**Code No: IT16412**

**CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (Autonomous)**

**B.E.(IT)IV/IV I Sem (Main) Examination Nov - Dec 2016**

**Mobile Computing**

**Time: 3 Hours Max Marks:75**

***Note:*** Answer all questions from **Section-A** at one place in the same order

Answer any **five** questions from **Section-B**

**Section - A (25 Marks)**

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| 1 | What is co-channel interference ? | (2) |
| 2 | Write short notes on hidden and exposed terminals. | (2) |
| 3 | Write short notes on packet reservation multiple access techniques. | (3) |
| 4 | Which multiplexing schemes are used in GSM and for what purpose? | (3) |
| 5 | Define reverse tunneling. | (2) |
| 6 | Describe about transaction oriented TCP. | (2) |
| 7 | Discuss about data HOARDING techniques. | (3) |
| 8 | Explain about power –aware mobile computing. | (3) |
| 9 | State about communication asymmetry . | (2) |
| 10 | Give the limitations of mobile devices. | (3) |

**Section - B (50 Marks)**

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| 11 | (a) | Describe the challenges in mobile computing. Explain about aloha systems. | (5) |
| (b) | What are the main reasons for using cellular systems? How SDM is typically realized and combined with FDM? | (5) |
| 12 | (a) | Explain the different Handover techniques in satellite systems. | (5) |
| (b) | Consider A,B are transmitting data 01,10 respectively, the orthogonal key sequences assigned by CDMA are Ak = 11001, Bk = 00110. Compute the data to be transmitted to receiver and data interpretation at the receiver. Add noise to the transmitted data, what can the receiver detect for sender A, sender B? | (5) |
| 13 | (a) | What is GSM ? Give its system architecture. | (5) |
| (b) | Write short notes on smart systems. | (5) |
| 14 | (a) | Discuss about mobile IP briefly. | (5) |
| (b) | Explain the protocol mechanism of DHCP . | (5) |
| 15 | (a) | Discuss the working principle of slow start TCP. Explain the fast retransmit/ fast recovery mode with respect to duplicate acknowledgements in mobile IP. | (5) |
| (b) | Explain the push and pull based data delivery mechanisms. | (5) |
| 16 | (a) | Explain different multiplexing techniques in detail. | (5) |
| (b) | Explain GPRS architecture | (5) |
| 17 | (a) | State the features of Windows CE and android based devices. | (5) |
| (b) | Write about synchronization and conflict resolution strategies. | (5) |

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