Regulation R18 *Subject code: 2O6EA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Supplementary Examinations, February 2024

MICROPROCESSORS AND MICROCONTROLLERS

(Computer Science and Engineering)

Maximum Marks: 70 Date:17.02.2024 **Duration: 3 Hours**

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
3. Part B consists of 10 questions. Answer any 5 questions which carries 12M.
4. Each question carries 12marks 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	Calculate physical address of memory with address 4320:5600?	CO1	L2
2	List the advantages of Memory Segmentation.	CO1	L1
3	Categorize Register Banks of RAM in 8051.	CO2	L2
4	Explain PUSH and POP Instructions in 8051.	CO2	L2
5	What is need of RS-232?	CO3	L1
6	Write short notes on RAM and ROM.	CO3	L1
7	List any 3 features of ARM.	CO4	L1
8	Draw CPSR in ARM.	CO4	L1
9	Mention applications of CORTEX processor.	CO5	L2
10	What are the advantages of OMAP Processors?	CO5	L1
	Part-B		
Answer all the questions (10MX 5=50Marks)			
11	Draw the Block diagram of 8086 microprocessor and explain briefly. [10]	CO1	L2
	OR		
12	Describe following assembler directives of 8086 microprocessor. [10] I)DW II)SEGMENT III)ENDP IV)ASSUME V)OFFSET	CO1	L2
13	What are various addressing modes supported by 8051 Microcontroller? Describe with neat examples. [10]	CO2	L2
	OR		
14	Write Timers and Counters concept in 8051 microcontroller. Explain Timer mode 0 operation. [10]	CO2	L2
15	Discuss the interfacing of 4X4 Keyboard to detect Key numbers with 8051 microcontroller. [10]	CO3	L2
	OR		
16	What is the purpose of UART? Explain it with neat diagram. [10]	CO3	L2
17	Draw ARM Programming Model and explain it. [10]	CO4	L2

18	What are the Features of ARM Processor? Explain LOAD and STORE instructions of ARM. [10]	CO4	L2
19	With a neat diagram, explain the Architecture of CORTEX Processor. [10]	CO5	L2
	OR		
20	a) Outline the Features of OMAP processor b) Explain applications of OMAP Processor in detail. [5+5]	CO5	L2