

Antenna and Wave Propagation
(EC-303, Dec-2005)

Note: Section A is compulsory. Attempt any four questions from Section B and any two questions from Section C.

Section-A

- a) What is antenna reciprocity?
- b) What factors affect the directional pattern of antenna?
- c) How is antenna efficiency calculated?
- d) What is Omni directional antenna? Draw its directional pattern.
- e) Define horizontally polarized wave.
- f) Where is parasitic array used?
- g) Define antenna gain.
- h) Define the electrical length of antenna.
- i) What is broad side array?
- j) What is the significance of antenna impedance?

Section-B

2. What are 'skip distance' and 'skip zone'?
3. Explain the working of reflector antenna
4. Describe the surface wave propagation for vertical and horizontal dipole.
5. An antenna has been designed for 65 MHz. Shall it work properly for (a) 130 MHz? Illustrate the answer with necessary figures.
6. Discuss the ionospheric propagation.

Section-C

7. Compare the features of various linear wire antennas.
8. Write notes on, a) circular aperture antenna, b) antenna temperature.
9. Compare various antenna arrays

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