R20 Regulation *Subject code:3P6BD*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Supplementary Examinations, December 2024

MICROPROCESSORS AND MICROCONTROLLERS

(EEE)

Maximum Marks: 70 Date:04.01.2025 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 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	Explain the use of Parity Flag in 8086 micro processor.	1	L1
2	How to calculate the physical address of memory in 8086. Explain with an example.	1	L1
3	Draw and explain TMOD register.	2	L1
4	Categorize Register Banks of RAM in 8051.	2	L1
5	What is need of RS-232?	3	L1
6	Write short notes on RAM and ROM.	3	L1
7	List out different advanced ARM processors.	4	L1
8	Explain how pipelining is used in ARM processor.	4	L1
9	Outline the features of CORTEX processor.	5	L1
10	Mention various advantages of OMAP Processors.	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		CO	Bloom Tx
11	Explain the Architecture of 8086 Microprocessor with a neat sketch. [10M]	1	L2
	OR		
12	List and Explain 8086 Microprocessor Data Transfer instructions with examples. [10M]	1	L2
13	What are various addressing modes supported by 8051 Microcontroller? Describe with neat examples [10M]	2	L2
	OR		
14	Explain the following SFR'S in detail [3+3+4]M 1)SCON 2) PCON 3) IP	2	L2
15	Draw and explain the architecture of 8255PPI with neat diagram. [10M]	3	L2
	OR		
16	Write short notes on Onboard communication interfaces. Explain working of SPI Bus. [10M]	3	L2

17	A) Explain in detail the interrupts of ARM Processor. [5M] B) Explain ARM pipeline concept. [5M]	4	L2
	OR		
18	Discuss in detail the Processor modes of ARM. [10M]	4	L2
19	Outline the classification, features and applications of ARM CORTEX processor. [10M]	5	L2
	OR		
20	List out different classifications of OMAP processor and explain one type in detail. [10M]	5	L2