STUDY PLAN

RAC		THEORY OF MACHINES		IC ENGINE		SOM	
Title	Timing	Title	Timing	Title	Timing	Title	Timing
Basic Introduction	Recording-1	Basic Introduction	Recording-1	Basic Introduction & Terminology	Recording-1	Bending in Beam-1	Recording-1
VCRS Intro + Ideal Refrigeration Cycle	Recording-2	Kinematic Pair & Classification-1	Recording-2	Air Standard Cycle + Otto Cycle Intro	Recording-2	Bending in Beam-2	Recording-2
VCRS Cycle Analysis (COP etc.)	Recording-3	Kinematic Pair & Classification-2	Recording-3	Otto Cycle Detailed	Recording-3	Bending in Beam-3	Recording-3
VCRS Performance Analysis	Recording-4	Degree of Freedom (DOF)	Recording-4	Diesel Cycle	Recording-4	Torsion in Shaft-1	Recording-4
Reverse Brayton (Bell-Coleman) Cycle	Recording-5	DOF Numericals-1	Recording-5	Dual Cycle + Numericals	Recording-5	Torsion in Shaft-2	Recording-5
Cascade Refrigeration System	Recording-6	DOF Numericals-2	Recording-6	Efficiency Comparison of Cycles-1	Recording-6	Combined Stresses-1	Recording-6
Refrigerants Definition	Recording-7	Grashof's Law	Recording-7	Efficiency Comparison of Cycles-2	Recording-7	Combined Stresses-2	Recording-7
Properties of Refrigerants	Recording-8	Inversions (Four Bar & Slider)-1	Recording-8	Performance Analysis-1	Recording-8	Combined Stresses-3	Recording-8
Psychrometry Introduction	Recording-9	Inversions (Four Bar & Slider)-2	Recording-9	Performance Analysis-1	Recording-9	Mohr Circle-1	Recording-9
Psychrometric Chart Processes	Recording-10	Instantaneous Center	Recording-10	SI Engine Combustion-1	Recording-10	Mohr Circle-2	Recording-10
Psychrometric Chart Numericals	Recording-11	Flywheel-1	Recording-11	SI Engine Combustion-2	Recording-11	SFD & BMD-1	Recording-11
Refrigeration Devices (Working & Material)	Recording-12	Flywheel-2	Recording-12	CI Engine Combustion-1	Recording-12	SFD & BMD-2	Recording-12
		Governor Intro	Recording-13	CI Engine Combustion-2	Recording-13	SFD & BMD-3	Recording-13
		Governor Classification	Recording-14	Carburetor	Recording-14	SFD & BMD-4	Recording-14
		Governor Performance	Recording-15	Fuel Quality & A/F Ratio	Recording-15	Slope & Deflection-1	Recording-15
		Gears Intro & Classification-1	Recording-16	Octane & Cetane Number	Recording-16	Slope & Deflection-2	Recording-16
		Gears Intro & Classification-2	Recording-17	Cooling System	Recording-17	Columns & Struts	Recording-17
		Gear Terminology	Recording-18	Lubrication System	Recording-18	Thin & Thick Cylinder	Recording-18
		Gear Analysis	Recording-19			Theory of Failure-1	Recording-19
		Gear Interference	Recording-20				

			Balancing-1	Recording-21				Theory of Failure-2	Recording-20
			Balancing-2	Recording-22				Springs	Recording-21
			Vibrations-1	Recording-23				Basic Introduction	Recording-22
			Vibrations-2	Recording-24				Types of Loads & Classification-1	Recording-23
			Vibrations-3	Recording-25				Types of Loads & Classification-2	Recording-24
			Cam & Follower-1	Recording-26				Stress & Strain (Basics)-1	Recording-25
			Cam & Follower-2	Recording-27				Stress & Strain (Basics)-2	Recording-26
								Stress & Strain (Basics)-3	Recording-27
								Stress-Strain Curve	Recording-28
								Failure under Different Loading	Recording-29
								Elastic Constants	Recording-30
								Deformation (Series & Parallel)-1	Recording-31
								Deformation (Series & Parallel)-2	Recording-32
								Strain Energy due to Self Weight	Recording-33
								Strain Energy-1	Recording-34
								Strain Energy-2	Recording-35
								Moment of Inertia-1	Recording-36
								Moment of Inertia-2	Recording-37
								Thermal Stress-1	Recording-38
								Thermal Stress-2	Recording-39
								Beams (CRM)-1	Recording-40
								Beams (CRM)-2	Recording-41
								Beams (CRM)-3	Recording-42

MACHINE DESIGN		MATERIAL SCIENCE		HEAT AND MASS TRANSFER	
		Title	Timing	Title	Timing
Title	Timing	Introduction-1	Recording-1	Basic Introduction (Heat Transfer)	Recording-1
Basic Introduction	Recording-1	Crystalline Materials-1	Recording-2	Conduction-1	Recording-2
Design against Static Loading	Recording-2	Crystalline Materials-2	Recording-3	Conduction-2	Recording-3
Design against Fluctuating Loading-1	Recording-3	Steel-1	Recording-4	Conduction-3	Recording-4
Design against Fluctuating Loading-2	Recording-4	Heat treatment of steel-1	Recording-5	Fins	Recording-5
Bolted Joints-1	Recording-5	Cast Iron	Recording-6	Convection-1	Recording-6
Bolted Joints-2	Recording-6			Convection-2	Recording-7
Riveted Joints-1	Recording-7			Convection-3	Recording-8
Riveted Joints-2	Recording-8			Radiation-1	Recording-9
Belt Drive-1	Recording-9			Radiation-2	Recording-10
Belt Drive-2	Recording-10			Radiation-3	Recording-11
Belt Drive-3	Recording-11				
Clutches-1	Recording-12				
Clutches-2	Recording-13				
Brakes-1	Recording-14				
Brakes-2	Recording-15				
Bearings-1	Recording-16				
Bearings-2	Recording-17				
Bearings-3	Recording-18				
Design of Gears	Recording-19				
Miscellaneous-1	Recording-20				
Miscellaneous-2	Recording-21				