Regulation R18 *Subject code: 2P5BC*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, February 2024

MICROPROCESSORS AND MICROCONTROLLERS

(EEE)

Maximum Marks: 70 Date:20.02.2024 **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	How to calculate the physical address of memory in 8086. Explain with one example.	1	L2
2	Draw the Flag register of 8086 and indicate flag names.	1	L1
3	Explain the PSW Register of 8051 microcontrollers.	2	L2
4	What are the advantages of microcontroller over microprocessor?	2	L1
5	Explain the importance of Memory interfacing in 8051.	3	L2
6	Write short notes on Asynchronous Serial data Transfer.	3	L1
7	List out different 16 bit registers used in ARM Processor.	4	L1
8	Analyze few comparisons of ARM & Microcontroller.	4	L2
9	Expand OMAP and its memory capacity.	5	L2
10	Explain different applications of OMAP Processor.	5	L2

Part-B

Answer all the questions (10MX 5=50Marks)			
11	Define addressing mode. List out different addressing modes used in 8086 microprocessor. [10]	1	L2
	OR		
12	List and explain different Arithmetic Instructions of 8086 microprocessor with neat examples. [10]	1	L2
13	With a neat diagram, describe the internal architecture of 8051 Microcontroller. [10]	2	L2
	OR		
14	Explain the following SFR's of 8051 microcontrollers in detail. a)TMOD b) TCON. [10]	2	L2
15	Write a short note on On -Board Communication Interface and explain RS-232. [10]	3	L2
	OR		
16	Discuss the interfacing of 4X4 Keyboard to detect Key numbers with 8051 microcontrollers. [10]	3	L3
17	Draw and Explain the Architecture of ARM Processor. [10]	4	L3
	OR		

18	Mention about the program Status Register instructions of ARM Processor. [10]	4	L2
19	Summarize the main features of CORTEX Processor and explain functional diagram of CORTEX. [10]	5	L2
	OR		
20	Draw and explain the functional diagram of OMAP Processor. [10]	5	L2