BACHELOR OF ENGINEERING - VIDEO LECTURES

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Government Engineering Colleges

Affiliated to Anna University, Chennai

Bodinayakkanur - Theni, Srirangam - Trichy, Dharmapuri, Tirunelveli, Sengipatti - Tanjore, Vellore

Under the guidance of

Shri. K. VIVEKANANDAN, I.A.S.

Commissioner of Technical Education

DIRECTORATE OF TECHNICAL EDUCATION

GUINDY, CHENNAI - 600025

Directorate of Technical Education
Tamil Nadu

DEPARTMENT OF MECHANICAL ENGINEERING

ANNA UNIVERSITY AFFILIATED GOVERNMENT ENGINEERING COLLEGES - REGULATION 2017

B.E. Mechanical Engineering

Regulations 2017

Semester III
ME8391 Engineering Thermodynamics

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e -mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ME8391 Engineering Thermodynamics	Unit I Basic Concepts and First Law	Fundamental concepts of Thermodynamics	Dr.T.Suja Assistant Professor Thanthai Periyar Government Institute of Technology, Vellore *suja.tpgit@gmail.com* 9940033750	https://drive.google.com/drive/folders/1htwrhaRtk-nQEZiglvYkguwmx5yENA-i?usp=sharing	
2		Unit II Second Law and Availability Analysis	Second Law of Thermodynamics		https://drive.google.com/drive/folders/1W_0Q67l-ZTXmLtWquycfLkxVsXCbGoop?usp=sharing	
3			Introduction to Entropy	M.Kishore Kumar, Assistant Professor, Thanthai Periyar Government Institute of Technology, Vellore *kumarkishore93@gmail.com* 8220363615	https://drive.google.com/file/d/1pf3bAeAoW6aU42uMnlNo6ulivhzrfb6t/view?usp=sharing	
4			Introduction to Entropy (Prolongation)		https://drive.google.com/file/d/1f-JUU8XODWa4jfg10Wu5I-Iy8_Wyr8ax/view?usp=sharing	
5		Unit III Properties of Pure Substance And Steam Power Cycle	Part –I Properties of Pure Substances	Dr.T.Suja, Assistant Professor Thanthai Periyar Government Institute of Technology, Vellore *suja.tpgit@gmail.com* 9940033750	https://drive.google.com/drive/folders/1hsQt274c5pDvFSUk3w5VTQvQQ6KBMvtF?usp=sharing	
6			Part –II Properties of Pure Substances		https://drive.google.com/drive/folders/1hsQt274c5pDvFSUk3w5VTQvQQ6KBMvtF?usp=sharing	

7		Unit IV Ideal and Real Gases, Thermodynamic Relations	Properties of Ideal gas – Ideal and real gas comparison	Dr.C. Ananda srinivasan, Associate Professor Thanthai Periyar Government Institute of Technology, Vellore *anandsrinivasa@yahoo.com* 9443344089	https://youtu.be/nR4gEHIv_IU	
8			Properties of Real gas – Equations of state for ideal and real gases – Reduced properties, compressibility factor – principle of corresponding states. Generalized Compressibility Chart and its use		https://youtu.be/2o9YT8CuT5U	
9			Properties of Ideal gas – Ideal and real gas comparison – Equations of state for ideal and real gases – Reduced properties, compressibility factor – principle of corresponding states. Generalized Compressibility Chart and its use. Problems related to the above topics		https://youtu.be/z-ISn6-b8Ak	
10			Module 1 Maxwell's Equations	A.Sujatha Assistant Professor Thanthai Periyar Government Institute of Technology, Vellore *asujatha.06@gmail.com* 9486223273	https://youtu.be/lplqD70qaVE	
11			Module 2 Tds Equations		https://youtu.be/r21E-ZYlVfM	
12			Module 3 Difference of Specific heats		https://youtu.be/PPzYmcjQj4M	

13			Module 4 Ratio of specific heats		https://youtu.be/ILKQC0x353Q	
14			Module 5 Energy Equation		https://youtu.be/JyYbXFBspVs	
15			Module 6 Joule Thomson Coefficient		https://youtu.be/tCNcns9N0Sc	
16			Module 7 Clausius-Clapeyron Equation		https://youtu.be/7QI2eEI5E4k	
17			Module 8 Clausius-Clapeyron Equation for Phase Change Processes		https://youtu.be/WGIGDBG6eDU	
18			Module 9 Problems for Phase Change Processes		https://youtu.be/M_B4UDs5XZc	

19		Unit V Gas mixtures and Psychrometry	Introduction to Gas Mixture	M.Kishore Kumar Assistant Professor Thanthai Periyar Government Institute of Technology, Vellore *kumarkishore93@gmail.com* 8220363615	https://drive.google.com/file/d/1pnX5noQMWS5ihh4JPlUmYrJSXZsdIolG/view?usp=sharing	
20			Introduction to Gas Mixture (Prolongation)		https://drive.google.com/file/d/1BPs-45Z5dN35wxgQyu0XlYbusNcuUoHI/view?usp=sharing	
21			Psychrometry	P.Vijayalakshmi Assistant Professor Thanthai Periyar Government Institute of Technology, Vellore *vijayalakshmivellore@gmail.com* 9940124913	https://drive.google.com/drive/folders/1oc4cvwtBNh_VIVAwwee9BnB5lZYzd-4d?usp=sharing	

2. ME8351 Manufacturing Technology-I

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e -mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ME8351 Manufacturing Technology-I	Unit I Metal Casting Processes	Sand casting process	Dr.S.Sivasankar Assistant Professor Government College of Engineering, Thanjavur *sivasankar09@gmail.com* 8248924421	https://drive.google.com/file/d/1MsCJolFMV6Htvi57UzUsm_nEyYsLJk-z/view?usp=sharing	
2			Clay and moisture content test		https://drive.google.com/file/d/16ta37H_QI9ynkW3k9zt0jViAvvVq_oKg/view?usp=sharing	
3			Grain Size Measurement		https://drive.google.com/file/d/1z1ZOoZGIET4n6gmpjhWxX1sckUvUUu8Y/view?usp=sharing	
4			Mould hardness testing		https://drive.google.com/file/d/1fkf5oYhnck6IZgcCi3Imkv41oD6Ev90s/view?usp=sharing	
5			Permeability test		https://drive.google.com/file/d/1dwDlpzQmlhvBE0lZbQJhw4-wuyskLcb3/view?usp=sharing	
6			Moulding Sand strength		https://drive.google.com/file/d/1DBe7-zrT3UwldHpHRZv7mtu0F4FKUPci/view?usp=sharing	

7		Unit II Joining Processes	Gas Welding	Dr.S.Sivasankar Assistant Professor Government College of Engineering, Thanjavur *sivasankar09@gmail.com* 8248924421	https://drive.google.com/file/d/1VtX-PqSjc1M3EK1PvJuiRW9nI9I2QfHo/view?usp=sharing	
8			Metal Arc Welding		https://drive.google.com/file/d/1_C3gHCrA9PWONcJAew8-MF1uSRQ7mBqZ/view?usp=sharing	
9			Weld Defects		https://drive.google.com/file/d/1mYFg9QgKcxu-Qq9wKaMI_TeXrXqbasU3/view?usp=sharing	
10		Unit III Metal Forming Processes	Cold and hot working of metals	Dr.S.Sivasankar Assistant Professor Government College of Engineering, Thanjavur *sivasankar09@gmail.com* 8248924421	https://drive.google.com/file/d/18Xuuqbpoz6ggAIFd-YbY7wF4cYWM0Usi/view?usp=sharing	
11			Rolling process		https://drive.google.com/file/d/1iRBztSNtXXA66YpX3nsIqhbMlMCJH0Az/view?usp=sharing	
12		Unit IV Sheet Metal Processes	Introduction about Cogeneration	Dr.A.Velmurugan Assistant Professor Government College of Engineering, Dharmapuri *velathi.lec@gmail.com* 9894927406	https://drive.google.com/file/d/1z9V_J-97CxWIsdF-H1Adk9UoYKcziyHX/view?usp=sharing	
13			Topping Cycle and Bottoming Cycle		https://drive.google.com/file/d/1rcbz27eygq7x8JjLAhzTUHa2i9UcUfxw/view?usp=sharing	
14			Factors affecting Cogeneration		https://drive.google.com/file/d/1D8VO5gmha0lAOU8HL-mim0FzXXx7lm4U/view?usp=sharing	

15			Waste Heat Recovery System		https://drive.google.com/file/d/1elvATUYPVMTiq5TCifAgS2rKHI_hFGJ7/view?usp=sharing	
16			Recuperators		https://drive.google.com/file/d/1noVm2iwKVqyR_7ENmw7K8PH07_yFDKy2/view?usp=sharing	
17			Heat Pipe		https://drive.google.com/file/d/17CbptMgfzHdTnK9A0CGALmyf7Ov3Wn_-/view?usp=sharing	
18			Application of WHR		https://drive.google.com/file/d/1ckQuYsbLmo1-qwpw5elvoBl7PAiUS4QO/view?usp=sharing	
19		Unit V Manufacture of plastic components	Plastics-types and characteristics	Dr.S.Sivasankar Assistant Professor Government College of Engineering, Sengipatti, Thanjavur *sivasankar09@gmail.com* 8248924421	https://drive.google.com/file/d/1dvzeaMq74BZZtHJKKH_tKK9xfdFWJEd-/view?usp=sharing	
20			Moulding of plastics-Compression, Transfer and injection		https://youtu.be/Kj7V2hIE3ps	
21			Thermoforming of plastics		https://youtu.be/vQm7TDeA9Fo	
22			Sheet forming process of plastics		https://youtu.be/pRnBa8r7mW4	

