Reg. No.										

MANIPAL UNIVERSITY
SCHOOL OF INFORMATION SCIENCES

SECOND SEMESTER MASTER OF ENGINEERING – **ME** (EMBEDDED AND WIRELESS TECHNOLOGY)
DEGREE EXAMINATION – APRIL / MAY 2016

SUBJECT: EWT 608 – WIRELESS COMMUNICATION STANDARDS

Friday, May 6, 2016

Time: 10.00 – 13.00 Hrs. Max. Marks: 100

1. Explain the following WLAN standards
   a. IEEE 802.11á
   b. IEEE 802.11g
   c. IEEE 802.11n

(2+4+4=10 marks)

2. With DSSS transmitter/receiver structure explain the operations of a Direct Sequence Spread Spectrum based Physical Layer.

(10 marks)

3. Explain the principle of operation of virtual carrier sense CSMA/CA mechanism with short messages RTS and CTS.

(10 marks)

4. Write the structure of MAC header frame in IEEE802.11 and explain the Frame Control Field.

(10 marks)

5. Explain the responsibilities of the Link Manager Protocol (LMP) in Bluetooth stack.

(10 marks)

6. Write a note on the Controller states in Bluetooth.

(10 marks)

7. Explain the responsibilities and characteristics of the Physical layer of the ZigBee protocol stack.

(10 marks)

8. Write a short note on the following:
   a. Stateless Auto configuration.
   b. ICMPv6

(5+5=10 marks)

9. Give a brief comparison between WiFi and WiMax. (10 marks)

10. Write a brief note on the flow of GPRS protocol stack and end-to-end message form MS to GGSN.

(10 marks)

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