



Regulation R18

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

Subject code: 206EA

B.Tech VI Semester Supplementary Examinations, June/July 2023

## MICROPROCESSORS AND MICROCONTROLLERS

(CSE)

Maximum Marks: 70

Date: 24.06.2023 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 12 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 How to calculate the physical address of memory in 8086. Explain with one example.
- 2 Explain special function of general-purpose registers?
- 3 Draw the PSW Register of 8051 microcontrollers.
- 4 What are the advantages of microcontroller over microprocessor?
- 5 Explain the PSEN & EA signals in 8051.
- 6 Write short notes on Asynchronous Serial data Transfer.
- 7 List out different registers used in ARM Processor.
- 8 List 3 differences between ARM instruction set and Thumb instruction set.
- 9 Mention different types of CORTEX processor.
- 10 Explain different applications of OMAP Processor.

Part-B

Answer all the questions

(5X10M=50Marks)

- 11 Draw the Minimum mode Pin diagram of 8086 and explain all signals. [10]
- OR
- 12 List and explain different Arithmetic Instructions of 8086 microprocessor with examples. [10]
- 13 Explain TCON & TMOD Register with a diagram in 8051 microcontrollers. [10]
- OR
- 14 Describe Memory Organization of 8051 microcontroller. [10]
- 15 Write short notes on Serial Communication standards and Explain I2C BUS working. [10]
- OR
- 16 Explain Interfacing of D to A Converter with 8051 Microcontroller. [10]
- 17 Draw and Explain the Architecture of ARM Processor. [10]
- OR
- 18 Explain Data Processing instructions of ARM. [10]
- 19 Explain the Architecture of CORTEX Processor and its features. [10]
- OR
- 20 Explain OMAP processor. [10]