23			Blow moulding process of plastics		https://youtu.be/bn9vYn23ULI	
24			Extrusion process of plastics		https://youtu.be/KTHhYwP8-f0	

Semester V

3. ME8595 Thermal Engineering II

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e -mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ME8595 Thermal Engineering II	Unit I Steam Nozzle	Types of Nozzles	Dr.A.Velmurugan Assistant Professor Government College of Engineering, Dharmapuri *velathi.lec@gmail.com* 9894927406	https://drive.google.com/file/d/19j71gTEI6FyFbSNYMGYHP5-OQBEkq8ji/view	
2			Effect of Friction		https://drive.google.com/file/d/1iz1awSFuv1pDUQcc44AjxEulx-UgXPkO/view?usp=sharing	
3			Critical Pressure Ratio		https://drive.google.com/file/d/1Y3NBM6a1WUImfXvwUzWrxiaNVlajG-wk/view?usp=sharing	
4		Unit II Boilers	1.Introduction for Boiler	Dr.A.Velmurugan Assistant Professor Government College of Engineering, Dharmapuri *velathi.lec@gmail.com* 9894927406	https://drive.google.com/file/d/1TVPH57CpgiRN3yVeEF5vp4fT0g87KJed/view?usp=sharing	
5			2. Fire Tube Boiler		https://drive.google.com/file/d/1r7f8k1i1LthA_rNQALlXwQRsM0xB7eBH/view?usp=sharing	
6			3.Water Tube Boiler		https://drive.google.com/file/d/10tt5_BBBPkNO5MuJhrB419VT89vwGCYr/view?usp=sharing	
7			4.High Pressure Boiler		https://drive.google.com/file/d/173AwKNfT8gXLcPHVmKrzEgIU2jkb7y3N/view?usp=sharing	

8			5.Mountings		https://drive.google.com/file/d/1I6iVGiD7jqBfKQS74GD10LkJjHwy5u2i/view?usp=sharing	
9			6.Accessories		https://drive.google.com/file/d/1kJLJvosYkinWubuxXv2JFtmKBZ3CdFXa/view?usp=sharing	
10			7. Fuels and Types		https://drive.google.com/file/d/14s0ufLl8hfIqikDdq1UB4pBr8xNxaLD2/view?usp=sharing	
11		Unit III Steam Turbines	Introduction about Steam Turbine	Dr.A.Velmurugan Assistant Professor Government College of Engineering, Dharmapuri *velathi.lec@gmail.com* 9894927406	https://drive.google.com/file/d/1MJyK_KE38ZsFz6LLUgW-Bz2ZFQyJugpb/view?usp=sharing	
12			Compounding of Turbine		https://drive.google.com/file/d/1JGb54hi4nt7EBbc419xpRL2PQXJDMLNK/view?usp=sharing	
13			Impulse Turbine		https://drive.google.com/file/d/16cXEtdINPVe5WVcX3AjCSoTfZTSZrig-/view?usp=sharing	
14			Reaction Turbine		https://drive.google.com/file/d/1E7lOHbsEkdfgFDnFVydBRHtfF-ogpfOx/view?usp=sharing	
15			Governing of Turbine		https://drive.google.com/file/d/1dD264CMlsGliefkTTSlRu0UnT5RKElDc/view?usp=sharing	

16		Unit IV Cogeneration and Residual Heat Recovery	Introduction about Cogeneration	Dr.A.Velmurugan Assistant Professor Government College of Engineering, Dharmapuri *velathi.lec@gmail.com* 9894927406	https://drive.google.com/file/d/1z9V_J-97CxWIsdF-H1Adk9UoYKcziyHX/view?usp=sharing	
17			Topping Cycle and Bottoming Cycle		https://drive.google.com/file/d/1rcbz27eygq7x8JjLAhzTUHa2i9UcUfxw/view?usp=sharing	
18			Factors affecting Cogeneration		https://drive.google.com/file/d/1D8VO5gmha0lAOU8HL-mim0FzXXx7lm4U/view?usp=sharing	
19			Waste Heat Recovery System		https://drive.google.com/file/d/1elvATUYPVMTiq5TCifAgS2rKHI_hFGJ7/view?usp=sharing	
20			Recuperators		https://drive.google.com/file/d/1noVm2iwKVqyR_7ENmw7K8PH07_yFDKy2/view?usp=sharing	
21			Heat Pipe		https://drive.google.com/file/d/17CbptMgfzHdTnK9A0CGALmyf7Ov3Wn_-/view?usp=sharing	
22			Application of WHR		https://drive.google.com/file/d/1ckQuYsbLmo1-qwpw5elvoBl7PAiUS4QO/view?usp=sharing	
23			Introduction about Refrigeration Cycle		https://drive.google.com/file/d/1cv_ci6vkhDPh2I7T_Lpc_vWWGUW3B7Bk/view?usp=sharing	

24		Unit V Refrigeration and Air – Conditioning	Vapour Compression Refrigeration	Dr.A.Velmurugan Assistant Professor Government College of Engineering, Dharmapuri *velathi.lec@gmail.com* 9894927406	https://drive.google.com/file/d/18h8P9Sey_bOuSqJqx3xr5g7vV9_Rg4iV/view?usp=sharing	
25			Vapour Absorption Refrigeration		https://drive.google.com/file/d/1E5-EHzEjF5ahvAfYPRwtQems_tRsyJdT/view?usp=sharing	
26			Air conditioning System		https://drive.google.com/file/d/1LoLVLl9hxnGrEQIojhgEasBffnflNADf/view?usp=sharing	
27			Air Refrigeration Cycle and Thermo Electric		https://drive.google.com/file/d/1hSXPoG4zsy6DarOBwAynZF443sa7anyU/view?usp=sharing	
28			Cooling Load		https://drive.google.com/file/d/1oJuElm88TWbXSjUTgn4NnLZg6y9QTl2A/view?usp=sharing	

4. ME8593 Design of Machine Elements

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e -mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ME8593 Design of Machine Elements	Unit I Steady Stresses and Variable Stresses in Machine Members	Introduction to Design Process _ part 1	Prof. M.Kantha shoba Associate Professor Thanthai Periyar Government Institute of Technology, Vellore *kanthashoba79@gmail.com* 8754516015	https://drive.google.com/file/d/1hQWoadfwwf8JkROPNAqRuZ9bbW5yi57w/view?usp=sharing	
2			Introduction to Design Process _ part 2		https://drive.google.com/file/d/1f4FGHPdOjMOQ4A9WgmZw69_EE71eGCUq/view?usp=sharing	
3			Fits and Tolerances		https://drive.google.com/file/d/1J661YF8dOisyuNDW9DsInKJQIL-8vG51/view?usp=sharing	
4			Direct, Bending and Torsional Shear stress _ part 1		https://drive.google.com/file/d/1OpVVs_u7B6j2adgts-7KWRMcdEn9wBAg/view?usp=sharing	
5			Direct, Bending and Torsional Shear stress _ part 2		https://drive.google.com/file/d/10V8Xq0kDKglfjzIlO-Ip3vUueELGQPuN/view?usp=sharing	
6			Curved Beams		https://drive.google.com/file/d/1qM1uG67o5Dh12lFyyUDXSlumc6pDA23L/view?usp=sharing	

7			Principal Stresses	Prof. M.Kantha shoba Associate Professor Thanthai Periyar Government Institute of Technology, Vellore *kanthashoba79@gmail.com* 8754516015	https://drive.google.com/file/d/1Sii11ofEUDF0pZdbZGb42IXcUAJR0xcG/view?usp=sharing	
8			Stress Concentration		https://drive.google.com/file/d/1cyh_lqkC1E0Clf1po3wqYs2SaX4dm-YL/view?usp=sharing	
9			Variable stresses		https://drive.google.com/file/d/1KHJZ0mCnSZT3BEAQOkOlg7fOeAHt68mS/view?usp=sharing	
10			Theories of Failure & Eccentric Loading		https://drive.google.com/file/d/1MHCrGrQSjmS_sF9WGo6MyzB6Akhn_IWt/view?usp=sharing	
11		Unit II Shafts and Couplings	Design of Shafts_ part 1	Prof. M.Kantha shoba Associate Professor Thanthai Periyar Government Institute of Technology, Vellore *kanthashoba79@gmail.com* 8754516015	https://drive.google.com/file/d/12_yHu66bCMu72RCFknL9zrHLGA7_fYRc/view?usp=sharing	
12			Design of Shafts_ part 2		https://drive.google.com/file/d/1jyuJKH7YkTGCay0Ysd8Oc7yMD8sLmv6K/view?usp=sharing	
13			Keys and Key ways		https://drive.google.com/file/d/1B0terjCgXCHTJPI-kRE6CaKwl50lIdF7/view?usp=sharing	
14			Design of Muff Coupling		https://drive.google.com/file/d/1rrqFGKP6CtYUpsMN0M_tWERMn4SCkKkq/view?usp=sharing	

