PVP 12

Code: **ECMC2T4**

I M.Tech-II Semester–Regular/Supplementary Examinations – July 2017

EMI/EMC
(MICROWAVE & COMMUNICATION ENGINEERING)

Duration: 3 hours Max Marks: 70

Answer any FIVE questions. All questions carry equal marks

1. a) Explain the following practical experiences and concerns of EMI. 6 M
   i) Biological effects ii) Secure communication concerns

   b) Describe the methods to utilize the electromagnetic spectrum efficiently. 4 M

   c) Define EMI, EMC. 4 M

2. a) Explain the different sources of electromagnetic interference. 7 M

   b) Write a short note on electrostatic discharge. 7 M

3. a) Explain EMI from power electronic system. 7 M

   b) Write a short note on the non-linearities in circuits. 7 M

4. a) Discuss in detail about measurement using anechoic chamber. 7 M

   b) Compare the following test facilities 7 M
   i) anechoic chambers ii) TEM cell iii) GTEM cell

5. a) What are instruments used for measuring conducting EMI originating from operation on electronic or electric equipment? 7 M

   b) Explain the purpose of frequency and impedance scaling in filter design. 7 M

6. a) Explain the role of isolating and neutralizing transformers. 7 M

   b) Discuss about different types of cabling techniques. 7 M

7. a) Explain about the design methodologies for shielding effectiveness. 7 M

   b) What are the guidelines for good bonding explain? 7 M

8. a) Explain the effect of EMI on operations of transformer. 7 M

b) What are the national/international EMC standards for EMC design components. 7 M