

Code No: 117JR**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year I Semester Examinations, April/May - 2018****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) Mention the challenges of mobile computing. [2]
- b) Differentiate Infrared transmission with radio Transmission. [3]
- c) What is MACAW protocol. [2]
- d) State advantages and disadvantages of CDMA. [3]
- e) State routing between two IP addresses? [2]
- f) Draw the various fields of registration request packet of mobile IP. [3]
- g) What is query processing? [2]
- h) What are the steps involved in retrieving the indexed data frames? [3]
- i) List the properties of MANETs. [2]
- j) What are the advantages in DSR? [3]

PART-B**(50 Marks)**

- 2.a) Explain protocol architecture of IEEE802.11.
 - b) Discuss the differences between 1G, 2G, 2.5 and 3G mobile communications. [5+5]
- OR**
- 3.a) Discuss frequencies hopping spread spectrum and direct sequence spread spectrum.
 - b) Draw the MAC Frame format and explain its various fields in detail. [5+5]
- 4.a) Compare FDMA and TDMA schemes.
 - b) List the functional differences between CDMA and GSM. [5+5]
- OR**
- 5.a) Explain how MACA protocol avoids hidden exposed terminal problem.
 - b) List and Explain the MAC protocols for GSM. [5+5]
- 6.a) Describe mobile TCP. How does a supervisory host send TCP packets to mobile node and to fixed connection?
 - b) Explain the pros and cons of DHCP. [6+4]
- OR**
- 7.a) How does mobile IP works. Explain its architecture.
 - b) Draw format of mobile IP agent advertisement message. Describe each field in detail.[6+4]

- 8.a) List what are the hoarding techniques and discuss in detail.
b) Explain push based data delivery mechanisms in detail. [5+5]

OR

9. Explain the following selective tuning techniques.
a) Temporal addressing.
b) Broad cast addressing.
c) Distributed indexed based method. [10]

- 10.a) Explain destination sequence distance vector routing algorithm in MANETs.
b) Explain memory manager features in Windows CE. [6+4]

OR

- 11.a) Explain reactive and proactive protocols.
b) Discuss spread spectrum WAP. [5+5]

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