15			Design of Split Muff Coupling		https://drive.google.com/file/d/1VkQO4_rda1ybSLP0_We9yR530yVSMcHJ/view?usp=sharing	
16			Design of Flange Coupling		https://drive.google.com/file/d/1dHjwyFZR1pw1ERRYXGtyzY6RcTPcNmt4/view?usp=sharing	
17			Design of Flexible Coupling		https://drive.google.com/file/d/1YALIUTPHOGrUna2bXPegW4iY20R9STM4/view?usp=sharing	
18		Unit III Temporary And Permanent Joints	Knuckle joint Design procedure	Prof. M.Kantha shoba Associate Professor Thanthai Periyar Government Institute of Technology, Vellore *kanthashoba79@gmail.com* 8754516015	https://drive.google.com/file/d/1Galn_hpeSihWljk1yANqetIdHRgrsAf9/view?usp=drivesdk	
19			Problem on Knuckle Joint		https://drive.google.com/file/d/1HszKyBVWkUH1hJCBRqN_Za99-XD6LFiV/view?usp=drivesdk	
20			Sleeve and Cotter Joint Design Procedure		https://drive.google.com/file/d/1T_LRG3SU4O_NPWmHNHbzSsCOixBC6Q2r/view?usp=drivesdk	
21			Problem on sleeve and cotter joint		https://drive.google.com/file/d/1v_F1kZCQ6uaYa9lQw5If0bFVASvzLHf8/view?usp=drivesdk	
22			Socket and Spigot Cotter Joint Design Procedure		https://drive.google.com/file/d/1GDvkti7i0rRQoN25LHXbKonMarLVu3by/view?usp=drivesdk	

23			Problem on Socket and Spigot cotter joint		https://drive.google.com/file/d/12SuV7yGqgDxWDwz_iuwh5m7IsfywdETG/view?usp=drivesdk	
24			Introduction to Thread Joints, Basic Types of Screw Fastening, Common Types of Threaded Fastenings		https://youtu.be/ixbWWWMjuzk	
25			Cap Screws ,Set Screws		https://youtu.be/MUZXJLWQ8Vc	
26			Terminology of Screw Threads, Materials and Manufacture		https://youtu.be/7h5A4N0bjAQ	
27			Forms of Screw Threads		https://youtu.be/IYG2iUkxpRI	
28			Locking Devices		https://youtu.be/eFa5MShVemE	
29			Bolt of Uniform Strength, Bolted Joints – Simple Analysis		https://youtu.be/bIRVEjpLH2o	
30			Tutorial Problems1_Threaded Joints		https://youtu.be/wJVp18sHF3Q	

31			Eccentrically Loaded Bolted Joints In Shear, Design Procedure for Threaded Joints		https://youtu.be/Ch4eykIfAi8	
32			Tutorial Problems_ Eccentrically Loaded Bolded Joints in Shear		https://youtu.be/4d9HNbXWABk	
33			Tutorial Problems_ Eccentric Load Perpendicular to Axis of Bolt		https://youtu.be/Qva3ihXOvfc	
34			Tutorial Problems_ Eccentric Load Parallel to Axis of Bolt		https://youtu.be/KXem7h0N214	
35		Unit IV Energy Storing Elements and Engine Components	Introduction on springs	K.Barathi Assistant Professor Thanthai Periyar Government Institute of Technology, Vellore *barathidesign@gmail.com* 9962456743	https://youtu.be/gYV3Pts0R-4	
36			Design of helical springs I		https://youtu.be/LowzBTaiw60	
37			Design of helical springs II		https://youtu.be/85eycEb5GJs	
38			Problems on helical springs I		https://youtu.be/IySwp-uUGGg	

39			Problems on helical springs II		https://youtu.be/GE2wAc2ktF0	
40			Design of leaf spring		https://youtu.be/YEcHUFSK2w0	
41			Problems on leaf spring		https://youtu.be/L9Bp7hfwE_g	
42			Design of flywheel		https://youtu.be/8gLoH6cuEsU	
43			Problems on flywheel		https://youtu.be/cL2slss7WGY	
44			Design of connecting rod		https://youtu.be/Y1CMFREpSR0	
45			Problems on connecting rod		https://youtu.be/VEZXGxgPdOk	
46			Design of crank shaft I		https://youtu.be/oxlUOo7z5e8	

47			Design of crank shaft II		https://youtu.be/nM4phMu7AEo	
48			Problems in crank shaft		https://youtu.be/AY5ss2lZGkE	
49		Unit V Bearings	Introduction, Types of bearings, sliding contact bearing	Dr. K. Anbukarasi Assistant Professor Thanthai Periyar Government Institute of Technology, Vellore Assistant Professor, *anbukarasik75@gmail.com* 9994067372	https://youtu.be/o0Ld4iJK_Ws	
50					https://youtu.be/Be0G3Pss_JQ	
51			Design parameters, and roller bearings		https://youtu.be/ox4iF6eGj0I	
52			Selection process of rolling contact bearings, -Ball bearings and Roller bearing		https://youtu.be/_xNhZi24D6Y	
53					https://youtu.be/9McyBdc_R3U	
54					https://youtu.be/IwXw82Prv5U	

5. ME8501 Metrology and Measurements

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e -mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ME8501 Metrology and Measurements	Unit I Basics of Metrology	Basics ,need & elements of Metrology , Environment effects on Precision and Accuracy Errors& its measurement Standard types	Prof. M. Mahalingam Assistant Professor Government College of Engineering, Bodinayakkanur *mahamuthaiyan5@gmail.com* 7904752282	https://www.youtube.com/watch?v=N-72Ca8wm6Y	
2		Unit II Linear And Angular Measurements	Linear And Angular Measurements	Prof. M. Mahalingam Assistant Professor Government College of Engineering, Bodinayakkanur *mahamuthaiyan5@gmail.com* 7904752282	https://www.youtube.com/watch?v=zZVDFD3iaI0	
3		Unit III Advances In Metrology	Laser Interferometer, CMM, , Machine vision system, Types, Applications	Dr.Sukumar Assistant Professor Government College of Engineering, Bodinayakkanur *sukumar.rp@gmail.com* 994086268	https://www.youtube.com/watch?v=Lwrvflmsths	
4		Unit IV Form Measurement	Form measurement, Straightness, Flatness measurement, Thread, Gear, Surface roughness measurement, Roundness measurement, applications	Prof. M. Mahalingam, Assistant Professor Government College of Engineering, Bodinayakkanur *mahamuthaiyan@gmail.com* 7904752282	https://www.youtube.com/watch?v=uDpjiojN8oo	
5		Unit V Measurement of Power, Flow and Temperature	Measurement of Force, Torque, Power, Flow measurement, Temperature measurement , Reliability and Calibration	Prof. M. Mahalingam, Assistant Professor Government College of Engineering, Bodinayakkanur *mahamuthaiyan@gmail.com* 7904752282	https://www.youtube.com/watch?v=LHM64moA3TE	

6. ME8594 Dynamics of Machines

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e -mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ME8594 Dynamics of Machines	Unit I Force Analysis	Basic Concepts and Dynamic analysis of reciprocating parts	Mr.S.Sankar Ganesh Assistant Professor Government College of Engineering, Tirunelveli *sankarganesh181085@gmail.com* 8807266386	https://drive.google.com/file/d/1tbMycDbQpeJ2ldxSC6_j7nnjlBEQeGr1/view?usp=sharing	
2			Forces acting on reciprocating parts and Turning moment diagram		https://drive.google.com/file/d/1bZ7T6WNB7s3qJll_M8l9Kv_sYeVUXg1R/view?usp=sharing	
3		Unit II Balancing	Balancing of Rotating masses	Mr.S.Sankar Ganesh Assistant Professor Government College of Engineering, Tirunelveli *sankarganesh181085@gmail.com* 8807266386	https://drive.google.com/file/d/1Au9h8Oc-bLecM_MYOwHZWuqKjoAR4yv6/view?usp=sharing	
4		Unit III Free Vibration	Free Vibration	Mr.S.Sankar Ganesh Assistant Professor Government College of Engineering, Tirunelveli *sankarganesh181085@gmail.com* 8807266386	https://drive.google.com/file/d/1J1YowaehEAeSUMw9VzuSlBPpzQMtHfM2/view?usp=sharing	
5			Critical Speed of shafts		https://drive.google.com/file/d/1IE5Ef0uVcQgUQWQcw-SsVVupoQ5Cie6v/view?usp=sharing	
6			Free Damped Vibration		https://drive.google.com/file/d/1vudO8F2-xpT7MePbdaFWJvyXeEnvA_TJ/view?usp=sharing	
7		Unit IV Forced vibration	Forced vibration		https://drive.google.com/file/d/1LbyvaCyk9sXIETiYtJnPBPyQDLt4-pxW/view?usp=sharing	

