PVP 12

Code: ECMC1T4

I M.Tech - I Semester - Regular Examinations – April 2015

MICROSTRIP COMPONENTS & MICROSTRIP ANTENNAS

(MICROWAVE & COMMUNICATION ENGINEERING)

Duration: 3 hours Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

1. a) Explain micro strip capacitive evaluation and characteristic Impedance. 7 M

   b) A 2.0mm thick fused quartz substrate with permittivity 3.8 is used to construct a micro strip circuit. If the line widths have to be within the limits of 0.2mm and 6.0mm. What is the range of characteristic impedance? 7 M

2. a) Explain about planar circular spiral inductor. 7 M

   b) Explain quasi lumped elements. 7 M

3. a) Write in detail about micro strip band elimination filter. 7 M

   b) Explain about Micro strip power dividers in detail. 7 M

4. a) What are the limitations of micro strip antennas and explain the ways to minimize them. 7 M

b) Discuss in detail about various micro strip antenna configurations. 7 M

5. a) Explain the design of a rectangular patch using the transmission model. 7 M

b) Explain the cavity model for a radiated field of a rectangular patch. 7 M

6. a) Write the applications of circular micro strip antennas. 7 M

b) Explain the Greens function model analysis method for a circular Micro strip Antenna. 7 M

7. a) Draw the rectangular micro strip patch antenna with horizontal radiating slots and explain. 7 M

b) Explain about circularly polarized antennas. 7 M

8. a) Explain in detail about combined feeds for micro strip antennas with neat diagrams. 7 M

b) Explain about aperture coupling and electromagnetic coupling. 7 M