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(An Autonomous Institute Affiliated to VTU, Approved by AICTE & ISO 9001:2008 Certified)
(Accredited by National Assessment & Accreditation Council (NAAC) with 'A' grade)

Department of Electronics & Communication Engg.
Continuous Internal Evaluation – II

Course Name : **EMBEDDED SYSTEM AND IOT APPLICATIONS**	Date :	08-07-2021
Course Code : 18EC6DCEAI	Day :	Thursday
Semester : 6	Timings :	3.00pm-4.30pm
Max Marks : 50 M	Duration :	1&1/2 hours

No.		Question Description	Mks	CO & LEVELS
Q1	(a)	For a real time operating system interrupt latency should be . i) Minimal ii) Maximum iii)Zero iv) None of the above	1	
	(b)	The time taken to respond to an interrupt is known as i) interrupt delay ii) interrupt time iii) interrupt latency iv) interrupt function	1	
	(c)	Which can activate the ISR i) interrupt ii) function iii) procedure iv) structure	1	
	(d)	Write full form of SRN Scheduling policy i)Shortest request nextii) Service request number iii) software release notice iv) None of the above	1	
	(e)	Which type of protocol is CAN i) Serial ii) Parallel iii) Wireless iv) none of the above	1	
	(f)	I2c will address large number of slave devices. i)True ii) False iii) Both a&b iv) none of the above	1	
	(g)	The key feature of the PCI BUS is (i)Low cost connectivity (ii)Plug and Play capability (iii)Expansion of Bandwidth (iv)None of the mentioned	1	
	(h)	Which of the following is the way in which an IoT device is associated with data? i) Internet ii) cloud iii) Automata iv) network	1	
	(i)	An IoT network is a collection of _____ devices i) Signal ii) M2M iii) Interconnected iv) Network to Network	1	
	(j)	Which of the following is not an application of IoT? i) Wearable ii) Smart Grid iii) Arduino iv) Smart city	1	
Q2	a	Discuss I2C serial protocol with bus structure	4	CO2 L2
	b	Show the interrupt routines in RTOS environment	6	CO3 L3
Q3		Define IoT? Explain briefly the proposed architecture of CISCO Reference Model with neat diagram	10	CO4 L2
Q4		Summarize latency and deadline as performance metric in scheduling models for periodic, sporadic and aperiodic tasks.	10	CO3 L2
		OR		
Q5		Explain RTOS Preemptive scheduling and program counter assignment to various process.	10	CO3 L2
Q6		Identify Enabling technologies in developing common standards for the IoT	10	CO4 L3
		OR		
Q7		List and explain the IoT Applications and Challenges in detail.	10	CO4 L2