

Total No. of Questions : 10]

SEAT No. :

**P4945**

[Total No. of Pages : 3

**[4959]-1164****B.E. (Computer Engineering) (End Semester)****MOBILE COMPUTING****(2012 Pattern) (Elective - III)***Time : 2½ Hours]**[Max. Marks : 70*

**Q1)** a) What are different technical challenges and limitations of wireless communication? [5]

b) Why do you think the ciphering key  $K_c$  must differ from one call to another? [5]

OR

**Q2)** a) What is Handover? Explain various types of it. [5]

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

**Q3)** a) Describe mobility management with suitable diagram. [5]

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

OR

**Q4)** a) Explain Wireless Communication System with Block Diagram. [5]

b) Explain HSPA communication standard with its features and Architecture. [5]

**Q5)** a) What is mobile IP explain in detail. [5]

b) What do you mean by tunneling, encapsulation and de capsulation? [5]

c) Describe Indirect TCP. Explain the modifications of Indirect TCP as the selective repeat protocol and mobile-end transport protocol. [8]

OR

**P.T.O.**

- Q6)** a) Explain Mobile TCP. How does a supervisory host send TCP packets to the mobile node and to a fixed TCP connection? Give the advantages and disadvantages of Mobile TCP. [8]
- b) What is Reactive Routing Protocol in MANET? Describe DSR Routing Protocols. [5]
- c) Explain in detail the security threats to a MANET? [5]
- Q7)** a) Show architecture for data dissemination and broadcast. Explain the reason for communication asymmetry in mobile network. [8]
- b) What are the different types of data synchronizations in mobile computing systems? Describe synchronization usage models in mobile applications [8]

OR

- Q8)** a) Describe pull-based data-delivery mechanism. What are the advantages and disadvantages of pull-based data-delivery? [8]
- b) Explain in detail the classification of data delivery mechanism in Mobile Computing. [8]
- Q9)** a) Write short note on the following : [8]
- i) Mobile agent
- ii) Android OS
- b) Explain the role of a gateway in connecting networks using different protocols. Describe a transcoding gateway and its applications in mobile computing systems [8]

OR

**Q10)a)** Write short note on the following : **[8]**

i) Characteristics of Mobile OS

ii) Mobile File System

b) Describe the functions of a mobile agent. Why does an agent move from tier to tier during an application? Distinguish between an agent and a server. **[8]**

