SCHOOL OF ENGINEERING AND TECHNOLOGY

D.C. COURT JUNCTION, DIMAPUR

End Term Examinations December 2015

Course Code:	EC5T01	**Semester:**	V	**TotalMarks**	60
Course Name:	**Antenna & Wave Propagation**			**Time:**	3hrs.

Answer the following questions:

1. Define : i) Directive gain ii) VSWR iii) Capture area iv) FNBW (4)

2. Write a short note on : i) Half wave doublet ii) Fading (4)

3. What is antenna top loading and tuning? Give the relationship between physical and effective heights of antenna. (4)

4. What is MUF? Calculate the MUF for flat earth and curved Earth. (5)

5. Discuss the effect of ground on antenna performance? (5)

6. What is skip distance? Discuss in detail. (6)

7. Discuss antenna polarization. Give its applications. (6)

8. a) Explain in detail Folded dipole antenna. (8)

(OR)

b) What is pattern multiplication? Determine the radiation pattern for 4-isotropic and 8-isotropic elements fed in phase and spaced λ/2 apart.

9. a) Explain in detail Parabolic reflectors. Also discuss the effects of focal length and aperture size in parabolic reflector. (8)

(OR)

b) Calculate the electric field component due to radiation from an oscillating current element.

[Given: $H_\Phi = \frac{I_{dl}\text{Sin}\theta}{4\Pi}\left[\frac{-w\sin wt_1}{rc} + \frac{\cos wt_1}{r^2}\right]$.

10. a)Explain in detail the different modes of radio wave propagation. (10)

(OR)

b) Discuss the concept of lens antenna.

****