Reg. No. : ....

Name : ....

V Semester B.Tech. Degree (Reg./Sup./Imp. – Including Part Time) Examination, November 2014
(2007 Admn. Onwards)
PT2K6/2K6 EC 503 : APPLIED ELECTRO MAGNETIC FIELD THEORY

Time : 3 Hours   Max. Marks : 100

Instruction : *Answer all questions.*

PART – A

I. a) Explain electric scalar potential.

    b) Write short note on electric dipole.

    c) State and explain Ampere's law.

    d) Explain scalar magnetic potential.

    e) What is wave polarization, explain its importance.

    f) Explain Poynting's vector.

    g) State and explain laws of reflection and refraction.

    h) What is Smithchart ? What are its application ?   **(8×5=40)**

PART – B

II. a) State and explain Stake's theorem.   **6**

    b) Derive the expression for electric field intensity due to a infinite line charge with uniform charge density P_L c/m.   **9**

                      OR

    c) Derive the expression for capacitance between parallel wires.   **8**

    d) A circular disk of radius 4 m carries a uniformly distributed charge of 350π μc. Calculate the force on a 50 μc charge located on the axis of the disk and 5 m from its centre.   **7**