

Total No. of Questions : 10]

SEAT No. :

P3233

[5461]-274

[Total No. of Pages : 2

B.E. (Computer Engineering)

MOBILE COMPUTING

(2012 Course) (Elective - III) (End Sem.) (Semester - II)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Assume suitable data, if necessary.*

Q1) a) Describe mobility management with suitable diagram. **[5]**

b) Explain functioning of cellular network. How the given set of frequencies are used to increase capacity of a network? **[5]**

OR

Q2) a) Explain using block diagram the process of authentication in a GSM service. **[5]**

b) Explain the purpose and IEEE standards for WPAN, WLAN, Wimax, Bluetooth. **[5]**

Q3) a) Explain DSSS with one example. **[5]**

b) Explain the multiple access efficiency of FDMA systems. **[5]**

OR

Q4) a) What is handover? When handover in mobile communication takes place. **[5]**

b) Why CSMA/CD is not used in wireless networks? **[5]**

Q5) a) Explain working of Mobile IP. What are the limitations of traditional IP to support mobility? **[6]**

b) Explain Snooping TCP. Give the advantages and disadvantages of Snooping TCP. **[6]**

c) Explain what is MANET. What are the security threats to a MANET? **[6]**

OR

P.T.O.

- Q6)** a) What do you mean by tunneling, encapsulation and de-capsulation? How does a tunnel differ from a route? [6]
- b) List the entities of Mobile IP and describe data transfer from mobile node to a fixed node and vice versa. [6]
- c) What is reactive routing protocol in MANET? Describe DSR and AODV routing protocols. [6]

- Q7)** a) What are the different types of data synchronizations in mobile computing systems? Describe synchronization usage models in mobile applications. [8]
- b) Explain in detail classification of data delivery mechanism in mobile computing. [8]

OR

- Q8)** a) Explain the reason for Communication asymmetry in mobile network. Give examples of asymmetric communication architecture for data dissemination. [8]
- b) Describe Pull-based data-delivery mechanism. What are the advantages and disadvantages of Pull-based data-delivery? [8]

- Q9)** a) Describe function of mobile agent. Why does an agent move from tier to tier during an application? Distinguish between an agent and a server. [8]
- b) Explain basic characteristics of mobile operating systems and write difference between IOS and Android OS. [8]

OR

- Q10)**a) Explain the role of gateway in connecting networks using different protocols. Describe transcoding gateway and its applications in mobile computing system. [8]
- b) Write short note on [8]
- i) Service discovery and device management in mobile O.S.
- ii) Mobile-agent-based architecture.

