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Total Number of Pages : 1

M.TECH

M.TECH 2ND SEMESTER (AR 18) REGULAR EXAMINATIONS, APRIL/MAY 2019

ANTENNAS AND RADIATING SYSTEMS

Branch: ECE, Subject Code:MECPC2010

Time: 3 Hours

Max Marks : 70

PART-A**(10 X 2=20 MARKS)****1. Answer the following questions.**

- Draw the radiation pattern of a half wave dipole antenna.
- What is meant by radiation pattern?
- Define Radiation intensity?
- Define Beam efficiency?
- Define Directivity?
- What are the different types of aperture?
- Define Aperture efficiency?
- What are the field zone?
- What is meant by Polarization?
- Define antenna efficiency?

PART-B**(5 X 10=50 MARKS)****Answer any five questions from the following.**

- Q2. a) Define and discuss the antenna parameters. [5]
 b) Explain the current distribution in dipole antenna. [5]
- Q3. a) Find the fields radiated from micro strip for the principal E-plane and H-plane. [5]
 b) Write the properties of beam forming matrices. [5]
- Q4. a) Explain the terms cell splitting and sectorized systems. [5]
 b) Explain Vivaldi antenna. [5]
- Q5 a) Derive the equation for Antenna array factor ? [5]
 b) A micro strip transmission line of beryllium oxide of dielectric const 6.8 has a width-to-height ratio of 1.5. Assuming that the thickness-to-height ratio is 0, determine Effective dielectric constant. [5]
- Q6 a) Explain Radiation Pattern. [5]
 b) Explain the use of antenna in signal processing. [5]
- Q7 a) Explain about horn antennas with proper diagram. [5]
 b) Design the DOA of a two-element array. [5]
- Q8. Write short notes on :
 a) Horn antenna [5]
 b) What is a Short Dipole? [5]

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