.com/drive/folders/0B2iQyWujygWFMWloNExnQjBOaUk	24-04-2020
Numerical problems and solutions	PPT 5			27-04-2020
Numerical problems and solutions	PPT 5			28-04-2020
Psychrometrics and Air-conditioning Systems: Introduction	PPT 1		https://drive.google.com/drive/folders/0B2iQyWujygWFMWloNExnQjBOaUk	30-04-2020
Psychometric properties of Air	PPT 1		https://drive.google.com/drive/folders/0B2iQyWujygWFfkjvMzRJWUpCQIB3QkZVVXh1Y3c5NW	01-05-2020

			1BZUJ0dTNuMmU3TkpaVE Y2d WICS2M	
Psychometric Chart	PPT 1	https://youtu.be/R_eM4JovdqM	https://drive.google.com/drive/folders/0B2iQyWujygWFfkjvMzRjWUpCQIB3QkZVVXh1Y3c5NW1BZUJ0dTNuMmU3TkpaVEY2dWICS2M	02-05-2020
Assignment 4.3	PPT 1		https://drive.google.com/drive/folders/0B2iQyWujygWFfkjvMzRjWUpCQIB3QkZVVXh1Y3c5NW1BZUJ0dTNuMmU3TkpaVEY2dWICS2M	03-05-2020
Analyzing Air-conditioning Processes; Heating, Cooling,			https://drive.google.com/drive/folders/0B2iQyWujygWFfkjvMzRjWUpCQIB3QkZVVXh1Y3c5NW1BZUJ0dTNuMmU3TkpaVEY2dWICS2M	04-05-2020
Dehumidification and Humidification	PPT 2		https://drive.google.com/drive/folders/0B2iQyWujygWFfkjvMzRjWUpCQIB3QkZVVXh1Y3c5NW1BZUJ0dTNuMmU3TkpaVEY2dWICS2M	05-05-2020
Adiabatic mixing of two moist air streams	PPT 2			06-05-2020
Evaporative Cooling	PPT 2			07-05-2020
Cooling towers.	PPT 3			08-05-2020
Quiz 3	PPT 3			09-05-2020
Reciprocating Compressors: Operation of a single stage reciprocating compressors.	PPT 1	http://www.youtube.com/watch?v=E6_jw841vKE		12-05-2020
Work input through p-v diagram and steady state	PPT 1			13-05-2020

Module 5

steady flow analysis.				
Effect of Clearance and Volumetric efficiency	PPT 1	http://www.youtube.com/watch?v=ITCu7gNMicc		14-05-2020
Adiabatic, Isothermal and Mechanical efficiencies.	PPT 2			15-05-2020
Multi-stage compressor, saving in work, Optimum intermediate pressure	PPT 2	http://www.brighthubengineering.com/hvac/51688-principle-of-working-of-refrigeration-reciprocating-compressors/		16-05-2020
Inter-cooling, Minimum work for compression.	PPT 2	http://www.videoevo.com/video.php?i=NEdWOFa2cWuRpbmpOaEE&final-pressor-animation		17-05-2020
Steam nozzles: Flow of steam through nozzles, Shape of nozzles,	PPT 3	https://www.youtube.com/watch?v=AXcb3TBLETY	http://www.sathyabamauniversity.ac.in/uploads/notes/note_1455804851.pdf	18-05-2020
effect of friction, Critical pressure ratio,	PPT 3	https://www.youtube.com/watch?v=9FyJnJ-_0Bc		19-05-2020
Supersaturated flow.	PPT 3			20-05-2020

Module	Date & Duration	Topics [1 Hr Each]	PPT	Video Links	E-Materials	Old QP & Link
18 M AT 41 .3	26 /3 /2 02 0	prob abilit y densi ty funct ion		https://drive.google.com/open?id=1kfICUXc0wZrdZFAEyOCKH7DicN1vFHH1	https://drive.google.com/open?id=1M0aHzVtfUiHzFd6iN38yQ3Kx6LBC8ISR	
	27 3/ 20 20	bino mial distri butio n		https://drive.google.com/open?id=1kfICUXc0wZrdZFAEyOCKH7DicN1vFHH1	https://drive.google.com/open?id=11BNGzX9COlgob4hG8gV7z49w5Nlr0dct	
	28 /0 3/ 20 20	Probl ems on bino mial distri butio n		https://drive.google.com/open?id=1kfICUXc0wZrdZFAEyOCKH7DicN1vFHH1	https://drive.google.com/open?id=11BNGzX9COlgob4hG8gV7z49w5Nlr0dct	
	30 /0 3/ 20 20	poiss on distri butio n		https://drive.google.com/open?id=1kfICUXc0wZrdZFAEyOCKH7DicN1vFHH1	https://drive.google.com/open?id=1FQ0RkK8ZyrlOpvjeSExjtGM6S6aVPzit	
	31 /0 3/ 20 20	PRO BLE MS ON POIS			https://drive.google.com/open?id=1FQ0RkK8ZyrlOpvjeSExjtGM6S6aVPzit	

