



R20 Regulation

Subject code:306FC

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Supplementary Examinations, December 2024

MICROPROCESSORS AND MICROCONTROLLERS (IT)

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	What are the conditional and control flags of 8086 microprocessor?	1	L1
2	Explain the different general-purpose registers of 8086 microprocessor.	1	L1
3	Illustrate the different features of 8051 microcontroller.	2	L1
4	Draw the frame format of PSW.	2	L1
5	Define the terms Simplex, Half Duplex and Full Duplex Communication standards	3	L1
6	What is Asynchronous Serial data Transfer.	3	L1
7	List out few comparisons of ARM and Microcontroller.	4	L1
8	Summarize applications of ARM processor.	4	L1
9	What is OMAP and list out its features?	5	L1
10	Discuss applications of CORTEX processor.	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		CO	Bloom Tx
11	Explain the register set of 8086 microprocessors. [10M]	1	L2
OR			
12	List and describe different string manipulation operations of 8086 microprocessor with example. [10M]	1	L2
13	Draw the Pin diagram of 8051 microcontroller and explain each pin in detail. [10M]	2	L2
OR			
14	A) Explain Interrupt Structure of 8051 microcontroller in detail. [5M] B) Explain the following SFRs of 8051 Microcontroller in detail: [5M] i) TCON ii) IE	2	L2
15	With the help of a neat diagram, show the interfacing of LCD Display with 8051 microcontroller and explain its operation [10M]	3	L2
OR			

16	Explain Interfacing of the D to A Converter with 8051 Microcontroller. [10M]	3	L2
17	A) Explain about the different exceptions in ARM processors. [5M] B) Draw and explain the structure of current program status registers. [5M]	4	L2
	OR		
18	Draw ARM Programmer Model and explain it. [10M]	4	L2
19	Describe architecture of cortex processor with a neat sketch. [10M]	5	L2
	OR		
20	Discuss with a neat sketch the architecture of OMAP Processor. [10M]	5	L2