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 gate-way?

   (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 ?

   (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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