

[illegible]

B.Tech. || ECE || 8th Sem. *7th sem*

VRP

Paper ID : m/18

(2011 taken onwards)

Max Marks: 60

- All Questions are Compulsory.
- Assume any missing data

PART A (2×10)	
Q. 1.	Short Answer Questions.
(a)	What are salient features of ARM in comparison to other controllers used in embedded systems?
(b)	What is JTAG interface? What is its use?
(c)	What is the use of I ² C bus ?
(d)	Describe at least two instructions using interrupts in ARM.
(e)	Which different registers are used in instructions of ARM? Give example of each.
(f)	What do you understand by IDE? Describe any one IDE used for ARM based system development.
(g)	Differentiate between pointers and structures with the help of examples.
(h)	List and describe LCD display pins.
(i)	What are different types of debugging tools used in embedded systems development?
(j)	Explain zigbee interface. List its ports and their functioning.

Q. 2.	What do you understand by interrupts? What different types of interrupts are available in ARM? What are interrupt vector table. OR Draw and explain the architecture of ARM based controllers.	CO1
Q. 3.	What do you mean by instruction set of a processor? What are different types of instructions available in ARM? Give example of each.	CO2

	<p>OR</p> <p>What do you mean by addressing modes? What are different addressing modes of ARM processor? Explain with the help of example of each.</p>	
Q. 4.	<p>What are functions and function calls? How they are written in ARM assembly and C language? Explain with the help of example code of each.</p> <p>OR</p> <p>How instruction scheduling is handled in ARM? What are different types of conditional instructions available in its assembly? Give example of each.</p>	CO3
Q. 5.	<p>What is the use of RFID module? Draw its interfacing circuit with ARM and write the program to control it.</p> <p>OR</p> <p>What is stepper motor? Draw its interfacing circuit with ARM. Write the program for controlling stepper motor.</p>	CO4
Q. 6.	<p>Write a C program for an ARM based circuit to flash an LED interfaced with it. Draw and explain its circuit too.</p> <p>OR</p> <p>What do you mean by BIOMETRICS? Draw and explain the circuit of interfacing ADC with ARM.</p>	CO4