Code No.: EC502PC | R20 | H.T.No. | | | 8 | R | | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–I–Semester End Examinations (Regular) - January- 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 addressing mode. [2M]
   b) What is the purpose of MOV instruction? [2M]
   c) Write the different addressing modes used in 8051. [2M]
   d) Which ports of 8051 are bit addressable? [2M]
   e) Give the memory details in 8051. [2M]
   f) What is meant by USB and its applications? [2M]
   g) Define serial communication. [2M]
   h) What is meant by on board communication interface? [2M]
   i) What are the advantages of CORTEX processor? [2M]
   j) Distinguish between CORTEX processor and OMAP processor. [2M]

PART-B **(50 Marks)**

2. Write briefly about interrupts and its types. Explain the control flow of the microprocessor in detail when interrupt occurs. [10M]

OR

3. Describe the internal architecture of 8086 microprocessor With neat diagram. [10M]

4. Describe interrupts and interrupt programming with respect to 8051 microcontroller with neat diagram. [10M]

OR

5. Explain in detail about arithmetic and control instruction Set in 8051. [10M]

6.a) Explain serial communication standards.
   b) Explain serial data transfer schemes. [10M]

OR

7. Choose an integrated chip to be used for Analog to Digital conversion and explain how it is interfaced with the 8051. [10M]

8. Draw the internal architecture of ARM architecture and explain. [10M]

OR

9. Explain in detail about various software interrupt instruction. [10M]

10. Explain about CORTEX Processor and its applications. [10M]

OR

11. Explain in detail about OMAP architecture and its advantages. [10M]

****