8			Problems	Mr.S.Sankar Ganesh Assistant Professor Government College of Engineering, Tirunelveli *sankarganesh181085@gmail.com* 8807266386	https://drive.google.com/file/d/13i-i1YlcNQnInjeZ1_VMpaa4xreeLGrJ/view?usp=sharing	
9			Vibration Isolation		https://drive.google.com/file/d/1RPyQiwqBt5iYC1G73gZGaHQNh57NpBmV/view?usp=sharing	
10		Unit V Mechanism for Control	Governors (Watt and Porter Governor)	S.Sankar Ganesh Assistant Professor Government College of Engineering, Tirunelveli *sankarganesh181085@gmail.com* 8807266386	https://drive.google.com/file/d/1tibsSyTXmrSNs3ioC7SbNGv5VADy_U_K/view?usp=sharing	
11			Governors (Proell, Hartnell and Hartung)		https://drive.google.com/file/d/121EGqwa8Kixmwz903SbTAcww3mhNFzv3/view?usp=sharing	
12			Gyroscope		https://drive.google.com/file/d/1oWkLo5UTCtkXHmT_X0yb2HDxizMKX3VP/view?usp=sharing	

7.OAT551 Automotive systems

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e -mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	OAT551 Automotive Systems	Unit I Automotive Engine Auxiliary Systems	Introduction to Automotive systems	Dr. T. Prem Singh Inbaraj Assistant Professor Government College of Engineering, Tirunelveli *premsingh@gcetly.ac.in* 93457 37511	https://drive.google.com/file/d/1UwOosuCVhGQV8G6WWQi73yI4LzAhhBBC/view	
2			Automotive engines - Classification of engines		https://drive.google.com/file/d/1862h54PutWj8AW84Gz8HBX5np2tFxe0-/view	
3			Components of IC engine, working of two stroke & four stroke engines, Port timing and valve timing diagrams		https://drive.google.com/file/d/1aCBKmTcaef1c3XMNIxesXngYcGFF60rO/view?usp=sharing	
4		Unit II Vehicle Frames and Steering System	Vehicle Frames and Steering System	Dr. T. Prem Singh Inbaraj Assistant Professor Government College of Engineering, Tirunelveli *premsingh@gcetly.ac.in* 93457 37511	https://drive.google.com/file/d/1jZT9R-Wu9cICc8crfKm00HGnD4xxRqoe/view?usp=sharing	
5		Unit III Transmission Systems	Automotive clutches	Dr. T. Prem Singh Inbaraj Assistant Professor Government College of Engineering, Tirunelveli *premsingh@gcetly.ac.in* 93457 37511	https://drive.google.com/file/d/1Y64H4nKwyfAyBG-qcy_w-l19gTJTg0jU/view?usp=sharing	
6			Automotive gear box, propeller shaft, joints, differential and other transmission systems		https://drive.google.com/file/d/1SmERUdVfZIPaMQxfN36Lg0lT9VlJMRg9/view?usp=sharing	

7		Unit IV Suspension And Brakes Systems	Automotive suspension systems	Dr. T. Prem Singh Inbaraj Assistant Professor Government College of Engineering, Tirunelveli *premsingh@gcetly.ac.in* 93457 37511	https://drive.google.com/file/d/1DwnplSkLcQxxDuyuvUOfW5TUyexNKVv7/view?usp=sharing	
8			Automotive brakes, ABS and Electronic brake distribution		https://drive.google.com/file/d/19w_cbBoKzc91qo7CU2FxNsF5tR6qsOZU/view?usp=sharing	
9		Unit V Alternative Energy Sources	Alternate fuels for automotive systems - natural gas, LPG, bio diesel, bioethanol, hydrogen and fuel cells	Dr. T. Prem Singh Inbaraj Assistant Professor Government College of Engineering, Tirunelveli *premsingh@gcetly.ac.in* 93457 37511	https://drive.google.com/file/d/1Xp00m6NebqasinFUsYl-65k01bwlVJxm/view?usp=sharing	
10			Turbochargers and three way catalytic converters		https://drive.google.com/file/d/1sR2VAa55lVnSbLh6CWvw73TNKiIayYJU/view?usp=sharing	

8. OIM552 Lean Manufacturing

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e -mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	OIM552 Lean Manufacturing	Unit I Introduction to Lean Manufacturing	Introduction to Lean Manufacturing conventional manufacturing system Vs Lean manufacturing	Dr. RM.Nachiappan Associate Professor Government College of Engineering,Thanjavur *dcenachiappan@gmail.com* 9384102600	https://youtu.be/3VMjet2F qIA	
2					https://youtu.be/0XeLaS- 2cFE	
3					https://youtu.be/qyZNuQR xQ9k	
4					https://youtu.be/ZxQCM6x MeWU	
5					https://youtu.be/F_IwdSPC f1A	
6					https://youtu.be/JZdlURCx TbQ	
7					https://youtu.be/9fUwdpg qroY	

8					https://youtu.be/ltQu1o33_q5g	
9					https://youtu.be/zYHbU_2t_wFU	
10		Unit II Cellular Manufacturing, JIT, TPM	Cellular Manufacturing	Dr. RM.Nachiappan Associate Professor Government College of Engineering, Thanjavur *dcenachiappan@gmail.com* 9384102600	https://youtu.be/rYWni6DZcUs	
11		Unit III Set Up Time Reduction, TQM, 5S, VSM	Setup time reduction		https://drive.google.com/file/d/1YyWuVqY1phZv_PcdKiFCQBV3O65-6UaS/view?usp=sharing	
12		Unit IV SIX SIGMA	Six sigma - Definition, Statistical consideration		https://drive.google.com/file/d/1NNKB29VuYgXh4L-Ilwgj2tFcDD6y6yz4/view?usp=sharing	
13		Unit V Case Studies	Lean manufacturing implementation- (case study) in foot wear manufacturing industry		https://drive.google.com/file/d/138VuygCTP0WWK3fom-surXda-pZFbGcf/view?usp=sharing	

9. ORO551 Renewable Energy Sources

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e -mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ORO551 Renewable Energy Sources	Unit I Principles of Solar Radiation	Principles of Solar Radiation	Mr. P.Gowtham Assistant Professor Government College of Engineering, Srirangam *gowthamp@gces.edu.in* 9629742301	https://drive.google.com/drive/folders/1llpEfWJDav1YoD_zdL8IvtdpNrmbzYyh?usp=sharing	
2		Unit II Solar Energy Collection	Introduction of Solar Collector	V.Manieniyan Assistant Professor in Mechanical Engineering Government College of Engineering-Srirangam *manieniyan78@gmail.com* 9786597444	https://drive.google.com/file/d/1lLTKUv68RTHlZNBdzKFCOc35Uip1rMCQ/view?usp=sharing	
3			Focusing Collector		https://drive.google.com/file/d/1WJcMy5RBw9Y8jIvTJyU5Y5l5tExZ0ZL6/view?usp=sharing	
4			Performance Analysis Concentrating Collector		https://drive.google.com/file/d/1Q4BH8Xo16R8yHGi44Yq-tvHYiK2WceZs/view?usp=sharing	
5			Flat Plate Collector		https://drive.google.com/file/d/1vhn6BSmzABw293vWxr7FskxNDMtSEeew/view?usp=sharing	
6			Energy Balance		https://drive.google.com/file/d/1ltS8UFcGkXp88VR-ix0Fzq5tijl96Lxs/view?usp=sharing	

7			Performance Analysis Flat Plate Collector		https://drive.google.com/file/d/11qX1_evQQrjrM-Q0h50FNYawCQSI2mef/view?usp=sharing	
8			Advance Collector		https://drive.google.com/file/d/1stwpbxazGp4WP-7oOHd-fooGz0Y5WLH3/view?usp=sharing	
9		Unit III Solar Energy Storage And Applications	Solar Energy Storage	V.Manieniyan Assistant Professor Government College of Engineering-Srirangam *manieniyan78@gmail.com* 9786597444	https://drive.google.com/file/d/1D6q2ctZCK_Y9tIHfAn1WCqxdpLFtOdlS/view?usp=sharing	
10			Solar Energy Applications -1		https://drive.google.com/file/d/1eH6QyE-IlTE71k8iQ5e5jmxnznOnl_LO/view?usp=sharing	
11			Solar Energy Applications -2		https://drive.google.com/file/d/1XkYmEVCur9k5XdhRg0hXUNcmXTVO5VtB/view?usp=sharing	
12			Solar Energy Applications -3		https://drive.google.com/file/d/191MaV0m3ezW1Hvj-WfRc0PvXz4MaflR-/view?usp=sharing	
13			Photovoltaic Energy Conversion		https://drive.google.com/file/d/1LLQKwCNny4C2-uQon99lYbFd8fOq6iCG/view?usp=sharing	
14		Unit IV Wind Energy	Sources and potentials	P.Gowtham Assistant Professor Government College of Engineering Srirangam *gowthamvortex@gmail.com* 9629742301	https://drive.google.com/drive/folders/1YAHuWWaCC0-zPhzwDSYhEM8tQeeMAuDu?usp=sharing	
15			Horizontal and vertical axis windmills			
16			Performance characteristics, Betz criteria			
17			Principles of Bio-			

			Conversion, Anaerobic/aerobic digestion			
18			Types of Bio-gas digesters, gas yield, combustion characteristics of bio-gas, utilization for cooking			
19			I.C.Engine operation and economic aspects			
20		Unit V Geothermal Energy	Resources, types of wells, methods of harnessing the energy, potential in India	Mr.B.Suresh Kumar, Assistant Professor, Governenment College of Engineering Srirangam *suresh1983rev@gmail.com* 9994041270	https://drive.google.com/drive/folders/1pLLwOI6WcR7srU7GJP5iMwq-UOxF_nSD?usp=sharing	
21			OCEAN ENERGY: OTEC, Principles utilization, setting of OTEC plants, thermodynamic cycles			
22			Tidal and wave energy: Potential and conversion techniques			
23			Mini-hydel power plants, and their economics			
24			Direct energy conversion: Need for DEC, Carnot cycle, limitations, principles of DEC.			

