

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 110857

Roll No.

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B. TECH.

Theory Examination (Semester-VIII) 2015-16

MOBILE COMPUTING

Time : 3 Hours

Max. Marks : 100

Note: Attempt questions from all Sections as per directions.

Section - A

Attempt all parts of this section. Answer in brief. (2×10=20)

1. (a) What is multicluster architecture?
- (b) How many types of links are there between master and slave supported by Bluetooth?
- (c) Define Fisheye State Routing.
- (d) What are the additional functions in wireless ATM with respect to fixed ATM?
- (e) What is the general goal of a file system?

- (f) Discuss IP-Within-IP encapsulation in mobile IP.
- (g) Why did we choose hexagonal shape for cells in cellular phone system?
- (h) What is the basic purpose of Agent Advertisement in packet forwarding?
- (i) Differentiate Static and dynamic routing.
- (j) What are hidden node and exposed node problems in wireless LAN?

Section-B

2. Attempt any five questions from this section.

(10×5 = 50)

- a. Discuss the architecture of GSM. Also explain the security issues to implement the GSM.
- b. Explain the mechanisms to address the quality of services and energy efficient issues in MANETs.
- c. Describe the TORA algorithm and explain the route creation and route maintenance in detail with suitable example.

(2)

- d. Explain the architecture and protocol stack of Wireless Application Protocol (WAP).
- e. "CSMA/CD is not a suitable protocol for wireless LAN" Give reasons in favour of or against the statement.
- f. Describe fault tolerance in mobile computing environment in details.
- g. Compare SDMA, TDMA, FDMA and CDMA in terms of transmission techniques, signal separation, advantages, disadvantages and applications?
- h. What kind of problems may arise, if TCP is implemented over wireless networks? Explain.

Section-C

Attempt any two questions from this section.

(15×2 = 30)

- 3. Explain different issues that need to be addressed while designing routing protocols for adhoc wireless networks. Explain the key issues involved in Qos routing mobile Adhoc network.
- 4. Six stations A through F communicate using MACA protocol. Is it possible that two transmissions take place simultaneously? Explain your answer.

(3)

5. What are the different distribution services provided by the base station to deal with station mobility in 802.11 standard conformant wireless LAN?