Registration no: | | | | | | | | | | |

Total Number of Pages: 2 **M.TECH**
CSPE204

2nd Semester Back Examination – 2016-17

MOBILE COMPUTING

Branch: COMMUNICATION ENGG, COMMUNICATION SYSTEMS,

Time: 3 Hours

Max Marks: 70

Q.CODE:Z829

Answer Question No.1 which is compulsory and any five from the rest.

The figures in the right hand margin indicate marks.

Q1 **Answer the following questions:** (2 x 10)

a) List the limitation of GSM Network.
b) What is a Cell? How do you define the size of a cell?
c) Explain the mechanism of Packet delivery in Mobile IP.
d) What is the difference between soft handoff and hard handoff?
e) What is the difference between Mobile IP and Cellular IP?
f) What are the basic functions of WAP gateway?
g) What do you mean by BSS in Wireless LAN?
h) Differentiate between slow and fast hopping.
i) What is a Mobile Agent? Which application domains need Mobile Agents?
j) Differentiate between Pico net and Scatter net.

Q2 a) Give an account of the three tier mobile computing architecture. (5)
b) Differentiate between TCP and wireless TCP. (5)

Q3 a) How tunneling is different from encapsulation? Briefly discuss different types of encapsulation techniques in mobile IP. (5)
b) Describe the working of Mobile IP with respect to the foreign agent and home agent. (5)

Q4 a) Describe the WAP protocol stack. (5)
b) Describe the functions of HLR and VLR in call routing and roaming. (5)

Q5 a) Explain the architecture of an infrastructure based IEEE802.11 wireless LAN with suitable example. (5)
b) Explain the different challenges due to disconnected operation of mobile hosts. (5)

Q6 a) What are the different channel allocation strategies? Explain them by justifying their suitability over variant user load distributions. (5)
b) Illustrate the difference between frequency hopping spread spectrum and direct sequence spread spectrum. (5)

Q7 Write the GPRS architecture reference model. Further explain the (10)

network signaling reference model for GPRS , in detail , with suitable diagram.

Q8 **Write short notes on any two of the following:** (5 x 2)

a) PCS Architecture.
b) Energy Efficiency in Mobile Networks
c) FDMA scheme
d) Routing Strategies in ad-hoc Networks