		SON DIST RIBU TION				
	01 /0 4/ 20 20	----- --	---	----	-----	
	02 /0 4/ 20 20	EXP ONE NTIA L DIST RIBU TION		https://www.youtube.com/watch?v=aBQDMYN1mLw&list=PLMLsjhQWWlUqogTHxVTXwY-pjyo7jDGih&index=23	https://drive.google.com/open?id=1hUIBJL7Og5pJzJGjF7w8_Zas0NYweoG1	
	03 /0 4/ 20 20	Probl ems on expo nenti al distri butio n		https://drive.google.com/open?id=1z8C_AhBS17DUACPcATq0g8vC1zFfChYM	https://drive.google.com/open?id=1jgbAdvEaeBdm1lkhK_qcqbmo8kxJFDru	
	04 /0 4/ 20 20	NOR MAL DIST RIBU TION		https://drive.google.com/open?id=1KRFXc8BpOV2HY-i1bxVxicjNsXulcjYg	https://drive.google.com/open?id=1OYhUB1ZSJolK3tlovgWVaShl_U_vMpnZ	
	07 /0 4/ 20 20	Probl ems on nor mal distri butio n		https://drive.google.com/open?id=1KRFXc8BpOV2HY-i1bxVxicjNsXulcjYg	https://drive.google.com/open?id=1jgbAdvEaeBdm1lkhK_qcqbmo8kxJFDru	
18 M AT 41 .4	8/ 4/ 20 20	CUR VE FITTI NG		https://drive.google.com/open?id=1iKw5Z8iNvrR5D1vc0uFfETkhrYQnPTq	https://drive.google.com/open?id=1mLQNouWmo2NkBbZWoiXSiWieliQJYSRI	

09 /0 4/ 20 20	problems on curve fitting		https://drive.google.com/open?id=1iKw5Z8iNvrR5D1vc0uFfETkhrYQnPTq	https://drive.google.com/open?id=1mLQNouWmo2NkBbZWoiXSiWieliQJYSRi
13 /4 /2 02 0	CURVE FITTING OF THE TYPE $Y=AX^B$		https://drive.google.com/open?id=1iKw5Z8iNvrR5D1vc0uFfETkhrYQnPTq	https://drive.google.com/open?id=1kxMq8RAuZjYWzd6JDOVNseOufIhxCCR9
15 /0 4/ 20 20	problems on curve fitting of the type $y=ax^b$		https://drive.google.com/open?id=1iKw5Z8iNvrR5D1vc0uFfETkhrYQnPTq	https://drive.google.com/open?id=1kxMq8RAuZjYWzd6JDOVNseOufIhxCCR9
16 /0 4/ 20 20	RANK OF CORRELATION		https://drive.google.com/open?id=1JyFR1Ahis3Dmzu1k8eJllh6kmQvuBVP0	https://drive.google.com/open?id=1ECWhuCHgCaKNB1YIMc4INN58iN-3CS9u
17 /0 4/ 20 20	REGRESSION ANALYSIS	https://drive.google.com/open?id=1qHjeboqFW7EK_4sugv7LtteWuWXQVCqJ	https://drive.google.com/open?id=1JyFR1Ahis3Dmzu1k8eJllh6kmQvuBVP0	https://drive.google.com/open?id=1AHRDxRjLXovyrMwq7l6MnkgH9tvmz6Ce
20 /0 4/ 20 20	Problems on Rank of		https://drive.google.com/open?id=1JyFR1Ahis3Dmzu1k8eJllh6kmQvuBVP0	https://drive.google.com/open?id=11BjqCNGcOYRvufqxC7sePQ4pyTdPkbmr

		Correlation			
	21/04/2020	Problems on regression analysis		https://drive.google.com/open?id=1JyFR1Ahis3Dmzu1k8eJllh6kmQvuBVP0	https://drive.google.com/open?id=11BJqCNGcOYRvufqx7sePQ4pyTdPkbmr
18m at 41.5	22/04/2020	Joint probability distribution of two discrete variable, expectation and covariance		https://drive.google.com/open?id=1SoMykEFkaEHQfGO81wRFw9olfLhTev1l	https://drive.google.com/open?id=15nPFS6zyM7uh24Rq-YWXIC2cMWO69O!
	23/04/2020	Joint probability distribution of two discrete variable, expectation		https://drive.google.com/open?id=1SoMykEFkaEHQfGO81wRFw9olfLhTev1l	https://drive.google.com/open?id=15nPFS6zyM7uh24Rq-YWXIC2cMWO69O!

	n and cova rianc e			
24 /0 4/ 20 20	Intro ducti on to sam pling distri butio n		https://drive.google.com/open?id=1yt19bBvalS6hkd-JvrORI4PA3mzeE5S	https://drive.google.com/open?id=1cMX4rwoWIZeLdCwyGoLKHP Ea1BVRcnci
27 /0 4/ 20 20	stand error s :Typ e I ,Typ e II, Type III error s		https://drive.google.com/open?id=1yt19bBvalS6hkd-JvrORI4PA3mzeE5S	https://drive.google.com/open?id=1cMX4rwoWIZeLdCwyGoLKHP Ea1BVRcnci
28 /0 4/ 20 20	stand error s :Typ e I ,Typ e II, Type III error s		https://drive.google.com/open?id=1yt19bBvalS6hkd-JvrORI4PA3mzeE5S	https://drive.google.com/open?id=1cMX4rwoWIZeLdCwyGoLKHP Ea1BVRcnci
29 /0 4/ 20 20	Hypo thesi s testi ng of a sam		https://drive.google.com/open?id=1yt19bBvalS6hkd-JvrORI4PA3mzeE5S	https://drive.google.com/open?id=18BYIjoMOH_n3Jdfoh1eWFpXo0iZFka11

