ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT (AITAM) TEKKALI

(Approved by AICTE, Accredited by NBA Affiliated to JNTU, Kakinada)

STUDENT ATTENDENCE REGISTER

Name	: M. BHASKARARAO
Subject	: EMF
Class	: II – A
Year	: 2014 – 15

Scanned by CamScanner

LESSON PLAN

Period	Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Action Upon Review
	1/9	Scalar, Vector	1			
		Field, Scalar				
		Vector products				
	2/9	Vector Component				
		Unit Vector				
		Unit vector normal				
	3/9	to a plane				
		Vector Triple product				
		Cartesian				
	4/9	Cylindrical				
		Spherical				
		differential length				
	5/9	area, volume				
		divergence, Curl				
		gradient, Laplacian				
	8/9	Electro static fields				
		Coulomb's law				
		EFI due to a line and surface				
	9/9	Charge				
		Work done in moving a point				

Scanned by CamScanner

LESSON PLAN

Period	Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Action Upon Review
	12/9	Charge in electro static field				
		Electric potential				
		Properties of potential				
	15/9	function				
		Potential gradient				
		Gauss's Law				
		Application of Gauss Law				
	16/9	Maxwell's first law				
		$div(D) = \rho_v$				
	17/9	Laplace's and Poisson's eqn.	2			
		Solution of Laplace's equation in one	4			
		Variable	4			
	22/9	Electric dipole Dipole moment	4			
		Potential and EFI due to	4			
		an electric dipole	4			
	23/9	Torque on an	4			
		electric dipole in an electric	4			
		field	4			
	25/9	Behaviour of Conductors in	4			
		an electric field	4			

Scanned by CamScanner

LESSON PLAN

Period	Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Action Upon Review
		Conductors and Insulators				
	27/9	Electric field inside a dielectric material				
		polarization				
		Dielectric and				
	28/9	Conductor materials				
		Dielectric boundary Conditions				
	6/10	Capacitance				
		Capacitance of parallel plate				
	6/10	spherical and				
		Co-axial capacitors				
		Composite dielectrics				
		Static magnetic fields	3			
		Biot-Savart's Law	4			
		Oastard's experiment	4			
		Magnetic field intensity	4			
		MFI due to a straight Current carrying				
		filament				
		MFI due to circular				
		Square and				
		Solenoid current				

Scanned by CamScanner

LESSON PLAN

Period	Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Action Upon Review
		Relation between magnetic flux				
		magnetic flux density				
		Maxwell's 2nd equation (div B)				
		Ampere's Circuital law				
		Its applications				
		MFI due to an infinite sheet of				
		Current and a long Current				
		carrying filament				
		Point form of Ampere's				
		Circuital law				
		Maxwell's third equation				
		Curl (H) = J				
		field due to Circular loop				
		Rectangular and Square loops				
		Magnetic forces	4			
		Moving charge in a Magnetic field	4			
		Lorentz force equation				
		Force on a Current element				
		force on a straight and a long current carrying conductor				

Scanned by CamScanner

LESSON PLAN

Period	Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Action Upon Review
		Force between two Straight long and				
		Parallel Current Carrying Conductors				
		Magnetic dipole				
		dipole moment				
		a differential Current loop				
		Torque on a Current loop				
		Self and Mutual inductance	5			
		Neumann's formula				
		determination of Self - Inductance				
		of a Solenoid and toroid and				
		Mutual inductance between a Straight				
		long wire and a Square loop wire				
		energy stored and density in a				
		magnetic field				
		Time Varying fields				
		Faradays Law of electromagnetic				
		Induction and point form				
		Maxwell's fourth equation				
		$\text{Curl}(E) = -\frac{\partial B}{\partial t}$				
		Statically & dynamically Induced emf				

Scanned by CamScanner

LESSON PLAN

Period	Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Action Upon Review
		Simple problems				
		Modifications of				
		maxwell's equation				
		for time varying				
		fields				
		Displacement Current				
		Poynting theorem				
		Poynting Vector				

Scanned by CamScanner