Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

SEVENTH SEMESTER B.Tech. (E & C) DEGREE END SEMESTER EXAMINATION
NOV 2017
SUBJECT: EMBEDDED NETWORKING (ECE - 4002)

TIME: 3 HOURS **MAX. MARKS: 50**

Instructions to candidates

- Answer **ALL** questions.
- Missing data may be suitably assumed.

1A. Describe the sequence of operational steps involved in I2C communications.
1B. What is meant by communication protocol? How they are classified? Discuss in detail.
1C. What are the disadvantages of synchronous peripheral interface?

(5+3+2)

2A. What are the different types of data transfer scheme supported by USB. Describe two types in which one involve time as a critical factor and other uses to get immediate attention.
2B. Mention the different types of errors in CAN bus. Briefly describe any four types.
2C. Draw and identify different fields and their length in the standard frame of CAN bus.

(5+3+2)

3A. With neat frame format describe the IEEE Ethernet frames.
3B. What are the advantages of Ethernet network over other networks?
3C. Describe the features of Dallas Semiconductor DSTINIm400 (TINI) module used for embedded networking application.

(5+3+2)

4A. Describe the sequence of operations performed by a computer to send and receive a message using UDP in an Ethernet network.
4B. With relevant diagram, explain the process involved in establishing TCP connection.
4C. How does Restricting the access to resources helps in securing devices and local network.

(5+3+2)

5A. Describe the components of a basic wireless sensor network device with relevant diagram.
5B. Explain the Binary proximity location finding techniques for wireless sensor Networks.
5C. Describe the power aware routing protocol in wireless sensor networks.

(5+3+2)