Semester VII

10. ME8792 Power Plant Engineering

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e -mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ME8792 Power Plant Engineering	Unit I Coal Based Thermal Power Plants	Layout of Modern Coal Power Plant	Dr.N.Muthukumaran Assistant Professor Government College of Engineering, Dharmapuri *muthukumarapme@gmail.com* 9894301560	https://drive.google.com/file/d/1ZSah45PGycaEuMnp4jzLnv5X6WxesxsU/view?usp=sharing	
2			Boiler		https://drive.google.com/file/d/1nr9aKnvsxzjCkqxY2ompnvGBKUiFWJjt/view?usp=sharing	
3			Sub Systems of Thermal Power Plants		https://drive.google.com/file/d/1mtVDkjDJKSPmMfx824sIN6_8PMUvI61e/view?usp=sharing	
4		Unit II Diesel, Gas Turbine and Combined Cycle Power Plants	Power Cycle	Dr.N.Muthukumaran Assistant Professor Government College of Engineering, Dharmapuri *muthukumarapme@gmail.com* 9894301560	https://drive.google.com/file/d/1tLs449clPMfwQRU6DBZnDQtJdP-bfqrx/view?usp=sharing	
5			Components of Diesel and Gas turbines		https://drive.google.com/file/d/1hQuh5l_vGhpGgY4OkBviEHuNIlltILWQ/view?usp=sharing	
6			Combined cycle		https://drive.google.com/file/d/1oRcjG0Z3LjdlemgGUUZlk0L0A2IrMcNp/view?usp=sharing	
7			Integrated Gasifier Based Combined Cycle		https://drive.google.com/file/d/1izMcC1Xq6HW-9QUbT7PgSs6S4DsOe0Ml/view?usp=sharing	

8		Unit III Nuclear Power Plants	Nuclear Power Plant	Dr.N.Muthukumaran Assistant Professor Government College of Engineering, Dharmapuri *muthukumarapme@gmail.com* 9894301560	https://drive.google.com/file/d/1rp8LaQ-_xPYqWvl0kfOjKUBvsPY9ndRE/view?usp=sharing	
9		Unit IV Power From Renewable Energy	Hydro and Wind Energies	Mr.M. Murugan Assistant Professor Government College of Engineering, Dharmapuri *kalammurugan92@gcedpi.edu.in* 9677456530	https://youtu.be/S7YnJXBgLHs	
10			Tidal, Solar & Geothermal energies		https://youtu.be/bXK6p0LCtck	
11			Biogas & Fuel cell		https://youtu.be/AfxNCV9bUtU	
12		Unit V Energy, Economic And Environmental Issues Of Power Plants	Power tariff types, Load distribution parameters, load curve, Comparison of site selection criteria	Dr.N.Muthukumaran Assistant Professor Government College of Engineering, Dharmapuri *muthukumarapme@gmail.com* 9894301560	https://drive.google.com/file/d/1B8yUXKEtzeDGjFPwUDAizTLB7YBnCFSz/view?usp=sharing	
13			Capital & Operating Cost of different power plants with problems		https://drive.google.com/file/d/1MzPfeXN862Ir4PyMMzM5acv-H9zL95S1/view?usp=sharing	
14			Pollution control technologies including Waste Disposal Options for Coal based power plants		https://drive.google.com/file/d/1SUKIoDJdSlEGW1v4gPQXKiobxFHK5pic/view?usp=sharing	
15			Pollution control technologies including Waste Disposal Options for Nuclear power plants		https://drive.google.com/file/d/1m5EHt0L5kQ_nBG2Ff-z3TkoGfzkTmglh/view?usp=sharing	

11. ME8793 Process Planning and Cost Estimation

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e -mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ME8793 Process Planning and Cost Estimation	Unit I Introduction to Process Planning	Introduction to Process Planning	Dr. TV Rajamurugan Assistant Professor Government College of Engineering, Srirangam *vrajamanu@gmail.com* 9444241305	https://drive.google.com/drive/folders/1v3zCDvYrBE6Re3kxkRSt7pjNEASMu984?usp=sharing	
2		Unit II Process Planning Activities	Process parameter calculation, Selection of JIGs and Fixtures, Selection of quality assurance methods, Set of documents required for process planning, Economics of process planning, Case study.	Dr.M.Rajamuthamilselvan Assistant Professor Government College of Engineering, Srirangam *rajanarmi@yahoo.co.in* 9486402483	https://drive.google.com/drive/folders/1w72ZcCf6z0x6EqpsehBwP9jL-ybTPeGB?usp=sharing	
3		Unit III Introduction To Cost Estimation	Cost Estimating-1	N,Ramasubbu, Assistant Professor Government College of Engineering, Srirangam *ramasubbu9596@gmail.com* 9994408478	https://drive.google.com/file/d/1ZzmJfCOE3O2LWqYa_JIYboclQe-mZ4qc/view?usp=drivesdk	
4			Cost Estimating-2		https://drive.google.com/file/d/1MYnigujko6wFoxt71SUvzS3E1eFUaqHj/view?usp=drivesdk	
5			Elements of Cost-1		https://drive.google.com/file/d/1sA6DXVTwH54aNZK5p-ZvNhsn9gSXfGYI/view?usp=drivesdk	
6			Elements of Cost-2		https://drive.google.com/file/d/1myXflII3T0y6Lqk6gcA_FEmnWPOu9WPG/view?usp=drivesdk	

7			Elements of Cost Estimation and Costing		https://drive.google.com/file/d/1xaSaM211v1GJXvhrmFqwpNe-adpFF6cC/view?usp=drivesdk	
8			Components of Cost and Estimation of Material Cost		https://drive.google.com/file/d/10IFyFAEG4k9funPc3PoR4xg1W8Vl0eIb/view?usp=drivesdk	
9			Estimation of Material cost-2		https://drive.google.com/file/d/1ssdBwKhuzaIiAoP1xiYUZevvPap6K-Ki/view?usp=drivesdk	
10			Labour Cost and Standard time		https://drive.google.com/file/d/1UyRDla80Xc5rP0Alih_07GXT_zgLY5P7/view?usp=drivesdk	
11			Problems on Estimation of cost and profit		https://drive.google.com/file/d/130SrR4YQ9FvtNWyop_e6Lbxf8Vq9endd/view?usp=drivesdk	
12			Problems Contd. and Allocation of overhead expanses1		https://drive.google.com/file/d/19oOziDlCYo48m-LBHaplctSqE8BKN99S/view?usp=drivesdk	
13			Overhead Expanses-2 and Depreciation-1		https://drive.google.com/file/d/1CMncY07pE5Dc_slo-kDraaBjOqfDhtIT/view?usp=drivesdk	
14			Depreciation(P)-2		https://drive.google.com/file/d/1ZdM7K8UN59Z_1i2b_2R3nGz8DJjgQdxh/view?usp=drivesdk	

15		Unit IV Production Cost Estimation	Estimation of Forging Shop-1	N,Ramasubbu Assistant Professor Government College of Engineering, .Srirangam, *ramasubbu9596@gmail.com* 9994408478	https://drive.google.com/file/d/10n198OxjJ6m7aQv_fjUv-LrUh-u2yjpn/view?usp=drivesdkp	
16			Estimation of Forging Shop-2		https://drive.google.com/file/d/1Qmlm9w7YnHBjT5MTSXNhlmvnMEX62OJL/view?usp=sharing	
17			Estimation of Forging Shop-3		https://drive.google.com/file/d/1FB7qWjeECv8MTcXbAYZpV8-_NvCTc4Dz/view?usp=drivesdk	
18			Estimation of Forging Shop-4		https://drive.google.com/file/d/1C0MIROXcZS9OlhOy7mfIFLRbkiP-qtm2/view?usp=drivesdk	
19			Estimation of Foundry Shop-1		https://drive.google.com/file/d/1ZUlm2EkZZV7L4czvefLQFQiCXmxIc6U7/view?usp=drivesdk	
20			Estimation of Foundry Shop-2		https://drive.google.com/file/d/1T9TMOMDj_I5olBATyvcu4mS-o9rN5uk_/view?usp=drivesdk	
21			Estimation of Foundry Shop-3		https://drive.google.com/file/d/1elbjGYBxErmh1uWRWViytVgEIX5tqMLk/view?usp=drivesdk	
22			Estimation of Welding shop Part I to Part III	Dr M. Rajamuthamilselvan Assistant Professor Government College of Engineering, .Srirangam *rajanarmi@yahoo.co.in* 9486402483	https://drive.google.com/file/d/1elbjGYBxErmh1uWRWViytVgEIX5tqMLk/view?usp=drivesdk	