	pling distri butio n for singl e mea n			
04 /0 5/ 20 20	Probl ems on Hypo thesi s testi ng of a sam pling distri butio n for singl e mea n		https://drive.google.com/open?id=1yt19bBvalS6hkd-JvrORI4PA3mzeE5S_	https://drive.google.com/open?id=18BYljoMOH_n3Jdfoh1eWFpXo0iZFka11
05 /0 5/ 20 20	stud ent's t- distri butio n		https://drive.google.com/open?id=1LAmJpyJmRUYcTeU_1J2bnRidxeZeklwh	https://drive.google.com/open?id=1YoEYkNgbcn7ZAiwSvYLTDGSIzzEgg6e
06 /0 5/ 20 20	Probl ems on stude nt's t- distri butio n		https://drive.google.com/open?id=1LAmJpyJmRUYcTeU_1J2bnRidxeZeklwh	https://drive.google.com/open?id=1YoEYkNgbcn7ZAiwSvYLTDGSIzzEgg6e
07 /0 5/	Probl ems on		https://drive.google.com/open?id=1LAmJpyJmRUYcTeU_1J2bnRidxeZ	https://drive.google.com/open?id=18BYljoMOH_n3Jdfoh1eWFpXo0iZFka11

20 20	stud ent's t- distri butio n		eklwh		
08 /0 5/ 20 20	Chi- squa re distri butio n as a test of good ness of fit		https://drive.google.com/open?id=1TbS6OdC0WBR0rVKkrLn9-a64FVKeXdDZ	https://drive.google.com/open?id=1IHEksi1sDvwf5T928DnUlc6aGlvrxUiy	
11 /5 /2 02 0	Chi- squa re distri butio n as a test of good ness of fit		https://drive.google.com/open?id=1TbS6OdC0WBR0rVKkrLn9-a64FVKeXdDZ	https://drive.google.com/open?id=1IHEksi1sDvwf5T928DnUlc6aGlvrxUiy	
12 /5 /2 02 0	probl ems onChi- squa re distri butio n as a test of good		https://drive.google.com/open?id=1TbS6OdC0WBR0rVKkrLn9-a64FVKeXdDZ	https://drive.google.com/open?id=1IHEksi1sDvwf5T928DnUlc6aGlvrxUiy	

		ness of fit				
13	/5	/2	02	0	REVI SION ON MOD ULE 1	https://drive.google.com/open?id=0BxCysTrmSoKyfllTnJmVHpDeEJzak9oenIPWG1MbWlxbmhDTGZkMGISb1Nhd3pvb215cEU
14	5/	20	20	20	REVI SION ON MOD ULE 1	https://drive.google.com/open?id=0BxCysTrmSoKyfllTnJmVHpDeEJzak9oenIPWG1MbWlxbmhDTGZkMGISb1Nhd3pvb215cEU
16	/5	/2	02	0	REVI SION ON MOD ULE 1	https://drive.google.com/open?id=0BxCysTrmSoKyfllTnJmVHpDeEJzak9oenIPWG1MbWlxbmhDTGZkMGISb1Nhd3pvb215cEU
18	/5	/2	02	0	REVI SION ON MOD ULE 3	https://drive.google.com/open?id=1jqYHEhI6A7XEr0w_Vh1R6ty_mn7p_Pya
19	/5	/2	02	0	REVI SION ON MOD ULE 3	https://drive.google.com/open?id=1jqYHEhI6A7XEr0w_Vh1R6ty_mn7p_Pya
20	/5	/2	02	0	REVI SION ON MOD ULE 3	https://drive.google.com/open?id=1jqYHEhI6A7XEr0w_Vh1R6ty_mn7p_Pya

Mod ules	Topics	PPT	Video Links	E- Mate rials	Date
Mod ule 3 : Flui d Dy n amic s	Introduction. Forces acting on fluid in motion. Euler's Equation of motion along a streamline.	Refer PPT attac hed in Goog le Class room	https://youtu.be/2g5g6YneM9U https://youtu.be/oK8UxWI-85Y	Refer E- textb ook attac hed in Goog le Class room	25th March 2020
	Integration of Euler's Equation to obtain Bernoulli's equation.		https://youtu.be/9l4o3-vrm98		26th March 2020
	Assumptions and limitation of Bernoulli's equation.		https://youtu.be/qie6UCJqM_Q https://youtu.be/UJ3-Zm1wbIQ		27th March 2020
	Introduction to Navier - stokes equation. Application of Bernoulli's theorem such as venturimeter, orifice meter, rectangular & triangular notch, pitot tube,		https://youtu.be/NjoMoH51UZc		28th March 2020
	Numericals		https://youtu.be/bC8v6hIXnSk https://youtu.be/U33VVUcu81c		30th March 2020
					31st March 2020
					01st April 2020

			https://youtu.be/L3226qMaSkM https://youtu.be/-EQSu8XzPI4		2nd April 2020
	Numericals		https://youtu.be/X_TLcZK7GR M https://youtu.be/MQWeSgTmR qA <i>Exercise the problems given in E-textbook attached in Google Classroom</i>		3rd April 2020 4th April 2020
Module 2:	Boyancy & Centre of Boyancy	Shar ed in Google class room	Self made https://www.youtube.com/watch?v=MkkIBJ45Z1 Q	Text book attached in google class room	5th April 2020
	Meta centre, Metacentric height	Shar ed in Google class room	Self made https://www.youtube.com/watch?v=QUgXf2Rj2Y Q	Text book attached in google class room	5th April 2020
	Metacentric height application	Shar ed in Google class room	Self made https://www.youtube.com/watch?v=AvrHKPqL6Jk &pbjreload=10	Text book attached in google class room	6th April 2020
	Fluid Kinematics:	Shar ed in Google class room	https://www.youtube.com/watch?v=BujgCq7i_r8 &pbjreload=10	Text book attached in google class	6th April 2020

