4th sem. EM

BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

SIVARAM VIHAR, GHATAKESWAR HILLS
MOHADA, BERHAMPUR (GM.)

STUDENT'S ATTENDANCE REGISTER

Time / Day		09.5C – 10.4C	11.3C – 12.2C	10.4C – 11.3C	9.5C – 10.4C
TUE		Electrical Machine			
WED			Electrical Machine		
FRI				Electrical Machine	
SAT					Electrical Machine

Year/ Session	2nd/2023(E)
Semester & Branch	From – 14|02|2023 to: 23|05|2023
Subject with Code	4th Sem / E & Telecommunication.
Name of the Faculty Member	Electrical Machine (Th-1)
	Er. K. Srinivas

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
February 2023	3rd	14/02/23	Unit-1 Electrical Material: 1.1: Properties & uses of different Conducting material.
		15/02/23	1.2: Properties & uses of various insulating material used in electrical engineering.
		17/02/23	1.3: Various magnetic materials & their uses.
	4th	21/02/23	Unit-2: DC Generator: 2.1: Construction, principle & application of DC Generator.
		22/02/23	2.2: Classify DC Generator including voltage equation.
		24/02/23	
		25/02/23	

Signature of the Faculty:

Signature of the Principal/Course Co-ordinator/HOD:

B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
February	5th	28/02/23	2.3: Derive EMF equation & simple problems.
March 2023	1st	01/03/23	2.4: Parallel operation of DC Generators.
			Unit: 3: DC Motor:
		03/03/23	3.1: Principle of working of DC motor.
		04/03/23	3.2: Concept of development of torque & back EMF in DC motor including simple problems
	2nd	10/03/23	3.3: Derive equation relating to back emf, current, speed & torque equation.
		11/03/23	
	3rd	14/03/23	
		15/03/23	3.4: Classify DC motors & explain characteristics, application.

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B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
March 2023	3rd	17/03/23 18/03/23	3.5: Three point & four point starter/ static of DC motor by solid state converters.
	4th	21/03/23	3.6: Speed of DC motor by field control and armature control method.
		22/03/23	3.7: Power Stages of DC motors & derive efficiency of a DC motors
			Unit:4: AC Circuits:
		24/03/23	4.1: Mathematical representation of phasors, significant of operator "J".
		25/03/23	4.2: Addition, subtraction, Multiplication and Division of phasor quantities.
	5th	28/03/23 29/03/23 31/03/23	4.3: AC Series circuits containing resistance, capacitances, Conception of active, reactive and apparent power and Q-factor of series circuits & solve related problems.

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
April 2023	2nd	04/04/23 05/04/23 08/04/23	4.4: Find the relation of AC parallel circuits containing Resistances, Reactances & Capacitances Q-factor of parallel circuits.
	3rd	11/04/23	Unit: 5: Transformer: 5.1: Ideal transformer.
		12/04/23	5.2: Construction & working Principle of transformer.
		15/04/23	5.3: Derive emf equation of transformer, voltage transformation ratio.
	4th	18/04/23 19/04/23	5.4: Discuss flux, current, EMF components of transformer and their phasor diagram under no load condition.

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B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
April 2023	4th	21/04/23	5.5: Phasor representation of transformer flux, current emf primary and secondary. Voltage under loaded condition.
		22/04/23	5.6: Types of losses on single phase (1-Ø) transformer.
	5th	25/04/23	5.7: Open Circuit & Short-circuit test (simple problems)
		26/04/23	5.8: Parallel operation of transformer.
		28/04/23	5.9: Auto transformer.

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B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
April 2023	5th	29/04/23	Unit: 6: Induction Motor: 6.1: Construction feature, types of three-phase induction motor.
May 2023	1st	02/05/23	6.2: Principle of development of rotating magnetic field in the stator.
		03/05/23	6.3: Establish relationship between synchronous speed, actual speed and slip of induction motor.
		06/05/23	
	2nd	09/05/23	6.4: Establish relationship between torque, rotor current and power factor.
		10/05/23	6.5: Explain starting of an induction motor by using DOL and Star-Delta stator.
		12/05/23	→ State industrial use of induction motor.

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B.I.E.T.,COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
May 2023	2nd	13/05/23	Unit: 7: Single phase induction motor: 7.1: Construction features and principle of operation of capacitor type and shaded pole type of single phase induction motor.
	3rd	16/05/23	
		17/05/23	7.2: Explain construction & Operation of AC series motor.
		20/05/23	
	4th	23/05/23	7.3: Concept of alternator & its application.

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