Code: CT78   **Subject: MOBILE COMPUTING**

ALCCS

Time: 3 Hours   **DECEMBER 2015**   **Max. Marks: 100**

PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.

NOTE:

- **Question 1 is compulsory and carries 28 marks. Answer any FOUR questions from the rest. Marks are indicated against each question.**
- **Parts of a question should be answered at the same place.**

Q.1 a. What are the three main causes of co channel interference with regard to frequency reuse?

b. State the concept of Slotted ALOHA. What are its application areas?

c. Why do we use Mobile IP Systems?

d. Discuss briefly about Cellular IP.

e. What are the functions performed in the MAC sublayer in wireless and in wired environment?

f. Discuss the specific design alternative of wireless TCP.

g. Write down the domains of pervasive computing paradigm.   **(7×4)**

Q.2 a. Compare IEEE 802.11 and Bluetooth with regard to their ad-hoc capabilities. Where is the focus of these technologies?   **(10)**

b. How does Direct Sequence Spread Spectrum technique works? Explain with suitable diagram.   **(8)**

Q.3 a. What are the channel allocation techniques? How these are used in cellular communication?   **(10)**

b. Write short note on   **(8)**
(i) Mobile quality of service
(ii) Location management

Q.4 a. What are the basic constraints in radio propagation? Briefly explain Multipath effect on radio transmission.   **(10)**

b. Distinguish between DCF and PCF in context to wireless LAN. Explain their coexistence in wireless LAN with appropriate diagrams.   **(8)**

Q.5 a. Explain the process of registration with a foreign agent with necessary packet formats.   **(10)**

b. Write briefly about the advantages of Data Dissemination and Broadcast Models   **(8)**

Q.6 a. Write down the overview of indirect TCP and snooping TCP   **(10)**

b. Define the following concepts in detail:
(i) Mobile Agents
(ii) Wireless WEB   **(4+4)**

Q.7 a. Explain the WAP Architecture with a neat diagram? Contrast between both versions of WAP.   **(10)**

b. Explain the various classes of services provided by WTP with relevant timing diagrams.   **(8)**