				room	
velocity & acceleration of fluid particles	Shared in Google classroom	https://www.youtube.com/watch?v=nFZ-HsMTTJ8		Text book attached in google classroom	7th April 2020
types of fluid flow	Shared in Google classroom	https://www.youtube.com/watch?v=JrjTRKBtYgw&pbjreload=10		Text book attached in google classroom	7th April 2020
continuity equation in 3 dimension form	Shared in Google classroom	https://www.youtube.com/watch?v=jn_g6cW9r0 w		Text book attached in google classroom	8th April 2020
Rotational & Irrorational Flow	Shared in Google classroom	https://www.youtube.com/watch?v=xptH0qSCDR8		Text book attached in google classroom	8th April 2020
Laplace equation	Shared in Google classroom	https://www.youtube.com/watch?v=-D4GDdxJrpg		Text book attached in google classroom	9th April 2020

	Stream function	Shar ed in Google class room	https://www.youtube.com/watch?v=doJRUy7TK7 Q&t=34s	Text book attached in google class room	9th April 2020
	Stream function continued....	Shar ed in Google class room	https://www.youtube.com/watch?v=4qppw7dO7 kM	Text book attached in google class room	10th April 2020
	Equipotential line	Shar ed in Google class room	https://www.youtube.com/watch?v=N-p7PwSqpAU	Text book attached in google class room	10th April 2020
	flow net in fluid mechanics	Shar ed in Google class room	https://www.youtube.com/watch?v=kDO3EcXblw g	Text book attached in google class room	11th April 2020
	Fluid kinematics Numericals	Shar ed in Google class room	https://www.youtube.com/watch?v=w2OQF8II-ng	Text book attached in google class room	11-14th April 2020
Mod	Dimensional	Shar	https://www.youtube.com/watch?v=j	Text	15th April

ule 4	analysis	ed in Google class room	mJWdhrVnds	book attached in google class room	2020
	Dimensional analysis continued..	Shar ed in Google class room	https://www.youtube.com/watch?v=OdlY3RLw24&t=322s	Text book attached in google class room	15th April 2020
	Rayleigh's method	Shar ed in Google class room	https://www.youtube.com/watch?v=6iqme-HilyM	Text book attached in google class room	16th April 2020
	Buckingham 's Pi theorem	Shar ed in Google class room	https://www.youtube.com/watch?v=6VeCQeb7TZk	Text book attached in google class room	17th April 2020
	Dimensionless Numbers,	Shar ed in Google class room	https://www.youtube.com/watch?v=UrkZ9BLDtDU&list=PLpkxWdKlr-Nja7fPGpcRW5lb_5INciJrU&index=4	Text book attached in google class room	18th April 2020
	Dimensionless Numbers	Shar ed in	https://www.youtube.com/watch?v=6M-5yggk59U&list=PLpkxWdKlr-	Text book	18th April 2020

	(Numerical)	Goog le class room	Nja7fPGpcRW5lb_5INciJrU&index=5	attac hed in goog le class room	
	Dimensionless Numbers (Numerical)	Shar ed in Goog le class room	https://www.youtube.com/watch?v=fwEYvLt95Yo&list=PLpkxWdKlr-Nja7fPGpcRW5lb_5INciJrU&index=6	class room	20th April 2020
	Buckingham ' s Pi theorem(Nume rical)	Shar ed in Goog le class room	https://www.youtube.com/watch?v=selqur9cBbc	Text book attac hed in goog le class room	21 st April 2020
Modu le 5	Compressible Flows: Introduction	Shar ed in Goog le grou ps	https://www.youtube.com/watch?v=KN3ALHRMxDs&list=PLwso92X2xJyF015Y5-vWDlr8y5WHKvvAG	Text book attac hed in goog le class room	22-Apr-20
	Stagnation temperature	Shar ed in Goog le grou ps	https://www.youtube.com/watch?v=W65nP9YmbA&list=PLwso92X2xJyF015Y5-vWDlr8y5WHKvvAG&index=2	Text book attac hed in goog le class room	22-Apr-20
	Thermodynamic relations of perfect gases	Shar ed in Goog le grou ps	https://www.youtube.com/watch?v=ewoUwCVa3QY	Text book attac hed in goog le	23-Apr-20

			class room	
Internal energy and enthalpy	Shared in Google groups	Self made https://www.youtube.com/watch?v=ewoUwCVa3QY	Text book attached in google class room	23-Apr-20
Speed of sound	Shared in Google groups	https://www.youtube.com/watch?v=ewoUwCVa3QY	Text book attached in google class room	24-Apr-20
Pressure field due to a moving source	Shared in Google groups	https://www.youtube.com/watch?v=ewoUwCVa3 QY	Text book attached in google class room	24-Apr-20
Basic Equations for one-dimensional flow,	Shared in Google groups	https://www.youtube.com/watch?v=ewoUwCVa3 QY	Text book attached in google class room	25-Apr-20
Stagnation and sonic properties	Shared in Google groups	https://www.youtube.com/watch?v=ewoUwCVa3 QY	Text book attached in google	25-Apr-20

