

**ANNA UNIVERSITY OF TECHNOLOGY, COIMBATORE**  
**B.E. / B.TECH. DEGREE EXAMINATIONS : NOV / DEC 2010**

**REGULATIONS : 2007**

**SEVENTH SEMESTER**

**070290086 - EMBEDDED SYSTEMS**

**(COMMON TO ECE / MEDICAL ELECTRONICS)**

**TIME : 3 Hours**

**Max.Marks : 100**

**PART - A**

**(20 x 2 = 40 MARKS)**

**ANSWER ALL QUESTIONS**

1. What is an Embedded System?
2. What is meant by Hardware Architecture?
3. Give some of the applications of an Embedded System.
4. List out some of the testing tools used in an Embedded System.
5. Enumerate some of the data types in programming of an Embedded System.
6. Write some of the I/O devices in an Embedded System.
7. What do you mean by parameter passing?
8. List out the features of productivity tool.
9. What are the various addressing modes are there in a PIC Microcontroller?
10. List some of the I/O ports in a PIC Microcontroller.
11. What do you mean by Assembly Language Programming?
12. What are the uses of timers in PIC microcontrollers?
13. Define: Kernel.
14. What is Task?
15. Write short notes on Interrupt Service Routine.
16. What are the timers are there in a RTOS concepts?
17. List out some of the uses of the  $\mu\text{C}$  OS – II.
18. What do you mean by adaptive cruise control?

19. Write the features of smart card.
20. List out some of the Operating Systems in an Embedded Systems.

**PART - B**

**(5 x 12 = 60 MARKS)**

**ANSWER ANY FIVE QUESTIONS**

21. Describe in detail about the specifications of an Embedded System.
22. Discuss about the recent trends in Embedded System with suitable examples.
23. Explain in detail about memory management in an Embedded System.
24. How memory mapped IO devices are accessed? Explain with necessary sketch.
25. Draw the architecture of any one of the PIC Microcontroller and explain.
26. List out some of the interrupts in PIC Microcontroller and explain.
27. Discuss in detail about the memory management in RTOS with suitable sketches.
28. Draw the architecture of automatic chocolate vending machine using  $\mu$ COS RTOS and explain in detail.

**\*\*\*\*\*THE END\*\*\*\*\***