PVP 12

Code: EE7T4

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

EMBEDDED SYSTEMS
(ELECTRICAL & ELECTRONICS ENGINEERING)

Duration: 3 hours Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1 a) Define embedded system. Briefly describe the special characteristics of embedded system. 7 M

b) Categorize Embedded Systems with respect to their application. Give example for each. 7 M

2 a) Explain the software architecture of an Embedded System and give the importance of application software. 7 M

b) What is the role of various design automation tools for embedded software development? Explain with a good example. 7 M

3 a) What are the different features offered by a hardware platform for the development for an embedded system for a given application? 7 M

b) Explain the architecture of an AVR microcontroller used in embedded system design. 7 M

4 a) Explain the need for communication in embedded systems and List out the various communication types with an example for each. 7 M

b) Illustrate how an RS 485 communication interface is superior to RS232 interface. 7 M

5 a) What is an Operating system? What are its primary functions? 7 M

b) What is the role of a kernel in operating system? Explain the types of kernels. 7 M

6 a) Briefly describe the embedded software development process with the help of a neat diagram. 7 M

b) List out the various development tools used in the software development and explain the role of each. 7 M

7 Develop an application for toggling LED's connected to a port of AVR Microcontroller when a switch was pressed. 14 M

8 a) Explain how to program flash memory using JTAG in Prayog. 7 M

b) Illustrate the parallel communication interface on Prayog. 7 M