

Total number of printed pages – 4 B. Tech
PEEC 5409

Eighth Semester Examination – 2008

MOBILE COMPUTING

Full Marks – 70

Time : 3 Hours

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

*The figures in the right-hand margin
indicate marks.*

1. Answer the following in questions : 2×10
- (a) What is the basic function of WAP gateway?
 - (b) What does it mean that GSM uses both FDMA and TDMA techniques ?
 - (c) Can you recover a GSM system if both the HLR and VLR fail at the same time ?

P.T.O.

- (d) What is inter-BS handoff ? Explain.
- (e) What is known as mobility anchor point ?
- (f) What is called burst and normal burst ?
- (g) What is meant by a binding cache ?
- (h) Define traffic multiframe and control multiframe.
- (i) What do you mean by mobility binding ?
- (j) What are the different types of control channels in GSM ?
2. (a) Draw the WAP protocol stack. What is the function of Wireless Application Environment (WAE) ? 5
- (b) What modifications are made to Base Station System to accommodate GPRS ? 5
3. (a) Describe WAP network architecture. 5

- (b) Define and differentiate between Wireless Transaction Protocol(WTP) and Wireless Session Protocol(WSP). 5

4. (a) What are the major parts of an MS in GSM ? Describe them. 5

- (b) Describe the functions of HLR and VLR in call routing and roaming. 5

5. (a) What is PCS system ? Explain its architecture with block diagram. 5

- (b) Explain cellular IP. What are the advantages of cellular IP ? 5

6. (a) How is data handled in GPRS ? Describe the limitations of GPRS. 5

- (b) Why is path minimization necessary ? Can you find reasons why some cellular service providers do not implement path minimization ? 5

7. (a) What are the various channel assignment scheme used in Personal Communication Service (PCS) network ? 5
- (b) Discuss essential framework for pervasive web application architecture. 5
8. Describe the GPRS architecture and protocols. How many of them already exist in GSM. 10

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