



Reg. No. : .....

Name : .....

**Eighth Semester B.Tech. Degree Examination, November 2015**  
**(2008 Scheme)**  
**Computer Science & Engineering**  
**08.805 (3) MOBILE AND WIRELESS NETWORKS (Elective – III) (R)**

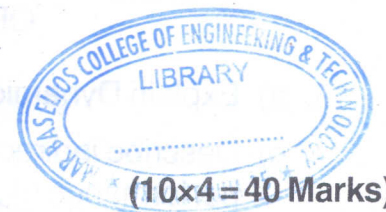
Time : 3 Hours

Max. Marks : 100

**PART – A**

Answer **all** questions.

1. Discuss different types of antennas and its signal propagation ranges of radio communication.
2. Give the significance of modulation in data transmission. Give any two reasons why baseband signal cannot be directly transmitted in a wireless system.
3. If the transmitter and receiver in a WLAN operating at 2.4 GHz are separated by a distance of 50 m and the power transmitted by the transmitter is 10 dBm, what is the received power considering free space propagation and Omni-directional antennas at both ends ? [1dBm = 0.0013 W]
4. Explain different types of handoff mechanism used in mobile communication.
5. What are hidden/exposed terminals and Near-far terminal of wireless communication.
6. Give significance of MOT protocol used in Digital Audio broadcasting.
7. Compare Infrared transmission with Radio transmission.
8. Describe classification of satellite based on their orbits.
9. What are different requirements of Mobile IP ? Explain.
10. Explain dynamic host configuration protocol (DHCP).



P.T.O.



## PART – B

Answer **one** question from **each** Module.

**Module – I**

11. a) What are the advantages of using multiplexing in data communication ? Explain FDM and TDM. 10
- b) Discuss different impairments of radio signal propagation. What are the effects of multipath propagation ? 10

OR

12. a) How spread spectrum eliminates narrowband interferences ? Explain Direct Sequence Spread Spectrum (DSSS) technique. 10
- b) How a MAC scheme using CDM has to assign certain codes to allow the separation of different users in code space ? Explain with example. 10

**Module – II**

13. a) Differentiate 2G and 3G technologies. Explain services offered by GSM and Functional Architecture of GSM system. 12
- b) Explain system architecture model and protocol architecture of DECT. 8

OR

14. a) Explain system architecture and protocol architecture of infrastructure based IEEE 802.11 standard (WLAN). 8
- b) Explain MAC frame structure of IEEE 802.11. 6
- c) Explain performance characteristics and working of Bluetooth technology. 6

**Module – III**

15. a) Describe IP packet delivery and Agent discovery in mobile network. 8
- b) What do you mean by tunneling and encapsulation. Explain different methods of encapsulation used in Mobile IP. 12

OR

16. a) Explain Dynamic source Routing of mobile ad-hoc network. 10
- b) Describe indirect TCP and Snooping TCP as approaches for improving performance of classical TCP in mobile and wireless environment. 10

**(3×20 = 60 Marks)**