

Code: **ECMC2T6B**

I M.Tech - II Semester - Regular Examinations - December 2013

**SELECTED TOPICS IN ANTENNAS
(MICROWAVE & COMMUNICATION ENGINEERING)**

Duration: 3 hours

Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

1. a) Explain the operating principles of multiple feed and resonant loop Yagi-Uda antennas. 8 M
b) Write about design of rhombic antenna and explain its radiation properties. 6 M
2. Derive the radiated fields bandwidth input impedance of cylindrical dipole. 14 M
3. a) Discuss planar log spiral antenna. 7 M
b) Explain the theory behind spiral antennas. 7 M
4. a) Explain the principle of scaling and its application to log periodic design. 7 M
b) Write about V-log-Periodic array. 7 M
5. a) Derive the field equations of cylindrical DRAs. 10 M
b) Explain about excitation methods applied to the DRA. 4 M

6. Discuss the Babinet's principle for complementary antennas. 14 M
7. a) What is Radome? 4 M
- b) Explain the operating principles of half wave dielectric Radome with suitable equations. 10 M
8. Discuss the influence of an oblique angle of incidence on the shape and development of elements. 14 M