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> IT'S HARD TO BEAT A PERSON WHO NEVER GIVES UP.
>
> Babe Ruth, American professional baseball player

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B.E. (Computer Science & Engineering) Seventh Semester (C.B.S.)

Elective - II : Mobile Computing

P. Pages : 2   **NRT/KS/19/3578**

Time : Three Hours   *0263*   Max. Marks : 80

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Notes : 1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Assume suitable data whenever necessary.
10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What is the need of wireless communication? State & explain various applications of wireless communication.   **7**

b) Explain the simplified reference model of wireless system.   **7**

OR

2. a) What are the advantages of wireless N/W over wired Network.   **7**

b) What are Antennas? State & Explain different types of antennas.   **7**

3. a) Explain in details cellular system in wireless communication.   **6**

b) What is Hidden and exposed terminals problem. Describe in details with example.   **7**

OR

4. a) What is the need of specialized MAC in wireless communication.   **6**

b) Compare SDMA, FDMA, TDMA and CDMA.   **7**

5. What do you mean by GSM? Explain GSM architecture in detail with RSS, NSS & OSS and their components.   **13**

OR

6. Write short notes on **any three.**   **13**

i) VLR (Visiting Location Register)   ii) Equipment Identity Register (EIR)

iii) Cell layout & frequency   iv) Protocols (GSM)

v) Handover in GSM.

7. a) What is Mobile IP? How mobile IP is useful in mobile communication.   **6**

b) Describe DHCP. Explain working of DHCP for mobile IP. **7**

OR

8. a) Explain how classical TCP has improvement using Indirect TCP and snooping TCP. **7**

   b) Write short note on.
   Fast retransmission/Fast Recovery **6**

9. a) What is mobile Ad-hoc Network? What are the advantages of mobile ad-hoc network? **6**

   b) Explain fundamental difference between wired network and ad-hoc network related to routing. **8**

OR

10. a) Describe properties of MANET in details. **6**

    b) Explain any one routing algorithm in MANET. **8**

11. a) Describe WAP 1.X architecture in details. **6**

    b) Write short notes on Bluetooth protocol stack. **7**

OR

12. Write short notes on **any two.** **13**

    i) Link Management

    ii) J2ME

    iii) Wireless LAN

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