23		Unit V Machining Time Calculation	Introduction to Machining Time Calculation	Dr. I. Rahamathullah, Assistant Professor, Governenment College of Engineering Srirangam, *rahamath.iitm@gmail.com* 9444269773	https://youtu.be/MojfK66plik	
24			Importance of Machining time calculation and some lathe operations		https://youtu.be/MRq0rZy67ug	
25			Machining time calculation lathe operations 1		https://youtu.be/UPAjwK6TvB0	
26			Machining time calculation lathe operations 2		https://youtu.be/4dIwMI6xqCw	
27			Machining time calculation - Milling		https://youtu.be/GJyXc7_0kXg	
28			Machining time calculation – shaping and planning		https://youtu.be/9IpRlVe6neI	
29			Machining time calculation - Grinding		https://youtu.be/Ax6hNj5FkYk	

12. ME8791 Mechatronics

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e -mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ME8791 Mechatronics	Unit I Introduction	Introduction to Mechatronics	Dr.B.Asaithambi Assistant Professor Government College of Engineering, Thanjavur *balakrishnanasaithambi@gmail.com* 9486959384	https://youtu.be/mPtsUQv A_mk	
2		Unit II Microprocessor and Microcontroller	Microprocessor and Microcontroller	Dr.B.Asaithambi Assistant Professor Government College of Engineering, Thanjavur *balakrishnanasaithambi@gmail.com* 9486959384	https://drive.google.com/file/d/14v5c00ZCpDQXKq5jDT5xpY_VCaNbAW0W/view?usp=sharing	
3		Unit III Programmable Peripheral Interface	Programmable Peripheral Interface	Dr.B.Asaithambi Assistant Professor Government College of Engineering, Thanjavur *balakrishnanasaithambi@gmail.com* 9486959384	https://drive.google.com/file/d/1iTvybkfriJLkElFE-5jyhHk9Ch3ATWy_/view?usp=drivesdk	
4		Unit IV Programmable Logic Controller	Introduction to Programmable Logic Controller	Dr. K. Anbukarasi Thanthai Periyar Government Institute of Technology, Vellore *anbukarasik75@gmail.com* 9994067372	https://youtu.be/UdWCv1NyeSU	
5			Architecture of PLC and I/O modules of PLC		https://youtu.be/_rIJYQ1yHcM	
6			Lecture on Ladder Programming, Logic Functions, Sequencing and Mnemonics	Mr.T.L.Ariyanathar Thanthai Periyar Government Institute of Technology, Vellore *ariyanathar@gmail.com* 9042718539	https://drive.google.com/file/d/1wpGi0oYrwoIM7_W-ixKUzkPIFqWn_B-H/view?usp=sharing	

7			Lecture on Timers/Counter/Internal Relay, Shift Register, Data Handling and selection of PLC		https://drive.google.com/file/d/1wtOy91iT5WttAnhJw3nBvIsSw3Ahg100/view?usp=sharing	
8		Unit V Actuators And Mechatronic System Design	Actuators And Mechatronic System Design	Mr.K.Senthilkumar Assistant Professor(ADHOC) Government College of Engineering, Sengipatti *senthil30may@gmail.com* 8344518235	https://youtu.be/1MbXJE0S1jU	

13. OML751 Testing of Materials

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e -mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	OML751 Testing of Materials	Unit I Introduction to Materials Testing	Introduction to testing of materials	Ms. Varthini Rajagopal Assistant Professor Government College of Engineering, Srirangam *varthini@gces.edu.in* 8903948847	https://drive.google.com/a/gces.edu.in/file/d/1X68oepG6CRrrQHD3nsSInH1l-ZZMU7j5/view?usp=drive_ web	
2					https://drive.google.com/a/gces.edu.in/file/d/14lafrH-SAh1szlllciqb8VcPz0cafUbI/view?usp=drive_web	
3					https://drive.google.com/a/gces.edu.in/file/d/1FbSMfSyFarvWbVHsu-9CYnOQi3LSMF_y/view?usp=drive_web	
4					https://drive.google.com/a/gces.edu.in/file/d/1KOY9ZctKXRYwG1cJwuGjoAaM0MSI8AXv/view?usp=drive_web	
5		Unit II Mechanical Testing	Introduction to Mechanical Testing, Hardness Test, Tensile Test, Impact Test(Izod and Charpy),Bend Test,Fatigue test - Principles, Techniques, Methods, Advantages, Applications	C.Rajaganapathy. Assistant Professor, Government College of Engineering, Srirangam *crgmech@gces.edu.in* 9994400278	https://drive.google.com/file/d/136feZpHjMXrzuibVMH05Bv4sDkoEwrdC/view?usp=sharing	
6		Unit III Non Destructive Testing	Visual inspection & Liquid penetrant test	Ms. Varthini Rajagopal Assistant Professor Government College of Engineering, Srirangam *varthini@gces.edu.in* 8903948847	https://drive.google.com/file/d/1SpJuj0ARsuUDtLCPz_eQyp3IzrHHtZ4k/view?usp=sharing	

7			Magnetic particle test & Thermography test		https://drive.google.com/file/d/1PiXmcemHX5DoDz7ODxo_HkwowAq1dYRl/view?usp=sharing	
8			Radiographic test & Eddy current test		https://drive.google.com/file/d/1DbaX4MLbSdIL5tPG_NvLkpVhTxXW1Lgs/view?usp=sharing	
9			Ultrasonic test &Acoustic emission		https://drive.google.com/file/d/1geDbre18Kkh48UvUmdJ0Iq1tXGhZJLu_/view?usp=sharing	
10		Unit IV Material Characterization Testing	Preparation of samples for microscopy	Dr.A.Baskar Assistant Professor Government College of Engineering Srirangam *basau2006@gmail.com* 9442359174	https://drive.google.com/file/d/1-I1h3yJznO6Bs7P-3cTsu62OXOna5dz4/view?ts=5f42924c	
11			XRD techniques		https://drive.google.com/file/d/1-t-DewyWBKZzmg65FyC1IVppTx32Psmn/view?ts=5f42b379	
12			SEM observation		https://drive.google.com/file/d/1-rUw9FUQt5G4p04Ty-YGD2MbzXac5o97/view?ts=5f42b868	
13			Microscopy observation		https://drive.google.com/file/d/1-VNsaL12xhX45q93YjafLUlWrmAJi3Rx/view?ts=5f42c10b	
14		Unit V Other Testing	Chemical Testing: X-Ray Fluorescence, Elemental Analysis by inductively coupled plasma-optical Emission Spectroscopy and Plasma-Mass spectrometry	C.Rajaganapathy Assistant Professor, Governenment College of Engineering Srirangam *crgmech@gmail.com* 9994400278	https://drive.google.com/file/d/1Ls8gAyQpGCmOCXMlOUMS9l-5iQjKHBbZ/view?usp=sharing	

15			Differential Thermal Analysis	Dr.A.Baskar, Assistant Professor, Government College of Engineering Srirangam, Trichy *basau2006@gmail.com* 9442359174	https://drive.google.com/file/d/1JZ_V0wM3vweWkd4Yn-drHobO3dcKHc2Y/view?ts=5f7adda4	
16			Dynamic Mechanical Analysis		https://drive.google.com/file/d/1J_Ds6MIUjFDzmxWvimstciocGwVJxQzV/view?ts=5f7b2ba6	
17			Thermo Mechanical Analysis		https://drive.google.com/file/d/1Jag0AEUYb4QlEGYJypky4VyrHlMJ4tQT/view?ts=5f7b3a55	
18			Differential Scanning Calorimeter		https://drive.google.com/file/d/1JuD_NxyYBQqhjhRLM-2kKSWOCy38YZXM/view?ts=5f7c0be9	

14. OIE751 Robotics

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e-mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	OIE751 Robotics	Unit 1 Fundamentals of Robot	Fundamentals of Robot	Mr.J.Prabhakaran Assistant Professor(ADHOC) Government College of Engineering, Thanjavur *jpkn006@gmail.com* 9500334050	https://youtu.be/e29klH71ZME	
2		Unit II Robot Drive Systems And End Effectors	Robotics OIE751 : Unit 2	Mr.J.Prabhakaran Assistant Professor(ADHOC) Government College of Engineering, Thanjavur *jpkn006@gmail.com* 9500334050	https://youtu.be/x8JC8jaP064	
3		UNIT III Sensors And Machine Vision	Robotics OIE751 : Unit 3	Mr.J.Prabhakaran Assistant Professor(ADHOC) Government College of Engineering, Sengipatti *jpkn006@gmail.com* 9500334050	https://youtu.be/t2CVshfgOVU	
4		UNIT IV Robot Kinematics and Robot Programming	Robotics OIE751 : Unit 4	Mr.J.Prabhakaran Assistant Professor(ADHOC) Government College of Engineering, Sengipatti jpkn006@gmail.com 9500334050	https://youtu.be/jJvNOkCR2-0	
5		UNIT V Implementation and Robot Economics	Robotics OIE751 : Unit 5	Mr.J.Prabhakaran Assistant Professor(ADHOC) Government College of Engineering, Sengipatti *jpkn006@gmail.com* 9500334050	https://youtu.be/Oxh-elcT1yA	

