Roll No:

# The Assam Royal Global University, Guwahati
## Royal School of Engineering & Technology
B.Tech CSE 6th Semester
Semester End Examination, June 2023
Course Title: Microprocessor
Course Code : ECE022C609

**Time: 3 Hours**                                                    **Maximum Marks: 70**

**Note: Attempt all questions as per instructions given.**
*The figures in the right-hand margin indicate marks.*

### Section – A

1. Attempt **all questions**. (Maximum word limit 50)                    2 x 8

   a. How to differentiate address bus from multiplexed data bus?
   b. What is a Macro?
   c. Why do we need advanced processors?
   d. Mention 2 advantages of closely coupled multiprocessor configuration.
   e. How is a DAC different from a ADC?
   f. What is interfacing?
   g. What is the function of SFR?
   h. Mention two key differences between microprocessor and microcontroller.

### Section – B

2. Attempt **any two** of the following:                                 6x 2

   a. Explain the Execution Unit of Intel 8086 microprocessor.
   b. Explain the function of the following pins of microprocessor 8086
      (i)ALE (ii) HOLD (iii) DT/$\overline{R}$
   c. Discuss, in details, the interrupt structure in microprocessor 8086.

3. Attempt **any two** of the following:                                 7 x 2

   a. Explain and draw the timing diagram for Read operation in minimum mode of 8086.
   b. How is Intel 80286 different from Intel 8086?Explain.
   a. Give a comparison between different configurations of a multiprocessor system.

4. Attempt **any two** of the following:                                 7 x 2

   a. Explain in details, the method of data transfer in 8086.
   b. Write about the process of interfacing an A /D converter with 8086.
   c. What is the purpose of interfacing PPI 8255 with 8086? Explain PPI 8255, in details.

5. Attempt **any one** of the following:                                 14 x 1

   a. Explain the main features of 8051. Also, with neat diagram explain the architecture of 8051.
   b. Discuss, in details, how a stepper motor is interfaced with 8051.