

Code No: 117JR**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year I Semester Examinations, November/December - 2017****WIRELESS NETWORKS AND MOBILE COMPUTING****(Information Technology)****Time: 3 Hours****Max. Marks: 75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

Part- A (25 Marks)

- 1.a) List specific features of Bluetooth technology. [2]
- b) Explain about MAC layer. [3]
- c) What are the motivational factors for a specialized MAC? [2]
- d) What is the significance of multiple access with collision avoidance (MACA)? [3]
- e) Define care of address (COA). [2]
- f) Define reverse tunneling. [3]
- g) What is stateful asynchronous mechanism? [2]
- h) What is hybrid broad cast model? [3]
- i) List characteristics of MANET. [2]
- j) What are the memory manager features of Windows CE? [3]

Part-B (50 Marks)

- 2.a) What is the rationale behind using different slot sizes in Bluetooth? Discuss in brief?
 - b) Explain the architecture of Bluetooth system. [5+5]
- OR**
- 3.a) Give a brief note on 2G and 3G.
 - b) Explain HIPERLAN and its characteristics. [5+5]
- 4.a) A TDMA system uses a 270-833 kbps data rate to support eight users per frame
 - i) What is the raw data rate provided for each user?
 - ii) If guard time and synchronization occupy 10.1 kbps determine the traffic efficiency?
 - iii) if (7.4) code is used for error handling, what is overall efficiency?
 - b) What are the countermeasures in SDMA, TDMA, FDMA, and CDMA? [6+4]
- OR**
- 5.a) Explain the term interference in the space time ,frequency time and code domain.
 - b) Is it possible to use a composite TDMA/CDMA scheme? Justify your answer. [5+5]
- 6.a) Explain various requirements of Mobile IP.
 - b) Discuss Generic Routing Encapsulation (GRE). [5+5]
- OR**
- 7.a) Discuss mobile IPV4 and mobile IPV6.
 - b) Compare and contrast indirect TCP, snooping TCP, and mobile TCP. [5+5]

- 8.a) Discuss two tier client server architecture with neat sketch.
b) Explain context aware computing. [5+5]
- OR**
- 9.a) Explain classification of data delivery mechanism.
b) Explain Indexing schemes. [5+5]
- 10.a) Explain security threats in MANETS? Why a MANET faces greater security threats than fixed infrastructure network.
b) Explain in detail Destination Sequence Distance Vector (DSDV). [5+5]
- OR**
- 11.a) Discuss about mobile agents.
b) Define operating system (OS)? Discuss palm OS. [5+5]

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