Reg. No.										

Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)

II SEMESTER M.TECH (COMPUTER SCIENCE AND INFORMATION SECURITY) END SEMESTER EXAMINATIONS, MAY 2016

SUBJECT: MOBILE AND WIRELESS SECURITY [CSE 572]

REVISED CREDIT SYSTEM

DATE:12-05-2016

Time: 3 Hours MAX. MARKS: 50

Instructions to Candidates:

- Answer **ANY FIVE FULL** questions.
- Missing data, if any, may be suitably assumed.

1A. With neat diagram explain extended trust negotiation protocol to support privacy. 3M
1B. Explain eight different categories of mobile malware. 4M
1C. Explain four security problems associated with the GSM operation. 3M

2A. Describe the subscriber related information contained in SIM card? 4M
2B. With neat diagram describe GSM protocol architecture. 3M
2C. Explain classification of five attacks on 3G networks based on their type. 3M

3A. Describe Kim's electronic cash protocol for mobile payments. Mention its drawbacks.4M
3B. With neat diagram explain hidden node problem in wireless network and how it can be solved. 3M
3C. Explain why jamming is major threat to Bluetooth security. 3M

4A. Describe the authentication issue within ad hoc networks. 2M
4B.With neat diagram explain optimized link state routing protocol and explain one attack on this protocol. 4M
4C. With neat diagram explain Diffie-Hellman key agreement technique within MANETs.4M

5A. With neat diagram briefly explain RFID system architecture and its components. 2M
5B. Explain five security requirements for RFID system. 4M
5C. Explain the protocol of the Ohkubo scheme for secure RFID system. Analyze whether it satisfies all the five security requirements. 4M

6A. Explain four categories of threats to mobile VoIP. 3M
6B. Explain security requirements for wireless sensor networks (WSNs). 3M
6C. Explain µTESLA protocol for authenticated broadcast in WSNs. 4M

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