

Code: ECMC2T4

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

**EMI/EMC  
(MICROWAVE & COMMUNICATION ENGINEERING)**

Duration: 3 hours

Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

1. a) Explain the effects of Electromagnetic Radiation on human life. 7 M  
b) Draw and explain the frequency spectrum reference to various hazards of EM radiation. 7 M
2. a) What is electromagnetic pulse and explain the effects of electromagnetic discharge. 7 M  
b) Explain various sources of noise and explain the methods to limit the noise. 7 M
3. a) What is Emission? And explain the testing process of radiated emission. 7 M  
b) Draw and represent the ideal OATS measurements and its equipment standards. 7 M

4. a) Explain the differences between the GTEM cell and TEM cell. 7 M
- b) With a practical example explain the effects of Radiation Interference. 7 M
5. a) What is the advantage of power line filters? 7 M
- b) Explain the problems of conducted voltages and currents in circuits 7 M
6. a) Define grounding and explain types of grounding. 6 M
- b) Write a short note of the following shielding and Isolation. 8 M
7. a) Explain the effect of magnetic field reflection effect. 7 M
- b) Derive the equation for reflection losses. 7 M
8. a) Explain the European standards of EMI and EMC. 7 M
- b) Draw and explain the design process of transformer suitable of EMC standard. 7 M