R16

Reg. No:

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.TECH IV Year II Semester Regular & Supplementary Examinations July-2021
REAL TIME OPERATING SYSTEMS
(Electronics and Communication Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

1	Explain Architecture of real Time Systems with the help of neat block diagram.	L2	12M

OR

2	a	Distinguish between embedded systems and real time systems.	L4	7M
	b	Explain the features of Real Time Systems.	L2	5M

UNIT-II

3	Briefly explain about Hardware and software selection criteria in real time systems.	L2	12M

OR

4	a	Define interrupts? Explain about different types of Interrupts with an example.	L1	6M
	b	Explain in brief about the interrupt vector table (IVT) in embedded systems.	L2	6M

UNIT-III

5	Explain in brief about the following peripherals i) Direct Memory Access ii) ADC & DAC iii) Comparator	L2	12M

OR

6	Explain about communication peripherals of real time systems? Explain how these are used in real time systems.	L2	12M

UNIT-IV

7	a	Explain the architecture of RTOS. What is need of RTOS?	L2	6M
	b	Explain about role of RTOS.	L2	6M

OR

8	a	Explain how interrupt routines handled in embedded system.	L2	6M
	b	Explain process management and memory management in embedded system.	L2	6M

UNIT-V

9	Define Scheduling. Explain about overview of scheduling policies.	L1	12M

OR

10	Explain about steps handle for RTOS Problems of Following i) Priority Inversion Phenomenon ii) Deadlock Phenomenon	L2	12M

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