

Code No.: EC502PC

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H.T.No.

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CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III-B.TECH-I-Semester End Examinations (Supply) - June- 2024
MICROPROCESSORS & MICROCONTROLLERS
(ECE)

[Time: 3 Hours]

[Max. Marks: 70]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks.

PART-A

(20 Marks)

1. a) Define the memory organization. [2M]
- b) Explain PUSH and POP instructions of 8086 microprocessor. [2M]
- c) List two data bit manipulation instructions of 8051 with example. [2M]
- d) Discuss any two addressing modes of 8051 microcontroller. [2M]
- e) Write short notes on USB bus interface. [2M]
- f) Write short notes on serial communication. [2M]
- g) Write any two control instructions of ARM processor with examples. [2M]
- h) Choose the main features of ARM controller. [2M]
- i) Exercise the general purpose registers in OMAP processor architecture. [2M]
- j) Outline the importance of OMAP processor. [2M]

PART-B

(50 Marks)

2. Discuss various addressing modes of 8086 microprocessor with necessary examples. [10M]
- OR**
3. Write an assembly language program to find the sum of prime numbers from 1 to 100. [10M]
4. Explain the 8051 Microcontroller architecture with the help of a block diagram. [10M]
- OR**
5. Outline the importance of timer and counter operations in 8051 Microcontroller. [10M]
6. Discuss the interfacing of ADC with 8051 microcontroller. [10M]
- OR**
7. Write short notes on the following [10M]
i) RS232 ii) SPI bus.
8. Illustrate the data flow model of ARM architecture. [10M]
- OR**
9. Classify the program status register instructions in ARM processor. [10M]
10. Dramatize the functions of OMAP processor architecture briefly. [10M]
- OR**
11. List out the merits and demerits of CORTEX and OMAP processors. [10M]
