



R20 Regulation

Subject code:306FC

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Regular/Supplementary Examinations, July 2024

MICROPROCESSORS AND MICROCONTROLLERS (IT)

Maximum Marks: 70

Date:26.07.2024 Duration: 3 hours

- Note:**
1. This question paper contains two parts A and B.
 2. Part A is compulsory and 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	Which type of operation is indicated by the status lines of 8086?	CO1	I
2	What is the maximum memory addressed by 8086?	CO1	II
3	List the features of 8051 microcontroller.	CO2	I
4	Mention the number of register banks of 8051.	CO2	I
5	List out the important features of the A/D converter.	CO3	I
6	State the advantage and disadvantage of parallel communication over serial communication.	CO3	II
7	List the features of ARM.	CO4	I
8	Compare ARM and x86 processor.	CO4	II
9	Give the applications of OMAP processor.	CO5	I
10	List the merits of CORTEX-M processor	CO5	I

Part-B

Answer All the following questions. (5X10M=50Marks)			
11	Present your understanding of internal hardware architecture of 8086 microprocessor with a neat diagram. [10]	CO1	IV
	OR		
12	Examine the effectiveness of the minimum mode and maximum mode pins in 8086 in detail. [10]	CO1	IV
13	Describe the interrupts in 8051 microcontrollers. [10]	CO2	III
	OR		
14	With a neat sketch, explain the architecture of 8051 microcontroller. [10]	CO2	III
15	Illustrate the keyboard interface using 8051 microcontrollers with diagram. [10]	CO3	IV
	OR		
16	Explain the different external communication interfaces RS-232, USB in detail. [10]	CO3	III
17	Draw the Architecture of ARM processor and explain in detail. [10]	CO4	III

	OR		
18	Discuss about the CPSR register of ARM processor. [10]	CO4	III
19	Explain the concept of super scalar pipeline of CORTEX processor with circuit diagram. [10]	CO5	IV
	OR		
20	Discuss about the OMAP processor architecture in detail. [10]	CO5	III