

UTKAL GOURAV MADHUSUDAN INSTITUTE OF TECHNOLOGY, RAYAGADA
Academic lesson plan for summer semester - 2023

Name of the teaching faculty: **Arabinda Pradhan**
 Semester: **4th**
 No. of periods per week: **5**
 semester Exam: **80**
 Total Marks: **100**

Discipline / Dept.: **EE**
 Subject (Theory): **EC-I**
 Total Periods: **75**
 Class Test: **20**

Week	Period	Unit / chapter	Topic to be covered
1 ST	1 st	DC GENERATORS	Introduction to EM. Operating principle of generator
	2 nd	DC GENERATORS	Constructional features of DC machine.
	3 rd	DC GENERATORS	Constructional features of DC machine.
	4 th	DC GENERATORS	Different types of D.C. machines
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to Basics of DC generator.
2 ND	1 st	DC GENERATORS	Derivation of EMF equation
	2 nd	DC GENERATORS	Losses and efficiency. Condition for max efficiency
	3 rd	DC GENERATORS	Armature reaction in D.C. machine
	4 th	DC GENERATORS	Commutation and methods of improving commutation
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Problems Discussion on emf equation
3 RD	1 st	DC GENERATORS	Inter poles and compensating winding
	2 nd	DC GENERATORS	Characteristics of D.C. Generators
	3 rd	DC GENERATORS	Characteristics. Problem Discussion on losses Efficiency
	4 th	DC GENERATORS	Application of different types of D.C. Generators.
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Problems Discussion on losses efficiency
4 TH	1 st	DC GENERATORS	Concept of critical resistance and critical speed
	2 nd	DC GENERATORS	Conditions of Build-up of emf of DC generator
	3 rd	DC GENERATORS	Parallel operation of D.C. Generators.
	4 th	DC GENERATORS	Numerical problems on DC Generator
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Doubt clear class related to DC generator.
5 TH	1 st	DC GENERATORS	Doubt clear class related to DC generator.
	2 nd	DC MOTORS	Basic working principle of DC motor
	3 rd	DC MOTORS	Significance of back emf in D.C. Motor.
	4 th	DC MOTORS	Voltage equation of D.C. Motor.
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Problems Discussion on Back EMF.
6 TH	1 st	DC MOTORS	Condition for maximum power output
	2 nd	DC MOTORS	Torque Equation and Problems.
	3 rd	DC MOTORS	Characteristics of shunt, series and compound motors
	4 th	DC MOTORS	Application and Problems on output power.
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to Basics of DC Motor.
7 TH	1 st	DC MOTORS	Starting method of shunt, series and compound
	2 nd	DC MOTORS	Speed control of D.C shunt motors
	3 rd	DC MOTORS	Speed control of D.C shunt motors and problems.
	4 th	DC MOTORS	Speed control of D.C. series motors
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Numerical problems on DC Motor.
8 TH	1 st	DC MOTORS	Determination of efficiency of D.C. Series Machine
	2 nd	DC MOTORS	Determination of efficiency of D.C. shunt Machine
	3 rd	DC MOTORS	Losses, efficiency and power stages of D.C. motor
	4 th	DC MOTORS	Uses of D.C. motors, Problems Discussion.
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Doubt clear class related to DC Motor.
9 TH	1 st	SINGLE PHASE TRANSFORMER	Working principle of transformer.
	2 nd	SINGLE PHASE TRANSFORMER	Constructional feature of Transformer
	3 rd	SINGLE PHASE TRANSFORMER	Constructional feature of Transformer
	4 th	SINGLE PHASE TRANSFORMER	Constructional feature of Transformer
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective and Doubt discussion
10 TH	1 st	SINGLE PHASE TRANSFORMER	procedures for Care and maintenance
	2 nd	SINGLE PHASE TRANSFORMER	EMF equation of transformer
	3 rd	SINGLE PHASE TRANSFORMER	Ideal transformer voltage transformation ratio
	4 th	SINGLE PHASE TRANSFORMER	Operation of Transformer at no load with ph diagrams