Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY PDDC - SEMESTER – IV • EXAMINATION – WINTER 2012

Subject code: X 40904		code: X 40904 Date: 01/01/2	Date: 01/01/2013	
Subj	ect l	Name: Theory of Electromagnetics		
Time: 02.30 pm - 05.00 pm		2.30 pm - 05.00 pm Total Marks	: 70	
		ions:		
	1. 2. 3.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a)	Explain Cartesian Co-ordinate system. Also explain transformation of vector from Cartesian to cylindrical co-ordinate system.	07	
	(b)	State and explain Biot Savart's Law.	07	
Q.2	(a)	State and explain Coulomb's law with necessary equation.	07	
	(b)	State and explain divergence theorem. OR	07	
	(b)	Write in brief electrostatic precipitator.	07	
Q.3	(a)	1	07	
	(b)	State and explain Ampere's circuit law. OR	07	
Q.3	(a)		07 07	
	(b)	Explain corona phenomenon.	U/	
Q.4	(a)	1 6 1 6	07	
	(b)	Explain curl of vector with necessary equation. OR	07	
Q.4	(a)		07	
	(b)	State and explain Poisson's Equation.	07	
Q.5	(a)		07	
	(b)	Write short note on equipotential surface. OR	07	
Q.5	(a)		07	
	(b)	State and explain Gauss's law.	07	