			class room	
Normal and oblique shocks	Shared in Google groups	https://www.youtube.com/watch?v=ewoUwCVa3 QY	Text book attached in google class room	27-Apr-20
Introduction to CFD	Shared in Google groups	https://www.youtube.com/watch?v=kwqoyuZTgl Q&list=PL8EAF844326CB B2E3	Text book attached in google class room	27-Apr-20
Necessity, limitations,	Shared in Google groups	https://www.youtube.com/watch?v=kwqoyuZTgl Q&list=PL8EAF844326CB B2E3	Text book attached in google class room	28-Apr-20
philosophy behind CFD	Shared in Google groups	https://www.youtube.com/watch?v=kwqoyuZTgl Q&list=PL8EAF844326CB B2E3	Text book attached in google class room	28-Apr-20
CFD Application	Shared in Google	https://www.youtube.com/watch?v=kwqoyuZTgl Q&list=PL8EAF844326CB	Text book attached	29-Apr-20

		groups		in google classroom	
			B2E3		
Revision	Revision on Fluid Kinematics	Shared in Google groups	https://youtu.be/dYqHdl70X8s	Text book attached in google classroom	30th Apr-20
		Shared in Google groups	https://youtu.be/iNkIOgi7RZw		02nd & 05th May-20
		Shared in Google groups	https://youtu.be/6MKg5SgWVys		06th & 08th May-20
		Shared in Google groups	https://youtu.be/6WnUas7IYss		09th & 12th May-20
		Shared in Google groups	https://youtu.be/o-u46qYpQD4		13th & 14th May-20
		Shared in Google groups	https://youtu.be/h28SeKO9bHE		15th & 18th May-20
	Revision on Fluid dynamics	Shared in Google groups	https://youtu.be/h28SeKO9bHE		

	le grou ps		
	Shar ed in Goog le grou ps	https://youtu.be/0GU7XQj3m3w	19th & 20th May- 20

Modules	Topics	PPT	Video Links	Materials	Date
Module 2 : MELTING & METAL MOLD CASTING METHODS	Melting furnaces: Classification of furnaces, Gas fired pit furnace [Lecture 1]	Attach ed to google class room	https://www.youtube.com/watch?v=GUctNyh1FR0	Attache d To google classro om	26 th Ma rch , 20 20
	Coreless induction Furnace				27 th Ma rch , 20 20
	Resistance furnace,				28 th Ma rch , 20 20
	Electric arc furnace				29 th Ma rch , 20 20
	Constructional features & working principle of cupola furnace.				30 th Ma rch , 20 20
	Casting using metal moulds: Gravity die casting		https://www.youtube.com/watch?v=P1G2EwbRnw0		1 st Apr il, 20 20
	Pressure die casting				
	Centrifugal casting		https://www.youtube.com/watch?v=U81LJAdzFsY		2 nd Apr il, 20 20
	slush casting		https://www.youtube.com/watch?v=ZSie37pNgak		3 rd Apr il, 20 20

	Thixocasting		https://www.youtube.com/watch?v=8X8v-aisiXI	4 th Apr il, 20 20	
	Continuous casting processes.		https://www.youtube.com/watch?v=6WIABd84404	6 th Apr il, 20 20	
Module 3 :	Definition, nucleation, solidification variables. Directional solidification-need and methods.		https://www.youtube.com/watch?v=8pGj_ETreqM	7 th Apr il, 20 20	
SOLIDIFICATION &NON-FERROUS FOUNDRY PRACTICE	Degasification in liquid metals-sources of gas, degasification methods.		https://www.youtube.com/watch?v=8pGj_ETreqM	8 th Apr il, 20 20	
	Fettling and cleaning of castings: Basic steps involved		https://www.youtube.com/watch?v=8pGj_ETreqM	9 th Apr il, 20 20	
	Sand Casting defects-causes, features and remedies.		https://www.youtube.com/watch?v=8pGj_ETreqM	10 th Apr il, 20 20	
	Advantages & limitations of casting process	Attach ed to google class room	https://www.youtube.com/watch?v=6miWge381x4	11 th Apr il, 20 20	
	Nonferrous foundry practice: Aluminium castings - advantages, limitations		https://www.youtube.com/watch?v=6miWge381x4	13 th Apr il, 20 20	
	melting of Aluminium using liftout type crucible furnace		https://www.youtube.com/watch?v=6miWge381x4	14 th Apr il, 20 20	
	Hardeners used, drossing, gas absorption, fluxing and flushing, grain refining, pouring temperature		https://www.youtube.com/watch?v=6miWge381x4		
	Stir casting set up, procedure, uses, advantages and limitations.				

	Definition, Principles, classification, application, advantages & limitations of welding		https://www.youtube.com/watch?v=NPi9L2fl4EI		16 th April, 2020		
Module-4							
Welding process, Special type of welding	Arc welding: Principle, Metal arc welding (MAW)	Attached to google class room	https://www.youtube.com/watch?v=16bMTnBMgAk	Attached to google class room	17 th April, 2020		
	Flux Shielded Metal Arc Welding (FSMAW)		https://www.youtube.com/watch?v=fk1zHMh3yj0		21 st April, 2020		
	Inert Gas Welding (TIG & MIG)		https://www.youtube.com/watch?v=W5rAK5IUusz		22 nd April, 2020		
	Submerged Arc Welding (SAW) Atomic Hydrogen Welding (AHW)		https://www.youtube.com/watch?v=j_A1eYxOG0I		23 rd April, 2020		
	Resistance welding principles, Seam welding		https://www.youtube.com/watch?v=PbEyH90Dp3Y		24 th April, 2020		
	Butt welding, Spot welding		https://www.youtube.com/watch?v=iiUIR2-Uy6Y		27 th April, 2020		
	Projection welding. Friction welding		https://www.youtube.com/watch?v=ZN4qzIWIVRk		28 th April, 2020		
	Explosive welding, Thermit welding		https://www.youtube.com/watch?v=Op68bH0bi6I		29 th April, 2020		
			https://www.youtube.com/watch?v=pcF7i297aZE				
			https://www.youtube.com/watch?v=ykf2Zckqcl4				

