4VP20CS078.

Vivekananda College of Engineering & Technology, Puttur
[A Unit of Vivekananda Vidyavardhaka Sangha Puttur ®]
Affiliated to VTU, Belagavi & Approved by AICTE New Delhi

CRM08	Rev 1.10	CS	26/07/22

CONTINUOUS INTERNAL EVALUATION - 2

Dept: **CS**	Sem / Div: **4 CS A/B**	Sub: **Microcontroller & Embedded Systems**	S Code: **18CS44**
Date: 04/08/2022	Time: 3:00-4:30 pm	Max Marks: 50	Elective: N

Note: Answer any 2 full questions, choosing one full question from each part.

QN		Questions	Marks	RBT	CO's
		PART A			
1	a	Explain the various purposes of embedded system in detail.	9	L2	CO3
	b	With neat interface diagram, illustrate the connection of master and slave devices in I2C bus.	8	L2	CO3
	c	With neat diagram, explain Little Endian and Big Endian architecture with an example.	8	L2	CO3
		OR			
2	a	With a neat diagram, explain interfacing of stepper motor through the driver circuit to micro-controller.	9	L2	CO3
	b	Explain the Serial Peripheral Interface (SPI) Bus and Universal Asynchronous Receiver Transmitter (UART) in detail.	8	L2	CO3
	c	Explain the difference between: i. Von-Neumann and Harvard Architecture ii. CISC and RISC Processors	8	L2	CO3

		PART B			
3	a	Explain the role of different types of memories used in embedded systems.	9	L2	CO3
	b	Mention the application of embedded system with example of each.	8	L1	CO3
	c	With neat block diagram, explain design and working of washing machine.	8	L2	CO3
		OR			
4	a	Explain classification of embedded systems based on generation and based on complexity and performance requirement.	9	L3	CO3
	b	List all the operational and non-operational quality attributes of an embedded system and explain any one operational quality attribute.	8	L1	CO3
	c	Write a note on, i. Reset circuit ii. Watch dog timer	8	L2	CO3

Prepared by: Mohan A R

HOD