VELAMMAL INSTITUTE OF TECHNOLOGY, PANCHETTI
DEPARTMENT OF ECE
ASSIGNMENT QUESTIONS

Academic Year	**2017-2018**
Batch	**2016-2020**
Year/Semester/Section	**II/III/B**
Subject Code /Title	**EC6403/EMF**
Name Of the Instructor	**S.MANJU**

ASSIGNMENT NO: I **Total Marks: 20**
DATE OF ISSUE:17/01/2018 **DATE OF SUBMISSION:25/01/2018**

S.NO.	Questions	K Level	CO	Marks
1.	Identify the spherical coordinates of A and Cartesian coordinates of B for the given two points A(x=2, y=3, z=-1) & B(r=4,θ=25^o ,Φ=120^o).	Apply	CO1	5
2.	Solve for charge Q_2 if a point charge Q=300μC located at (1,-1,-3)m experiences a force F1=8 a_x - 8 a_y + a_z (N) due to point charge Q_2 at (3,-3,-2)m.	Apply	CO1	5
3.	Identify E, P and ρ_S if a linear, homogeneous, isotropic dielectric material has ξ_r = 3.6 and is covering the space between z = 0 and z = 1 for V= -6000 z volts in the material.	Apply	CO2	10

ASSIGNMENT NO: II **Total Marks: 20**
DATE OF ISSUE:09/02/2018 **DATE OF SUBMISSION:12/02/2018**

1.	Build the magnetic field intensity at (0,0, -5) if a circular loop located on $x^2+y^2=4$, z=0 carries a direct current of 7 A along a_ϕ ^ .	Apply	CO3	10
2.	Identify the self-inductance and the mutual inductance for an iron ring of relative permeability 100 which is wound uniformly with two coils of 100 and 400 turns of wire. The cross section of the ring is 4 cm^2 and the mean circumference is 50 cm.	Apply	CO3	10

ASSIGNMENT NO: III **Total Marks: 20**
DATE OF ISSUE: 09/03/2018 **DATE OF SUBMISSION:14/03/2018**

1.	Build three coordinate systems and determine the field quantities using EM software (or) MATLAB	Apply	CO6	20

Faculty Incharge	HOD	Vice Principal	Principal