

Code No: **RT41053****R13****Set No. 1****IV B.Tech I Semester Supplementary Examinations, February/March - 2018****MOBILE COMPUTING****(Common to Computer Science and Engineering and Information Technology)****Time: 3 hours****Max. Marks: 70***Question paper consists of Part-A and Part-B**Answer ALL sub questions from Part-A**Answer any THREE questions from Part-B*

\*\*\*\*\*

**PART-A (22 Marks)**

1. a) Differentiate guided and unguided media transmission. [3]
- b) List the specifications of physical medium dependent and its sub layers in IEEE802.11. [4]
- c) Write about 32-bit subnet masking. [4]
- d) What do you mean by context-aware computing? [4]
- e) Write various steps in online bucket scheduling algorithm for broadcasting [4]
- f) Describe Functions of Android operating system for mobile devices. [3]

**PART-B (3x16 = 48 Marks)**

2. a) In detail describe the functions and limitations of operating systems in handheld devices. [8]
- b) When a mobile station moves from one cell to another how to handle handover mechanism? Explain different kinds of it. [8]
3. a) Explain the following medium access control mechanisms. [8]  
(i) For far and near terminals (ii) For hidden and Exposed terminals.
- b) Describe receiver transmitter structures of Direct Sequence and Frequency hopping Spread Spectrum in detail [8]
4. a) Explain the requirements for the evolution of new mobile IP protocol from existing IP protocol along with the working of mobile IP protocol. [8]
- b) What is the role of Reverse tunneling in route optimization? Explain. [8]
5. a) How to perform data delivery and congestion control in conventional TCP/IP transport layer protocol? Explain. [8]
- b) In detail explain the procedural differences between stateless synchronous & asynchronous and stateful synchronous & asynchronous mechanisms of cache invalidation. [8]
6. a) What is selective tuning and indexing? Explain different mechanisms of it. [8]
- b) In detail explain what is synchronization engine? How this tool is used for data synchronization in mobile devices? [8]

7. ~~Explain the following protocols used by MANET for routing~~

- a) Dynamic Source Routing b) Ad-hoc On-demand distance vector routing
- c) Cluster head gateway switch routing d) Table driven fat routing

[16]