Code: EC7T4A

IV B.Tech - I Semester – Regular Examinations - November 2015

EMBEDDED AND REAL TIME SYSTEMS
(ELECTRONICS & COMMUNICATION ENGINEERING)

Duration: 3 hours   Max. Marks: 70

Answer any **FIVE** questions.   All questions carry equal marks

1 a) List and define three main processor technologies. What are the benefits of using each of the three different processor Technologies?   10 M

  b) Write about the applications of an embedded system.   4 M

2 a) Explain about the development environment.   8 M

  b) How an Embedded System designer selects a microprocessor?   6 M

3 a) Explain about Dataflow Model.   7 M

  b) Explain about Concurrent Processes.   7 M

4 a) Explain about Bluetooth Protocol Architecture.   8 M

  b) What are the advantages of USB over RS-232?   6 M

5 a) Explain about the architecture of kernel. 8 M

b) Explain the difference between Semaphores and Mutex.

6 M

6 With suitable examples explain how to:
  a) Close a Pipe 3 M
  b) Read a Message from the pipe 4 M
  c) Post a message in a Mailbox 3 M
  d) Read message from a Mailbox 4 M

7 a) Explain the steps in developing Applications using Real
     Time Operating System. 7 M

  b) Compare and contrast RTOS Vs LINUX. 7 M

8 a) Explain about RT synthesis and behavioural synthesis.

8 M

  b) Explain about Hardware and Software co-simulation.

6 M