



MICROPROCESSORS AND MICROCONTROLLERS

(EEE)

Maximum Marks: 70

Date:28.06.2023 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 12marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10x2M=20 Marks)

- 1 Calculate physical address of memory with address 4320:5600?
- 2 Write down the difference between Microprocessor and Microcontroller.
- 3 Write down the specifications of 8051?
- 4 State the PUSH and POP Instructions in 8051.
- 5 What is need of RS-232?
- 6 Write about the ROM?
- 7 List any 3 features of ARM.
- 8 Draw CPSR in ARM.
- 9 Mention applications of CORTEX processor.
- 10 What are the advantages of OMAP Processors?

Part-B

Answer all the question (10MX 5=50Marks)

- 11 Draw the Block diagram of 8086 microprocessor and explain briefly. [10]

OR

- 12 Describe following assembler directives of 8086 microprocessor. [10]

I)DW II)SEGMENT III)ENDP IV)ASSUME V)OFFSET

- 13 Explain the addressing modes of 8051 Microcontroller with an example. [10]

OR

- 14 Write Timers and Counters concept in 8051 microcontroller. Explain Timer mode 0 operation. [10]

- 15 Discuss the interfacing of 4X4 Keyboard to detect Key numbers with 8051 microcontroller. [10]

OR

- 16 What is the purpose of UART? Explain it with neat diagram. [10]

- 17 Draw ARM Programming Model and explain it. [10]

OR

- 18 Explain the architecture of ARM Processor. [10]

- 19 With a neat diagram, explain the Architecture of CORTEX Processor. [10]

OR

- 20 Explain the features and applications of OMAP Processor in detail. [10]