			https://www.youtube.com/watch?v=FQPFSURUqLs		April, 2020
	Laser welding and Electron beam welding.		https://www.youtube.com/watch?v=Xv55EYGIUn4		30 th April, 2020
			https://www.youtube.com/watch?v=Fr0oFSX8Uwg		
Module-5 METALLURGICAL ASPECTS IN WELDING, SOLDERING, AND BRAZING	Structure of welds, Formation of different zones during welding,	Attached to google class room	https://www.youtube.com/watch?v=mkT_2XSaE-s&list=PLLy_2iUCG87DMpCKrUQxEi4he6NwDYM SN&index=2	Attached to google class room	4 th May 2020
	Heat Affected Zone (HAZ), Parameters affecting HAZ		https://www.youtube.com/watch?v=w19GgZwk3XY		5 th May 2020
	Effect of carbon content on structure and properties of steel, Shrinkage in welds & Residual Stresses		https://www.youtube.com/watch?v=mkT_2XSaE-s&list=PLLy_2iUCG87DMpCKrUQxEi4he6NwDYM SN&index=2		6 th May 2020
	Concept of electrodes, filler rod and fluxes. Welding defects- detection, causes & remedy		https://www.youtube.com/watch?v=mkT_2XSaE-s&list=PLLy_2iUCG87DMpCKrUQxEi4he6NwDYM SN&index=2		7 th May 2020
	Soldering, Brazing,		https://www.youtube.com/watch?v=bziWwcjllx4		11 th May 2020
	Gas Welding: Principle,		https://www.youtube.com/watch?v=uxvTI0UyUsQ		12 th May 2020
	oxy-Acetylene welding, oxyhydrogen welding		https://www.youtube.com/watch?v=uxvTI0UyUsQ		13 th May 2020

			20
air-acetylene welding, Gas cutting, powder cutting	https://www.youtube.com/watch?v=uxvTI0UyUsQ		14th May 2020
Methods used for inspection of casting and welding. Visual, magnetic particle	https://www.youtube.com/watch?v=1L4BSJJuvM		18th May 2020
fluorescent particle, ultrasonic. Radiography, eddy current, holography methods of inspection	https://www.youtube.com/watch?v=1L4BSJJuvM		19th May 2020

Materials	Topic	PPT	E- materials/ Video Links	Date
Module 5	Gear terminology, law of gearing, path of contact, arc of contact, contact ratio of spur gear.		PDF copy of Kurhmi text book on Theory of machines and some e materials on kinematics of machines Attached to Google Classroom(fo6ifxk) and also Scanned copies of JBK Das text book uploaded on daily basis	26/03/2020
Spur Gears and Gear Trains	Interference in involute gears, methods of avoiding interference, condition and expressions for minimum number of teeth to avoid interference.	Attached to Google Classroom(fo6ifxk)	https://drive.google.com/file/d/0B-T3d5xNT5cxZVplUUhZek9jRjA/view	27/03/2020
			https://www.youtube.com/watch?v=6IK3fORU-_c	
	Numericals on Gears			
	Gear Trains: Simple gear trains, compound gear trains. Epicyclic gear		https://www.youtube.com/watch?v=-90yBWxE7NQ https://learnmechanical.com/gear-trains/	30/03/2020

	trains:			
	Algebraic and tabular methods of finding velocity ratio of epicyclic gear trains, torque calculation in epicyclic gear trains.		Scanned copy of JBK Das text book	31/03/2020
	Numericals on Gear Trains		https://www.youtube.com/watch?v=mmKeXTOCCTY https://www.youtube.com/watch?v=yuWn3XiZh88	04-01-2020
	Numericals on Gear Trains		https://www.youtube.com/watch?v=mmKeXTOCCTY https://www.youtube.com/watch?v=yuWn3XiZh88	04-02-2020
Module 1	Mechanisms: Definitions: Link, types of links, joint, types of joints kinematic pairs, Constrained motion, kinematic chain	Attached to Google Classroom(fo6ifxk)	Attached to Google Classroom(fo6ifxk)	04-03-2020
Mechanisms	Mechanisms and types, degrees of		https://drive.google.com/file/d/0B-T3d5xNT5cxZVplUUhZek9jRjA/view	04-04-2020

<p>freedom, of planar mechanisms, Equivalent mechanisms,</p>		
<p>Groshoff's criteria and types of four bar mechanisms, inversion s of four bar chain, slider crank chain, Double slider crank chain and its inversion s</p>	<p>https://www.youtube.com/watch?v=D_PgCZR3YTY https://www.youtube.com/watch?v=3ogbAudtngs https://www.youtube.com/watch?v=miwHRgHQZDg</p>	<p>04-06-2020</p>
<p>Mechanisms: Quick return motion mechanisms-Drag link mechanism, Whitworth mechanism and Crank and slotted lever</p>	<p>https://www.youtube.com/watch?v=oZiHidL8s-A https://www.youtube.com/watch?v=HmBBHZN2gzk https://www.youtube.com/watch?v=AGn6pPgkZUk</p>	<p>04-07-2020</p>

