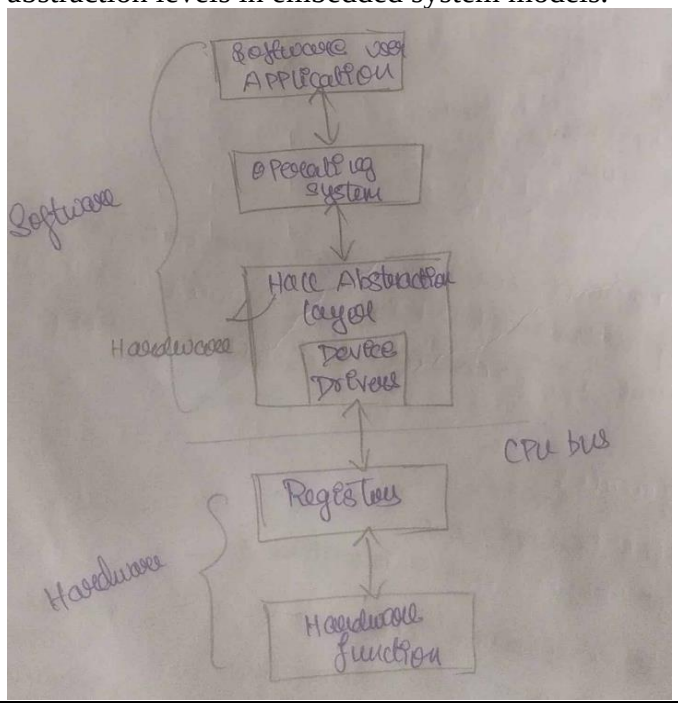
SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

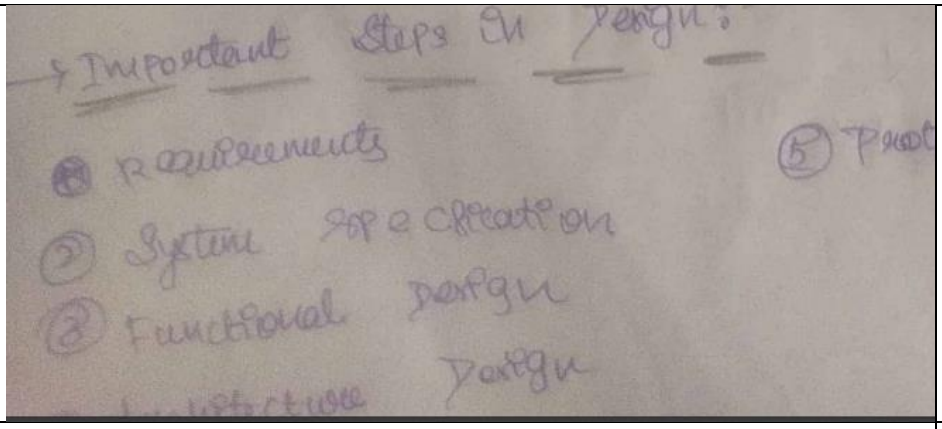
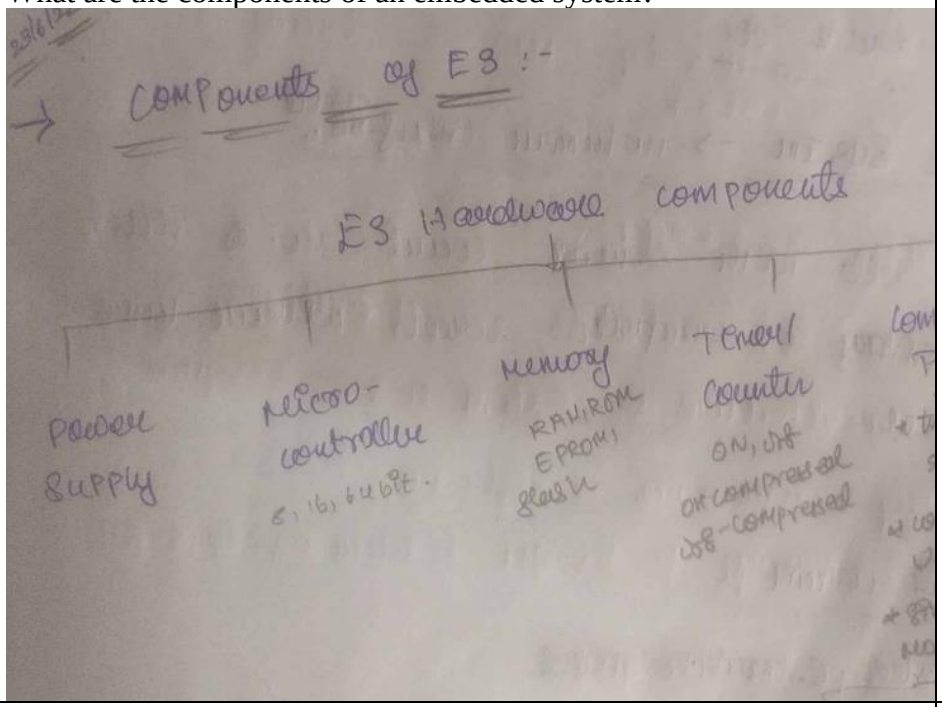
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

QUESTION BANK

SCSA1701 CYBER PHYSICAL SYSTEMS

UNIT – II

S.No	PART-A	CO	Blooms Level
1	Define Embedded Systems. **An embedded system is a combination of computer hardware and software designed for a specific function. Embedded systems may also function within a larger system**	CO 2	L1
2	What are the specifications of embedded system? Structure-oriented models describe the system's physical modules and the interconnections between them. They are well-suited at describing a particular architecture, such as a four-processor implementation with shared memory and an eight-processor implementation with cross-bar communication	CO 2	L2
3	Different abstraction levels in embedded system models.  	CO 2	L3
4	Steps involved in developing an embedded system.	CO 2	L3

			
5	List out some examples for embedded systems. • Digital cameras. • Digital wristwatches. • MP3 players • Temperature measurement systems. • Calculators.	CO 2	L2
6	What are the components of an embedded system? 	CO 2	L3
7	What are the analysis techniques for decentralized computer architectures?	CO 2	L4
8	Discuss about cyber physical system hardware platform.	CO 2	L5
9	Describe Processors, Sensors, and Actuators. **A processor is an integrated electronic circuit that performs the calculations that run a compute** **A sensor is a device that detects and responds to some type of input from the physical environment.** **An actuator is a component of a machine that is responsible for moving and controlling a mechanism or system**	CO 2	L3
10	How does Real Time Operating System (RTOS) work? RTOS pdf of your notes	CO 2	L4

S.No	PART- B	CO	Blooms Level
1	Discuss about Embedded Systems definition, specification, and languages in detail.	CO2	L2
2	Comment on different abstraction levels in embedded system models.	CO2	L3
3	Elaborate the Design, analysis techniques for decentralized computer architectures.	CO2	L4
4	Explain the cyber physical system hardware platform.	CO2	L3
5	Describe Real Time Operating System (RTOS) with an example.	CO2	L5