



R18 Regulation

Subject code:2P5BC

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech V Semester Supplementary Examinations, December 2024

MICROPROCESSORS AND MICROCONTROLLERS (EEE)

Maximum Marks: 70

Date:31.12.2024

Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20) Marks)		CO	Bloom Tx
1	How to calculate the physical address of memory in 8086 microprocessors?	1	L1
2	How many interrupts are there in 8086 microprocessors?	1	L1
3	State any two addressing modes of 8051.	2	L1
4	Name interrupts of 8051 microcontroller.	2	L1
5	Give two examples of Onboard communication interface?	3	L1
6	Expand UART.	3	L1
7	Write advantages of ARM processor.	4	L1
8	Expand CPSR in ARM Processor. what is its purpose?	4	L1
9	Give applications of ARM CORTEX processors.	5	L1
10	State advantages of OMAP processor.	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		CO	Bloom Tx
11	a) Explain in detail about the flag register of 8086 microprocessor. [5M] b) Explain about memory segmentation. [5M]	1	L2
OR			
12	What are various addressing modes supported by 8086 Microprocessor? Describe them with neat examples. [10M]	1	L2
13	a) Write the features of 8051 microcontroller? [5M] b) Write about memory organization in 8051 microcontrollers? [5M]	2	L2
OR			
14	Discuss TMOD & TCON register formats in 8051 microcontroller?[10M]	2	L2
15	Explain Stepper Motor interfacing to 8086 [10M]	3	L2
OR			
16	Explain about I2C bus briefly. [10M]	3	L2
17	Explain Load & Store instructions of ARM processor. [10M]	4	L2

	OR		
18	Explain ARM architecture with neat diagram. [10M]	4	L2
19	Explain the architecture of CORTEX Processor with neat diagram. [10M]	5	L2
	OR		
20	List out different classifications of OMAP processor and explain one type in detail. [10M]	5	L2