Mechanism.		
Straight line motion mechanisms, Peaucelli's mechanism and Robert's mechanism	https://www.youtube.com/watch?v=5y0rcmESxcY https://www.youtube.com/watch?v=2xwN9XZVInk https://www.youtube.com/watch?v=IKnnAwJnML0	04-08-2020
Intermittent Motion mechanisms: Geneva wheel mechanism, Ratchet and Pawl mechanism,	https://www.youtube.com/watch?v=v2bKGXH9oys https://www.youtube.com/watch?v=zv5lymLSAgw https://www.youtube.com/watch?v=EpVPG2fZrHE https://www.youtube.com/watch?v=l4CXz2UywVQ	04-09-2020
Toggle mechanism, pantograph	https://www.youtube.com/watch?v=Lx1-qOKCEZI https://www.youtube.com/watch?v=UpK7hkth-n0	04-10-2020
Condition for correct steering, Ackerman steering gear mechanism.	https://www.youtube.com/watch?v=i6uBwudwA5o https://www.youtube.com/watch?v=dv18Dadct8o https://www.youtube.com/watch?v=YjMEPJgzUcI https://www.youtube.com/watch?v=V1JGGEyR9gA	04-11-2020
Numericals on Degrees of freedom	Scanned copy of JBK das text book on DOF	13/04/2020

	Freedom			
	Numericals on Degrees of Freedom		Scanned copy of JBK das text book on DOF	15/0 4/20 20
	Numericals on Degrees of Freedom		https://www.youtube.com/watch?v=TB-GNM_B_ww https://www.youtube.com/watch?v=2eIPbGxTYVY https://www.youtube.com/watch?v=v0nEgajldDs	16/0 4/20 20
Module 2	Velocity and acceleration analysis of four bar mechanism		https://www.youtube.com/watch?v=feAMEsyjptc https://www.youtube.com/watch?v=crc_htkBzCY	17/0 4/20 20
Velocity and Acceleration Analysis by Graphical Method	Velocity and acceleration analysis of four bar mechanism	https://slideplayer.com/slide/14146861/ Scanned copy of JBK Das text book	https://www.youtube.com/watch?v=0uQAPnaW5D4&list=PLWPirh4EWFpEECWjyAysIZ6WIkWHUy72R	18/0 4/20 20
	Velocity and acceleration analysis of four bar mechanism		https://www.youtube.com/watch?v=fNu9QQftuTY&list=PLWPirh4EWFpEECWjyAysIZ6WIkWHUy72R&index=18 https://www.youtube.com/watch?v=o8J9t7uERYg	20/0 4/20 20
	Velocity and acceleration analysis of slider crank mechanism		https://www.youtube.com/watch?v=o4D1Lw3igMs https://www.youtube.com/watch?v=KZWhaasFVfU	21/0 4/20 20

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Velocity and acceleration analysis of slider crank mechanism	https://www.youtube.com/watch?v=-Malv17LXso	22/0 4/20 20
Velocity and acceleration analysis of slider crank mechanism	https://www.youtube.com/watch?v=Q1tDuKHE8IA	23/0 4/20 20
Mechanism illustrating Corioli's component of acceleration	https://www.youtube.com/watch?v=YUDn8Ay4uSI&list=PLWPirh4EWFpEECWjyAysIZ6WIkWUy72R&index=19 https://www.youtube.com/watch?v=AFCr8SrwH04	24/0 4/20 20
Angular velocity and angular acceleration of links	https://www.youtube.com/watch?v=UawvFB92iZE https://www.youtube.com/watch?v=tbHWZN5QA1Y https://www.youtube.com/watch?v=OtrT4a_XgGI	25/0 4/20 20
velocity of rubbing	https://www.youtube.com/watch?v=0vdIyhA-p08 https://www.youtube.com/watch?v=GWHKPxS7SR4	27/0 4/20 20
velocity of rubbing	https://www.youtube.com/watch?v=0QHeoJ4W_wQ	28/0 4/20 20

	Velocity Analysis by Instantaneous Center Method: Definition, Kennedy's theorem	https://www.youtube.com/watch?v=heD1hCfEiBI&list=PLWPirh4EWFpEECWjyAysIZ6WIkWUy72R&index=13 https://www.youtube.com/watch?v=YW_asjM_Qro&list=PLWPirh4EWFpEECWjyAysIZ6WIkWUy72R&index=14	29/0 4/20 20
	Determination of linear and angular velocity using instantaneous center method.	https://www.youtube.com/watch?v=CvRecHOF7-o&list=PLWPirh4EWFpEECWjyAysIZ6WIkWUy72R&index=12	30/0 4/20 20
Module 3	Velocity and Acceleration analysis of four bar mechanism by using complex Algebra	https://www.youtube.com/watch?v=OY1IZOiTP6g	31/0 4/20 20
Velocity and Acceleration Analysis by Analytical Method	Velocity and Acceleration analysis of slider crank mechanism by using complex Algebra	https://www.youtube.com/watch?v=K5YbE3fzLSg	05-03-2020
	Velocity	https://ocw.metu.edu.tr/pluginfile.php/3960/mod_re	05-

