

Roll No .....

**EX-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 questions.  
ii) All questions carry equal marks.

1. a) Explain the architecture of 8086 microprocessor with a neat block diagram. 7'
- b) Explain the 8086 flag register with each flag bit. 7
2. a) Draw the timing diagram for read and write cycle in minimum mode 8086. 7
- b) Write about PUSH and POP instructions with neat diagrams. 7
3. a) What is 8255 and explain the architecture of 8255? 7
- b) Explain about I/O modes of operation in 8255. 7
4. a) Explain about programmable interval timer 8254. 7
- b) What is memory mapped I/O and I/O mapped I/O and explain about interfacing 8255 to 8086 using memory mapped I/O and I/O mapped I/O. 7
5. a) Draw the pin diagram of 8051 microcontroller and explain the function of each pin in detail. 9
- b) Explain the I/O ports of 8051. 5

6. a) Write short notes on instruction set of 8051. 7
- b) Explain about the accessing internal and external memories and different modes of operation in 8051. 7
7. a) Explain the operation of stepper motor interfacing to 8051. <http://www.rgpvonline.com> 7
- b) What is RS-232 and explain the 8051 connections to RS-232. 7
8. a) Draw the functional block diagram of 8096 and explain the working operation. 7
- b) Write about the addressing mode in 8096. 7

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