

Code: ECMC2T2

**I M.Tech-II Semester-Regular Examinations-August 2014**

**WIRELESS COMMUNICATIONS AND NETWORKS  
(MICROWAVE & COMMUNICATION ENGINEERING)**

Duration: 3 hours

Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

- 1 a) Write short notes on static and dynamic channel assignment strategies. 7 M
- b) Explain how the capacity of cellular systems can be improved? 7 M
- 2 a) Explain TDMA in detail. What is frame efficiency? 7 M
- b) Explain how the radio capacity of a cellular system can be calculated? 7 M
- 3 a) What is common channel signalling? Explain in detail. 7 M
- b) Write short notes on X.25 protocol. 7 M
- 4 a) Explain about RAM data service and give the channel characteristics of RAM mobile data. Also explain about SS7 protocol. 7 M

- b) Draw and explain the architecture of CCS network. 7 M
- 5 a) Explain how tunnelling works in general and especially for mobile IP. 7 M
- b) Why has a scripting language been added to WML? How can this language help saving bandwidth and reducing delay? 7 M
- 6 a) What is backoff algorithm? Explain how the BEB algorithm in IEEE 802.11 works? 7 M
- b) Draw the IEEE 802.11 MAC frame format. What are the functions of PHY and MAC layers in IEEE 802.11 protocol? 7 M
- 7 a) What are the various error correction schemes used in Bluetooth baseband? Explain. 7 M
- b) List the types of L2CAP logical channels and give the formats of L2CAP. 7 M
- 8 a) What are the functions of authentication and encryption in GSM? How is system security maintained? 7 M
- b) Write short notes on Mobile application protocol. 7 M