and Acceleration analysis of slider crank mechanism by using complex Algebra	source/content/13/ch4/4-2-1.htm	04-2020
Velocity and Acceleration analysis of slider crank mechanism by using complex Algebra	https://www.youtube.com/watch?v=K5YbE3fzLSg	05-05-2020
Velocity and Acceleration analysis of slider crank mechanism by using complex Algebra	https://ocw.metu.edu.tr/pluginfile.php/3960/mod_resource/content/13/ch4/4-2-1.htm	05-06-2020
Freudenstein's equation for four bar mechanism	https://www.youtube.com/watch?v=zKchIPOGllc https://www.youtube.com/watch?v=Vh_OqBfrYRo	05-07-2020
Freudenstein's equation for four	https://www.youtube.com/watch?v=kFWFT2cdQS8 https://www.youtube.com/watch?v=NX5eUWIOhJU	05-08-2020

bar mechanism	https://www.youtube.com/watch?v=V42xZYq68Vg	
Freudenstein's equation for Slider Crank Mechanism	https://www.youtube.com/watch?v=dkBUeD7dLXI	05-09-2020
Freudenstein's equation for Slider Crank Mechanism	https://www.youtube.com/watch?v=kFWFT2cdQS8	05-11-2020
Function Generation of Four bar mechanism	https://www.youtube.com/watch?v=xedaz3NVmpM https://www.youtube.com/watch?v=j_n3h4UHeqE	05-12-2020
Function Generation of Four bar mechanism	https://www.youtube.com/watch?v=D_pTyMR3Dz0 https://www.youtube.com/watch?v=tBLswjJ10qw https://mechanicaldesign101.com/2019/05/11/construction-for-two-position-synthesis-of-a-four-bar-linkage/	13/5/2020
Numericals	VTU question paper with solutions will be uploaded	14/5/2020
Numericals	VTU question paper with solutions will be uploaded	15/5/2020
Unit Test on Module 3		18/05/2020

Materi als	Topic	PPT	E- materials/ Video Links	Date and dura tion	
Modul e 2	Functional requirements, Classification, Mechanical- Johnson Mikrokator, Sigma comparators, Dial indicator.	Attac hed to Goog le Class room	Attached to Google Classroom	26/03 /2020	
Comp arator s	Electrical comparators, LVDT.			http://nptel.vtu.ac.in/econtent/ courses/ME/10ME42B/9.php	27/03 /2020
	Pneumatic comparators- Principle of back pressure, Solex comparators.			http://nptel.vtu.ac.in/econtent/ courses/ME/10ME42B/11.php	28/03 /2020
	Optical comparators- Zeiss ultra optimizer.				30/03 /2020
Modul e 3	Terminology of screw threads, measurement of major diameter, minor diameter and pitch.	Attac hed to Goog le Class room	Notes attached to Google Classroom	04- 01- 2020	
Screw thread and Gear measur ement	Measurement of angle and effective diameter of screw threads by 2-wire and 3- wire methods.			04- 03- 2020	
	Best size wire. Screw thread gauges, Tool maker's microscope.			04- 05- 2020	
	Gear tooth terminology, tooth thickness measurement using constant chord method.			04- 09- 2020	
	Addendum comparator method and base tangent method.			04- 12- 2020	
	Measurement of pitch, concentricity, run out, and involute profile.			15/4/ 2020	
	Gear roll tester for composite error.			18/4/ 2020	
Module 4	Measurement system and basic concepts of measurement methods:	Attac hed to Googl e Classr oom	Notes and PPT attached to Google Classroom	20- 04-20	
	Definition, Significance of measurement, Generalized measurement system.			21- 04-20	
	Static characteristics- Accuracy, Precision, Calibration, Threshold, Sensitivity, Hysteresis, Repeatability, Linearity, Loading effect.			22- 04-20	
	Dynamic characteristics- System response, Time delay. Errors in measurement, Classification of errors.				

	Transducers: Transfer efficiency, Primary and Secondary transducers.			23-04-20
	Electrical transducers, Mechanical transducers.			24-04-20
	Electronic transducers, Relative comparison of each type of transducers.			25-04-20
	Intermediate Modifying and Terminating Devices: Mechanical systems, Inherent problems			27-04-20
	Electrical intermediate modifying devices, Input circuitry, Ballast circuit.			28-04-20
	Electronic amplifiers. Terminating devices, Cathode ray oscilloscope, Oscillographs.			29-04-20
Module 5	Introduction, definition, direct and indirect methods	Attached to Google Classroom	notes and PPT attached to google class room	30-04-20
	Force measuring instruments and Torque Measuring instruments		https://www.youtube.com/watch?v=HQC4bbmlvY	05-02-2020
	Types of dynamometers, absorption dynamometer		https://www.youtube.com/watch?v=50SUtuwfcrl	04-05-20
	Prony brake and rope brake dynamometer, power measuring instruments		https://www.youtube.com/watch?v=uwZGtFRtGoU	05-05-20
	Pressure measurement, principle, use of elastic member		https://www.youtube.com/watch?v=iamxg4Jsimo	06-05-20
	Bridgeman guage, McLeod guage, pirani guage		https://www.youtube.com/watch?v=UTEQ8cKHKJl	07-05-20
	Theory of strain gauges, types, electrical resistance strain guage		https://www.youtube.com/watch?v=4eTDXmFVi80	08-05-20
	Preparation and mounting of strain gauges, guage factor.		https://www.youtube.com/watch?v=o0LLV5GP6Ow	09-05-20
	Wheat stone bridge circuit, orientation strain gauges for force and torque, strain guage based load cells & torque sensors		https://www.youtube.com/watch?v=ZqAM_wQ35ow	11-05-20
				12-05-20
	Revision			13-05-20