R18 Regulation *Subject code:2O6EA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Supplementary Examinations, May 2025

MICROPROCESSORS AND MICROCONTROLLERS

(CSE)

Maximum Marks: 70 Date: 18.06.2025 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.
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)		Marks	CO	BTL
1	Calculate physical address of memory with address 4320:5600?	2M	1	L1
2	List the advantages of Memory Segmentation.	2M	1	L1
3	Categorize Register Banks of RAM in 8051.	2M	2	L1
4	Draw TMOD register.	2M	2	L1
5	What are advantages of serial data transfer scheme?	2M	3	L1
6	Describe EEPROM.	2M	3	L1
7	List out different 16 bit registers used in ARM Processor.	2M	4	L1
8	Analyze few comparisons of ARM & Microcontroller.	2M	4	L1
9	Mention applications of CORTEX processor.	2M	5	L1
10	What are the advantages of OMAP Processors?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Draw the Block diagram of 8086 microprocessor and explain briefly.	10M	1	L2
	OR			
12	Describe following assembler directives of 8086 microprocessor. I)DW II) SEGMENT III) ENDP IV) ASSUME V) OFFSET	10M	1	L2
13	What are various addressing modes supported by 8051 Microcontroller? Describe with neat examples.	10M	2	L2
	OR			
14	Describe Memory Organization of 8051 microcontroller neatly.	10M	2	L2
15	Write short notes on Serial Communication standards and explain I2C BUS working.	10M	3	L2
	OR			
16	Explain Interfacing of D to A Converter with 8051 Microcontroller.	10M	3	L2
17	Draw and Explain the Architecture of ARM Processor.	10M	4	L2
	OR			
18	Mention about the program Status Register instructions of ARM Processor.	10M	4	L2
19	With a neat diagram, explain the Architecture of CORTEX Processor.	10M	5	L2
	OR			
20	a) Outline the Features of OMAP processor b) Explain applications of OMAP Processor in detail.	5M 5M	5	L2