

Code : 051819

B.Tech. 8th Semester Exam., 2017

Mobile & Wireless Computing

Time : 3 hours

Full Marks : 70

Instructions :

- (i) The marks are indicated in the right-hand margin.
- (ii) There are **Nine** questions in this paper.
- (iii) Attempt **FIVE** questions in all.
- (iv) Questions No. 1 is compulsory.

1. Answer any SEVEN

2×7

- i. Mention the basic mechanisms that affect propagation in mobile communication.
- ii. Define bandwidth efficiency.
- iii. Define home agent.
- iv. Define co-channel cells.
- v. What are the basic components of a Cellular system?
- vi. What is WML script?
- vii. State the advantages of digital modulation schemes.
- viii. Define spread spectrum techniques.
- ix. What are the advantages of Mobile-IP in mobile computing?

P.T.O.

- x. What is an Ad-hoc network?
2. (a) Explain the concept of frequency reuse with suitable diagram.
- (b) Compare and contrast FDMA and TDMA with examples. 7+7
3. (a) Describe the three-tier architecture of mobile computing using a suitable diagram.
- (b) What is hidden and exposed terminal problem? Explain how multiple access with collision avoidance scheme avoids hidden and exposed terminal problem. 7+7
4. (a) Discuss the agent discovery and registration mechanism of mobile IP.
- (b) What is a cellular system? Give their advantages and disadvantages. 7+7
5. (a) Define handover. Explain the different types of handover schemes in GSM.
- (b) Elaborate upon the components of WAP architecture. 7+7
6. (a) What are the challenges of mobile communication?
- (b) Explain the concept of CDMA. What are its merits and demerits? 7+7

7. Draw the protocol architecture of Bluetooth and briefly explain the Base band layer and L2CAP of Bluetooth. 14
8. (a) Discuss the free space and multipath fading propagation model in wireless communication.
- (b) Briefly explain the features and applications of ad-hoc network. 7+7
9. Write short notes on the following: 14
- (a) IVR system
- (b) MMS
- (c) GPRS
