M18002076

Registration No: | | | | | | | | | | |

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M.TECH 2ND SEMESTER REGULAR EXAMINATIONS, MAY 2018
MOBILE COMPUTING
Branch: CS, Subject Code:MCSPE2031
Time: 3 Hours
Max Marks : 70

PART-A (10 X 2=20 MARKS)

1. Answer the following questions.

a) Mention the difference between handover and handoff? [CO1]
b) Explain difference between Pico net & Scatter net. [CO1]
c) What is VPN and why its required? [CO1]
d) What is the difference between mobile ip &cellular ip? [CO1]
e) What is the structure of MSRN number & discuss its importance in GSM network?[CO2]
f) What are the steps to be used to update mobile subscriber location when it moves to new location area? [CO1]
g) What are the main elements of UMTS? [CO3]
h) What is HLR & what are its functions? [CO2]
i) What is cell & how to define the size of cell? [CO1]
j) Explain the mechanism of packet delivery in mobile ip. [C03]

PART-B (5 X 10=50 MARKS)

Answer any five questions from the following.

2 a) Compare and contrast TDMA, CDMA & FDMA techniques [CO1](5)
b) Describe briefly the principle of frequency reuse in the context of a cellular network. How does frequency reuse increase spectrum efficiency in a cellular system? Which is the main problem caused due to frequency reuse in a cellular architecture? [CO1] (5)

3 a) Suppose there are two mobile subscribers in a nearby location . Draw a functional diagram with proper explanation showing the route signals if the cell phones are

(i) Operating on the same MTSO (Mobile Telephone switching Office)
(ii) Operating on the different MTSO (Mobile Telephone switching Office) [CO1] (5)

b) Difference between guard band & guard time. Why they are important in cellular system. [CO1] (5)

4 a) Explain billing and charging in GPRS and explain different types of hands-off in GPRS. [CO2] (5)
b) Explain the functions of GPRS protocol stack with diagram. [CO2] (5)

5 a) Describe GSM architecture and its services in detail. Explain the function of BSC & MSC. [CO2] (5)

. **b)** Explain in detail about the handover in GSM and how call routing takes place in a GSM System . [CO2] (5)

6 a) What advantages does the use of IPv6 offer in mobility? List the current entities of mobile IP. [CO3](5)

b) Explain the key mechanism in mobile IP. [CO3] (5)

7 a) Discuss in details the mobility management in UMTS network. [CO3](5)

b) What is Walsh Function? How it is used for generating code tree in WCDMA. [CO3](5)

8 Write short notes on

a) LTE [CO3][5]

b) Features of WCDMA [CO3][5]

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