

**BE-Elective-I : Mobile Computing**

P. Pages : 2

Time : Three Hours



**GUG/S/18/6539**

Max. Marks : 80

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- Notes :
1. All questions carry equal marks.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Which types of different services does GSM offer? Give some examples & reasons why these services have been separated. 8
- b) Give the reason for handover in GSM. What types of handover can occur & what are the typical steps for handover? 8

**OR**

2. a) What are the functions of authentication & encryption in GSM? How is system security maintained. 6
- b) Describe the functions of MS & SIM. 2
- c) Explain three tier architecture of mobile computing. 8
3. a) Compare the features of SDMA, FDMA, TDMA & CDMA with their advantages & disadvantages. 6
- b) What is a requirement for specialized MAC? 2
- c) With relevant diagram explain the registration process in mobile IP. 8

**OR**

4. a) With neat diagram explain the entities of mobile IP. 4
- b) Explain in detail how agent discovery & IP packet delivery taking place in mobile IP. 4
- c) What is DHCP? Explain how dynamic IP configuration is performed by DHCP. 8
5. a) Explain with neat diagram snooping TCP & Mobile TCP. 10
- b) Discuss in detail about: 6
  - i) Selective Retransmission.
  - ii) Transaction oriented TCP.

**OR**

6. a) What is database hoarding & what are the hoarding techniques explain in detail. 6
- b) Explain the concept of cache invalidation mechanism. 8
- c) What is minimal encapsulation. 2

7. a) what is data dissemination? Explain communication asymmetry in uplink & downlink in a mobile network. 6
- b) Explain data delivery mechanism in detail. 10

**OR**

8. a) What is MANET? What are essential features of MANET? What are the application of MANET? 8
- b) What are security problems in MANET? 4
- c) List the difficulties faced for routing in ad.hoc networks. 4
9. a) Discuss in detail about WAP architecture with diagram. 8
- b) Explain the classes of wireless transaction protocol. 8

**OR**

10. a) Explain the core protocols of Bluetooth. Also draw the protocol stack. 10
- b) Explain user scenarios for WPAN. 3
- c) Explain the configuration of profile in J2ME. 3

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