

Yenepoya Institute of Technology
Department of Mechanical Engineering

Subject : Elements of Mechanical Engineering - 18ME25
Semester : II (D, E, F Section)

Modules	Topics	Materials	Video Links	Date
Module – 2 : Hydraulic Pumps & Turbines	Hydraulic turbines & Classification of hydraulic turbines		https://youtu.be/YX_hX5zxc0	26-03-2020
	Difference between Impulse & reaction turbine ;Pelton wheel		https://drive.google.com/file/d/1dKpMxKG0XMKWpF5Gwd4uqJPeYhWsntr/view	27-03-2020
	Kaplan Turbine , Francis Turbine		https://drive.google.com/file/d/1SISZ1xf6saqazhSCr7N0lqYz7BkIFbj/view	28-03-2020
			https://drive.google.com/file/d/1hr0o0qns1TGxPl6MDfBdK9qOmaZTCk/view	29-03-2020
	Hydraulic pumps & classification		https://drive.google.com/file/d/1IRINxXzI0orRUR8QwzjzELhTT_NBjVCq/view	31-03-2020
	Specification of pumps ,Reciprocating pump		https://drive.google.com/file/d/1qCRN9cik-czkuOo22RHUKia05ldTKRi/view	01-04-2020
	Centrifugal pumps	https://drive.google.com/file/d/1HXFVAbPfoJFreg_vPIOj85R5OK2oh8B/view	02-04-2020	
Module – 5: Lathe ,Milling Machine ,Introduction to Advanced Manufacturing System	Principle of working of Lathe ,Parts of Lathe ,Types of Lathe	Attached to Google Classroom Code - ri6mo6q -Materials attached (PPT , PDF Notes)	https://youtu.be/NgbB1ldmo4	03-04-2020
	Operations on lathe – Turning ,Taper turning ,Threading ,Drilling ,Specification of Lathe		https://youtu.be/wS_SGKbD51A	
			https://youtu.be/8oGC5NyfA3o?list=PLY-0efwhi1uXwsh5q1W7GoyJnPF9G-9Xi	04-04-2020
	Milling – Principle ,types of milling machine ,Horizontal milling machine		https://youtu.be/GowC2UQPWv8	06-04-2020
	Vertical Milling machine		https://youtu.be/Ja18JMrVTrI	07-04-2020
	Milling Operations – form ,angular ,straddle, end milling ,gang milling etc(Simple Sketches)		https://youtu.be/LDxq9AkcYfk	08-04-2020
	Advanced Manufacturing systems ,CNC – Open & closed loop		https://youtu.be/HveeWxrC0NY	09-04-2020
	CNC Machining Centers		https://youtu.be/i3XWYff0j0w	10-04-2020
	Robots – Links , anatomy ,Configurations		https://youtu.be/mY965o7w	
			https://youtu.be/Fim9o5bH_Cc	11-04-2020
Module – 4 : Properties ,Composition & industrial Application of Engineering Materials,Welding ,Belt drives ,Gear Drives .	Metals - ferrous cast iron ,tool steels ,Stainless Steels		https://youtu.be/M5rY7X7aSk	13-04-2020
			https://youtu.be/TBKNOTfZBk	
	Non ferrous - Aluminium brass ,Copper ,bronze		https://youtu.be/3mGHwmR-Z4	15-04-2020
	Polymers – thermosetting & thermoplastics ,Ceramics ,glass, optical fiber ,glass, Cermet		https://youtu.be/loAoBg_v570	16-04-2020
	Composites – Fibre Reinforced ,Metal Matrix Composites ,Smart Materials		https://youtu.be/Yd_1TWesWpk	17-04-2020
	Piezoelectric Materials , shape memory alloys, Semiconductors & insulators		https://youtu.be/wruIjdwpj0	
			https://youtu.be/RihoVzEfwI	20-04-2020
	Joining Processes – Soldering ,Brazing ,welding – definitions ,Classification		https://youtu.be/w1-qAxKJoSU	
			https://youtu.be/PafSqL1riS4	