15. ME8071 Refrigeration and Air conditioning

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e-mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ME8071 Refrigeration and Air conditioning	Unit I Introduction	Refrigeration & Air Conditioning basic Fundamentals of R & AC I & II laws Reversed Carnot cycle COP	Prof. M. Sebakarthi Assistant Professor Government College of Engineering, Bodinayakkanur *karthiseb@gmail.com* 9629374060	https://youtu.be/ZuUl921LcvA	
2			Ideal refrigeration cycle Basic components Vapour compression refrigeration cycle T-s diagram COP calculation		https://youtu.be/Xm_0a1dLI1A	
3		Unit II Vapour Compression Refrigeration System	Vapour Compression refrigeration system, Components of Vapour compression refrigeration system, Compressor, Condenser, Expansion devices and Evaporator	Mr.M. Balamurugan Assistant Professor Government College of Engineering, Bodinayakkanur *balamelmangalam@gmail.com* 95009 30059	https://www.youtube.com/watch?v=yvFtigso2Fo	
4		Unit III Other Refrigeration Systems	Other Refrigeration systems, Vapour Absorption and Adsorption systems, Steam Jet refrigeration, Ejector refrigeration, Thermo Electric refrigeration, Vortex and Pulse jet refrigeration systems	Prof. M. Balamurugan Assistant Professor Government College of Engineering Bodinayakkanur *balamelmangalam@gmail.com* 9500930059	https://www.youtube.com/watch?v=oM3mivx1tOc	

5		Unit IV Psychrometric Properties and Processes	Psychrometric properties, Dalton law, DBT, WBT, DPT, Specific humidity, RH, Degree of saturation, Thermodynamic WBT, Psychrometric chart, Different processes, Mixing of air stream	Prof. M. Balamurugan Assistant Professor Government College of Engineering Bodinayakkanur *balamelmangalam@gmail.com* 9500930059	https://www.youtube.com/watch?v=cPPaJPStfh4	
6		Unit V Air Conditioning Systems and Load Estimation	Air conditioning system, Load calculation, Human comfort, Effective temperature, Summer and Winter air conditioing systems, Load calculation	Prof. M. Sebakarthi Assistant Professor Government College of Engineering Bodinayakkanur *karthiseb@gmail.com* 9629374060	https://www.youtube.com/watch?v=gUWcjGEX6cA&feature=youtu.be	

16. ME8073 Unconventional machining process

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e-mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ME8073 Unconventional machining process	Unit I Introduction and Mechanical Energy Based Processes	Introduction, need, classification,merits,demerits, AJM,WJM,USM	Dr. A. Athijeyamani Associate Professor Government College of Engineering, Bodinayakkanur *athimania@gmail.com* 9865906160	https://youtu.be/LotDJZt9Nz8	
2		Unit II Thermal And Electrical Energy Based Processes	Electrical Discharge Machining (EDM), Wirecut EDM, Plasma Arc machining and Electron beam machining	Dr. A. Athijeyamani Associate Professor Government College of Engineering, Bodinayakkanur *athimania@gmail.com* 9865906160	https://youtu.be/2g_3j0xy3lE	
3		Unit III Chemical And Electro-Chemical Energy Based Processes	Chemical Energy methods, Etchants, Masking, ECM, ECG, Electro Chemical Honing, processes, Problems, MRR	Prof. P. Sueshkumar Assistant Professor Government College of Engineering, Bodinayakkanur *ppskumar200@gmail.com* 6369009050	https://youtu.be/1R7yyFRjnaE	
4		Unit IV Advanced Nano Finishing Processes	Advanced Nano finishing processes, Abrasive flow machining, Chemo - Mechanical polishing, Magmetic Abrasive finishing, Abrasive flow finishing, working, Applications, Limitations	Prof. R. Jayashree Assistant Professor Government College of Engineering, Bodinayakkanur *jayashree.rengaraj@gmail.com* 9500512852	https://youtu.be/mmPoehhG4Ec	
5		Unit V Recent Trends In Non-Traditional Machining Processes	EDM, Wire cut EDM, Plasma Arc machining, Electron beam machining	Dr. A. Athijeyamani, Associate Professor Government College of Engineering, Bodinayakkanur , *athimania@gmail.com* 9865906160	https://www.youtube.com/watch?v=7lPEyu_TQ6Y&feature=youtu.be	

17. GE8077 Total Quality Management

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e-mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	GE8077 Total Quality Management	Unit I Introduction	TQM Introduction	Dr. A Krishnaveni Professor Government College of Engineering, Tirunelveli krishnaveni@gcetly.ac.in 98941 82237	https://drive.google.com/file/d/1Jrp463maL7a0dN9l4fT8m5CW4f3WF2fL/view?usp=sharing	
2			TQM _Unit I_Module 1: Introduction - Need for Quality - Evolution of Quality - Definitions of Quality - Dimensions of Product and Service Quality		https://drive.google.com/file/d/1KET_ZodGRXIrnCurIHqkRsZZ0j9RFX3R/view?usp=sharing	
3			TQM_Unit I_Module 2: Basic concepts of TQM - TQM Framework		https://drive.google.com/file/d/18JUC431Urina3-NqyJMgthaMNVvRgrj7/view?usp=sharing	
4			TQM_Unit I_Module 3: Contributions of Deming, Juran and Crosby - Barriers to TQM		https://drive.google.com/file/d/1BJ8PaVR7qpJTNOAL1dlSKKaZFx9lRdtl/view?usp=sharing	
5			TQM_Unit I_Module 4: Customer Focus - Customer Orientation, Customer Satisfaction, Customer Complaints, Customer Retention		https://drive.google.com/file/d/1MkEod1pY-H5bgiNK7FYAfNG7Z48bC59R/view?usp=sharing	

6		Unit II TQM Principles	Unit II_Module 1: Leadership - Quality Statements, Strategic quality planning, Quality Councils	Dr. A Krishnaveni Professor Government College of Engineering, Tirunelveli *krishnaveni@gcetly.ac.in* 98941 82237	https://drive.google.com/file/d/10eeJztfydxQLLRqie0OrrprUzA2Ib2jG/view?usp=sharing	
7			Unit II_Module 2: Employee involvement		https://drive.google.com/file/d/1re3dhPsirO6nrT5xS0V6vYtiPi1wuntS/view?usp=sharing	
8			Unit II_Module 3: Continuous process improvement - PDCA cycle, 5S, Kaizen		https://drive.google.com/file/d/1941qVKTqxZcmTm_6DwLS-RdMeQy9KKTW/view?usp=sharing	
9			Unit II_Module 4: Supplier partnership - Partnering, Supplier selection, Supplier Rating		https://drive.google.com/file/d/1p6DwQd1mSMIe7KS7p1Fz5duea8RZwQS5/view?usp=sharing	
10		Unit III TQM Tools and Techniques I	TQM _Unit III_Module 1: The seven traditional tools of quality	Dr. A Krishnaveni Professor Government College of Engineering, Tirunelveli *krishnaveni@gcetly.ac.in* 98941 82237	https://drive.google.com/file/d/1ZH69l_TOI1TUl-TDCzBeDCTs2sUZdQ5C/view?usp=sharing	
11			TQM_Unit III_Module 2: New management tools		https://drive.google.com/file/d/1ijlxzlKLJp7g8Pff6HHF6f9rf-9fZ2Dx/view?usp=sharing	
12			TQM_Unit III_Module 3: Six sigma: Concepts, Methodology, applications to manufacturing, service sector including IT		https://drive.google.com/file/d/1N_JtnE9rURSrMYhmFoaXdd9motXFwNiW/view?usp=sharing	

13			TQM_Unit III_Module 4: Bench marking - Reason to bench mark, Bench marking process - FMEA - Stages, Types		https://drive.google.com/file/d/1iHJibor2McHYpfe_MTnZ2PZjuRgi0EVZ/view?usp=sharing	
14		Unit IV Tqm Tools and Techniques II	TQM _Unit IV : Quality Circles - Cost of Quality	Dr. A Krishnaveni Professor Government College of Engineering, Tirunelveli *krishnaveni@gcetly.ac.in* 98941 82237	https://drive.google.com/file/d/1YNyncgpIzPe8yhB9YRRePY5PgWlQVyQP/view?usp=sharing	
15			TQM _Unit IV : Taguchi quality loss function		https://drive.google.com/file/d/13u3XfJ_CGAKJD8Q5WzFsYg7OEhYGFLXj/view?usp=sharing	
16		Unit V Quality Management System	TQM _Unit V_ Module 1: QMS Introduction—Benefits of ISO Registration—ISO 9000 Series of Standards—Sector-Specific Standards—AS 9100, TS16949 and TL 9000-- ISO 9001 Requirements—Implementation—Documentation—Internal Audits—Registration	Dr. A Krishnaveni Professor Government College of Engineering, Tirunelveli *krishnaveni@gcetly.ac.in* 98941 82237	https://drive.google.com/file/d/1HZjpXUvul5wqB3SeRl2tAZUsAgxoXI4I/view?usp=sharing	
17			TQM _Unit V _ Module 2: EMS Introduction—ISO 14000 Series Standards—Concepts of ISO 14001—Requirements of ISO 14001— Benefits of EMS		https://drive.google.com/file/d/1K8Q5piKgAxNNkxG0wVODTv7C883lDHpq/view?usp=sharing	

