Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

EE-6003 (CBGS)

B.E. VI Semester

Examination, May 2019

Choice Based Grading System (CBGS)

Microprocessor and Microcontrollers

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five question.
ii) All questions carry equal marks.

1. a) Draw and explain the Architecture of 8086 Microprocessor. 7
   b) Explain various addressing modes of 8086 in detail. Also give suitable examples. 7

2. a) Explain the purpose of stack in a Microprocessor based system which type of stack structure exists in 8086. 7
   b) Write an assembly language program in 8086 for the addition of a series of 8-bit numbers. The series contains 100 numbers. 7

3. a) Explain architecture of programmable peripheral interface chip 8255. 6
   b) Discuss how 8254 is used? 8
      i) To generate delay
      ii) To generate square wave

4. a) Describe the importance of DMA scheme. Draw the block diagram and explain the operation of 8257DMA controller. 7

   b) Explain the block diagram and function of each block of 8251 USART. 7

5. a) Discuss the memory organisation of 8051 Microcontroller. 7
   b) Explain the interrupts of 8051 Microcontroller with priority status. 7

6. a) Describe the pin configuration of 8051 Microcontroller. 7
   b) Explain the operation of TMOD and TCON register with block representation. http://www.rgpvonline.com 7

7. a) Design a SCR firing circuit based on 8051 Microcontroller. 7
   b) How will you interface stepper motor to 8051 Microcontroller? Explain. 7

8. Draw the functional block diagram of 8096 Microcontroller and explain it. Also discuss complete 8096 instruction set. 14

******

193