	Methods of soldering , Brazing & Welding		https://youtu.be/VVKXhac1-1E	21-04-2020
			https://youtu.be/3b93-8aCeuY	
	Arc Welding , Oxyacetylene Welding		https://youtu.be/0v2SNH_ho08	
			https://youtu.be/n_DuzHRZAJI	23-04-2020
	MIG & TIG Welding		https://youtu.be/7ede_QsYq	
			https://youtu.be/y3vvtYlWk	24-04-2020
	Belt drives- Definitions , Ratio of Tensions Derivation		https://youtu.be/IBjMuA_D9ws	
			https://youtu.be/v0SNF8VKAzI	27-04-2020
			https://youtu.be/7njmZ2zic	
	Length of belt deviation for open & cross belt drive		https://youtu.be/8tekakixyI	28-04-2020
			https://youtu.be/xRpQqXKX8S	
Advantages & disadvantages of V – Belt , Timing Belt	https://youtu.be/IMjGYECc3U	29-04-2020		
	https://youtu.be/F0nlvCTKm_U			
Advantages & disadvantages of V – Belt , Timing Belt	https://youtu.be/3pMx5hgZbU	30-04-2020		
	https://youtu.be/F0nlvCTKm_U			
Numericals on Belt drive	https://youtu.be/3pMx5hgZbU	04-05-2020		
	https://youtu.be/cfAK1bbdp8			
Numericals on Belt drive	https://youtu.be/KsTBDJkZ5E	05-05-2020		
	https://youtu.be/6VvN_9CBAsk	06-05-2020		
Gear Drives – Types of gears, helical, spur worm, bevel & Rack pinion.	https://youtu.be/TtUFO_sbas			
	https://youtu.be/P4rNX0gCm3E	07-05-2020		
Gear Trains – Simple Gear train Compound Gear train	https://youtu.be/QSj1VSnFWOk			
Advantages of Gear drives	https://youtu.be/pBKWgb-3ib0			
	https://youtu.be/7AFICXoN1js	08-05-2020		
Velocity Ratio Equations ;Comparison of Gear drives over	https://youtu.be/DouxZFuCh5o			
Numericals on velocity ratio	https://youtu.be/6XyVDp5-Rs	11-05-2020		
	https://youtu.be/NzpVh8jXy8			
	https://www.youtube.com/watch?v=Z6YC3I54so4	12-05-2020		
Classification, I.C. Engines parts, 2 Stroke and 4 stroke Petrol engines	https://www.youtube.com/watch?v=Pu7e3ulG6zo	13-05-2020		
4 stroke diesel engines, P-V diagrams of Otto and Diesel cycles.	https://www.youtube.com/watch?v=ITAU6G9apq			
	https://www.youtube.com/watch?v=Qze1f13CY	14-05-2020		
Indicated power, brake power, indicated thermal efficiency, brake thermal efficiency, mechanical efficiency, and specific fuel consumption,	https://www.youtube.com/watch?v=Kkmsj1U1XY			
Numerical problems on IC Engines	https://www.youtube.com/watch?v=MiOFLJR1jI	16-05-2020		
Numerical problems on IC Engines	https://www.youtube.com/watch?v=Q9Bwdfizes	17-05-2020		
Numerical problems on IC Engines	https://youtu.be/2bGMUfMMA1A	18-05-2020		
Properties of refrigerants, list of commonly used refrigerants, definitions	https://www.youtube.com/watch?v=J01tHkoo4-Y			
	https://www.youtube.com/watch?v=9uCeFhO8H40	19-05-2020		
Principle and working of vapour compression refrigeration and vapour absorption refrigeration	https://www.youtube.com/watch?v=h5wQoA15OnQ			
	https://www.youtube.com/watch?v=xDDmT-HK1Y	20-05-2020		
Principles and applications of air conditioners, Room air conditioner.	https://www.youtube.com/watch?v=YOXWpAeY3CQ			
		25-05-2020		
Split Air Conditioner Working	https://youtu.be/gVLhrLTF878			
	https://youtu.be/epIFGY4VUzw	26-05-2020		