

Total No. of Questions : 8]

P3657

SEAT No. :

[Total No. of Pages : 2

[5561]-288

B.E. (Computer Engineering)

MOBILE COMPUTING

(2012 Pattern) (Semester-II) (410451) (Elective-III)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume suitable data, if necessary.*

- Q1)** a) Explain various generations of cellular communication systems. [7]
b) What is signal strength attenuation? Explain scattering and diffraction in details. [6]
c) Explain various traffic and control channels used in GSM network. [7]

OR

- Q2)** a) What is the need of spread spectrum technology? Explain FHSS technology with example. [7]
b) Explain using block diagram the process of authentication in a GSM Service. [6]
c) Explain protocol layers between the MS and BTS in GSM Network. [7]

- Q3)** a) Indirect TCP. Explain the modifications of Indirect TCP as the selective repeat protocol and mobile-end transport protocol. What are the advantages and disadvantages of Indirect TCP? [8]
b) Explain the role of Agent Discovery, Agent advertisement and Agent Solicitation during location Management in GSM Network Describe. [8]

OR

- Q4)** a) Describe DSR and AODV Routing Protocols. Compare both on various parameters. [8]
b) Explain Cluster-head gateway switch routing (CGSR) protocol in detail. [8]

P.T.O.

- Q5)** a) Describe Push-based data-delivery mechanism. What are the advantages and disadvantages of Push-based data-delivery? [8]
- b) What do you mean by synchronization softwares? Explain Hotsync software in details. [9]

OR

- Q6)** a) What are the different types of data synchronizations in mobile computing systems? Describe synchronization usage models in mobile applications. [8]
- b) Why selective tuning is required ? Explain Direct and Hash-based methods. [9]

- Q7)** a) What are the characteristics and advantages of mobile agents? [8]
- b) Describe the functions of a mobile agent. Why does an agent move from tier to tier during an application? [9]

OR

- Q8)** a) List various operating Systems used as Mobile OS. Explain Architecture of Android application development platform. [9]
- b) Explain Mobile-agent-based architecture. [8]

