Student Exam No._____

# GANPAT UNIVERSITY

## B. TECH. SEMESTER: VII (COMPUTER ENGINEERING / INFORMATION TECHNOLOGY)

## REGULAR EXAMINATION NOV – DEC 2015

## 2CE704 / 2IT704 : MOBILE COMPUTING

**Time:** 3 Hours] **[Total Marks: 70**

**Instruction:** 1: Figures to right side indicate full marks.
2: Each section should be written in a separate answer book.
3: Assume suitable data if required.
4: Be precise and to the point in your answer.

### Section - I

**Que. – 1** **[A]** Explain route discovery and route maintenance process of DSDV. **[6]**

**[B]** Explain following MOBILE TRANSACTION MODELS: **[6]**

a. Kangaroo Transaction Model
b. Clustering Transaction Model

**OR**

**Que. – 1** **[A]** Explain following Electronic payment systems: **[6]**

a. Digital Wallet (Electronic wallet)
b. Electronic Cheque
c. Electronic cash

**[B]** Describe the properties of MANET. **[6]**

**Que. – 2** **[A]** Explain IERP, IARP and BRP of Zone Routing Protocols in MANET. **[5]**

**[B]** Describe push-based data-delivery mechanism. What are the advantages and disadvantages of push-based data dissemination? **[6]**

**OR**

**Que. – 2** **[A]** Which routing protocol supports multicasting? How that protocol creates multicast tree? **[5]**

**[B]** Show architecture for data dissemination and broadcast. Explain the reasons for communication asymmetry in mobile network. Give examples of asymmetric communication architecture for data dissemination. **[6]**

Que. – 3 [A] Explain various recovery models for mobile transactions. [4]

[B] What are the advantages and disadvantages of DSR Routing Protocols in MANET? [4]

[C] What is mobile computing? What are the major goals of mobile computing? [4]

**Section – II**

Que. – 4 [A] Explain the three tier architecture of mobile computing with their functions. [7]

[B] Explain the handover procedure in GSM system. [5]

**OR**

Que. – 4 [A] Explain GSM network architecture. [7]

[B] List and explain limitations of mobile computing. [5]

Que. – 5 [A] List the basic features of CDMA systems. Explain soft handover. [6]

[B] Explain the function of SGSN and GGSN. [5]

**OR**

Que. – 5 [A] Explain the Direct Sequence Spread Spectrum Techniques. [6]

[B] What are the functions of home and foreign agents in the mobile IP protocol? How does the agent discover COA(s) when a mobile station node visits a foreign network? [5]

Que. – 6 [A] Explain following. [6]

1. RFID
2. Application of GPRS
3. Uplink and Downlink

[B] How does a cellular network function? Explain cellular network architecture and use of frequency reuse. [6]

END OF PAPER