Paper Code: ECS-087	**Roll No.**										

B.Tech.
(SEM VIII) EVEN SEMESTER EXAMINATION, 2015-16
MOBILE COMPUTING

[Time: 3 hrs.] **[Max. Marks: 100]**

Note- Attempt All questions. All questions carry equal marks. Make suitable assumptions wherever necessary.

Q1. Attempt any **FOUR** parts of the following:- **[5 x 4 = 20]**

(a) Define mobile computing and discuss the different characteristics of mobile computing environment.
(b) What are the various constraints of working with mobile devices?
(c) Summaries the important characteristics of the different generations of cellular communication?
(d) What is handover/handoff? How is handoff different from roaming?.
(e) Explain the GSM architecture with different elements in this architecture.
(f) Give an overview of GPRS network? Discuss the data routing in GPRS.

Q2. Attempt any **TWO** parts of the following: - **[10 x 2 = 20]**

(a) Briefly explain the IEEE 802.11 standard and discuss its applications.
(b) 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.
(c) What is Bluetooth? How is Bluetooth useful in mobile computing? Describe the protocol stack of Bluetooth.

Q3. Attempt any **TWO** parts of the following: **[10 x 2 = 20]**

(a) Discuss the different issues regarding data management in mobile computers.
(b) (i) Explain how disconnected operations are managed by coda file system.
(ii) Discuss the security in Coda file system?
(c) Why is data replication important in a mobile computing application? Discuss the different issues of data replication in mobile computing?

Q4. Attempt any **TWO** parts of the following: **[10 x 2 = 20]**

(a) Describe the roll of a mobile agent in mobile computing. Also discuss the different category of mobile agents.
(b) Explain the different issues that arise in a transaction processing system having mobile clients for satisfactory operations of an application. How are these issues resolved?
(c) Write short notes on the following:
(i) Agent TCL.
(ii) Concordia.

Q5. Attempt any **TWO** parts of the following: **[10 x 2 = 20]**

(a) Discuss the QoS in Ad-Hoc networks and applications of Ad-Hoc networks.
(b) Explain Dynamic Source Routing (DSR). Clearly highlight the route discovery and route maintenance operations.
(c) Write short notes on the following:
(i) Ad Hoc MAC issues.
(ii) Global state routing.