18. MF8071 Additive Manufacturing

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e-mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	MF8071 Additive Manufacturing	Unit 1 Introduction	Introduction to Additive Manufacturing	Dr.V.Subravel Assistant Professor Government College of Engineering Thanjavur *subra.vetri@gmail.com* 9940062272	https://drive.google.com/file/d/17bR9Ni33Pn5KESefwY0YJRAESn3GNK3Q/view?usp=drivesdk	
2		Unit II Design For Additive Manufacturing	Design for Additive Manufacturing	Dr.V.Subravel Assistant Professor Government College of Engineering, Thanjavur *subra.vetri@gmail.com* 9940062272	https://drive.google.com/file/d/1DbgU5PgyulZqCAA_olUYD1RlyPgB0Hda/view?usp=drivesdk	
3		Unit III Photopolymerization and Powder Bed Fusion Processes	STA and SLM	Dr.V.Subravel Assistant Professor Government College of Engineering, Sengipatti *subra.vetri@gmail.com* 9940062272	https://drive.google.com/file/d/1FKjWJxHDMSEzcuPpmOQi7rFFQ0ScpAAH/view?usp=drivesdk	
4		Unit IV Extrusion Based and Sheet Lamination Processes	Extrusion Based and Sheet Lamination Processes	Mr. K. Senthil Kumar Assistant Professor(ADHOC) Government College of Engineering, Sengipatti *senthil30may@gmail.com* 8344518235	https://youtu.be/byBhiaOXXJ8	
5		Unit V Printing Processes And Beam Deposition Processes	Additive Manufacturing	Mr.J.Prabhakaran Assistant Professor(ADHOC) Government College of Engineering, Sengipatti *Jpkn00@gmail.com* 9500334050	https://youtu.be/y-eJsEKrYpU	

19. ME8095 Design of Jigs, Fixtures and Press Tools

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e-mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ME8095 Design of Jigs, Fixtures and Press Tools	Unit 1 Locating and Clamping Principles	Introduction	MrV.Gurukarthikeyan Assistant Professor Government College of Engineering Thanjavur *gurumech37@gmail.com* 8122077083	https://youtu.be/Vgze9xSA4hc	
2			Types of Locators		https://youtu.be/Z8MlAJkbuA0	
3			Types of Clamps		https://youtu.be/ww9GBXqjC5g	
4			Drill bushes		https://youtu.be/zpH2REAbDBY	
5		Unit II Jigs And Fixtures	Design of fixtures	Mr.V.Gurukarthikeyan Assistant Professor Government College of Engineering, Thanjavur *gurumech73@gmail.com* 8122077083	https://youtu.be/4TdjrRpOKQA	
6			Machine fixtures		https://youtu.be/a8TQDWcUT8k	
7			Press Tools		https://youtu.be/RZp7obv0-T4	

8		Unit III Press Working Terminologies and Elements of Cutting Dies	Press tools 2	Mr.V.Gurukarthikeyan Assistant Professor Government College of Engineering, Sengipatti *gurumech73@gmail.com* 8122077083	https://youtu.be/Yig9jgfBN5E	
9			Press tools 3		https://youtu.be/BK7ktnqZkcM	
10		Unit IV Bending and Drawing Dies	Bending - 1	Mr.V. Gurukarthikeyan Assistant Professor Government College of Engineering, Sengipatti *gurumech73@gmail.com* 8122077083	https://youtu.be/8eK0JgwEATo	
11			Bending - 2		https://youtu.be/uDDkRLDemfE	
12			Drawing - 1		https://youtu.be/xQudQ7Sc_M0	
13			Drawing - 2		https://youtu.be/6jaHpKy4wtw	
14		Unit V Forming Techniques and Evaluation	Forming Technology -1	Mr.V.Gurukarthikeyan Assistant Professor Government College of Engineering, Sengipatti *gurumech73@gmail.com* 8122077083	https://youtu.be/IjDJf3AaC-g	
15			Forming Analysis - 2		https://youtu.be/jky5c9QtnVI	

20. ME8097 Non-Destructive Testing and Evaluation

Sl. No	Subject Code and Name	e-Lecture Unit	Title of video lecture	Faculty Name, Designation, e-mail ID and mobile number	Video link (Google Drive/You Tube)	QR code
1	ME8097 Non-Destructive Testing and Evaluation	Unit I Overview of NDT	Overview of NDT	Dr.G.Padmanaban Associate Professor Thanthai Periyar Government Institute of Technology, Vellore *gknaban.pg@gmail.com* 9443956536	https://youtu.be/0WfmRb4gwsM	
2			Applications-Merits and Demerits of NDT		https://youtu.be/HpfApJOUFKY	
3			Various physical characteristics of Materials and their applications in NDT-Visual Examination		https://youtu.be/CQR-2zR7rHI	
4			Visual Examination (aided)		https://youtu.be/FHHM3cXE76k	
5		Unit II Surface NDE methods	Principle of Liquid Penetrant Test-important steps	Dr.G.Padmanaban Associate Professor Thanthai Periyar Government Institute of Technology, Vellore *gknaban.pg@gmail.com* 9443956536	https://youtu.be/lefO75JqIiU	
6			Characteristics-Types of Penetrants and Developers		https://youtu.be/_-9K3YH5S-k	
7			Principle of Magnetic particle Inspection Test-Steps involved		https://youtu.be/oWcG8-7RQw0	

8			Application of Magnetic media- Demagnetization- Residual Magnetism- Advantages and Limitations		https://youtu.be/vttf2GRuo0o	
9		Unit III Thermography and Eddy Current Testing (ET)	Principle of Thermography	Dr.G.Padmanaban Associate Professor Thanthai Periyar Government Institute of Technology, Vellore *gknaban.pg@gmail.com* 9443956536	https://youtu.be/izTSPB6DxJ4	
10			Types of Thermography and its advantages and Limitations		https://youtu.be/x0IKjOrJcPE	
11			Principle of Eddy Current Testing		https://youtu.be/bMl0lvRisGU	
12			Types of probes and Evaluation of result		https://youtu.be/oVo0k1nPtWU	
13			Applications, advantages and Limitations of ECT		https://youtu.be/VjQlSIH176k	
14		Unit IV Ultrasonic Testing and Acoustic Emission	Ultrasonic testing and Principle		https://drive.google.com/file/d/1tVd89aBBKpFBz_lPzHK0nEOFcstmydac/view?usp=sharing	
15			Transmission and pulse-echo method, straight beam and angle beam ,		https://drive.google.com/file/d/1I0wmT4_kuVL0pQ7BhKS6qZiceNmb4zMH/view?usp=sharing	

16			Transducer, Data representation, A-Scan, B-scan, C-scan. Time of Flight Diffraction	J.Ranganathan Assistant Professor Thanthai Periyar Government Institute of Technology, Vellore *ranganathan446@gmail.com* 9600884902	https://drive.google.com/file/d/1Xlk8nAI4LvoULKuOplLEIzuKLHgVrjeY/view?usp=sharing	
17			Acoustic Emission Principle and History		https://drive.google.com/file/d/1NaoWTXTB3EiWwcCRmZGvoz7c4Y9uvoPd/view?usp=sharing	
18			Acoustic Emission Testing Process		https://drive.google.com/file/d/1NFP8rxabHFoc0_1RpEYw6L-oDb1dNlF6/view?usp=sharing	
19			Acoustic Emission parameters		https://drive.google.com/file/d/1NMe_tsqtDYO9Ki6FKw3QBroKOR_er7Xo/view?usp=sharing	
20			Applications of Acoustic Emission		https://drive.google.com/file/d/1N_vEz_7ldwWOjoUWmaMATBtaoZfFFiu4/view?usp=sharing	
21		Unit V Radiography (RT)	Radiography	E.Elavenil Assistant Professor Thanthai Periyar Government Institute of Technology, Vellore *e.elavenil75@gmail.com* 9952522562	https://drive.google.com/drive/folders/14qSE-uQdE-kzSgJau-TR_z0D_KDErxg9?usp=sharing	
22					https://youtu.be/slMmYjVNWyE	
23					https://youtu.be/SFabz2M7Ypg	

24				P.Rajiv Assistant Professor Thanthai Periyar Government Institute of Technology, Vellore *ssmp.rajiv@gmail.com* 9751081674	https://youtu.be/apoqzgRkKt0	
25					https://youtu.be/rbHbf3AQrhA	