

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

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**EC-504 (GS)****B.E. V Semester**

Examination, December 2017

**Grading System (GS)****Microprocessors and Microcontrollers***Time : Three Hours**Maximum Marks : 70*

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

1. Draw the neat block diagram of 8086 microprocessor. Explain each block in detail.
2. Write a detailed note on memory organization with respect to 8086 microprocessor.
3. Write a program in 8086 assembly language to find the largest value in an array of 05H positive numbers stored in a data segment.
4. Explain I/O processors 8089 in detail with neat block diagram.
5. Explain the control word format of 8255 in I/O and BSR mode.

EC-504 (GS)

PTO

110

[2]

6. Explain 8251 USART programmable communication interface with neat block diagram.
7. What is the need of DMA controller? Explain master and slave mode in DMA controller with neat block diagram.
8. Answer any four of the following:
  - a) What is the significance of  $\overline{BHE}$  and  $A_0$  together?
  - b) Discuss in brief different addressing modes of 8086 microprocessor.
  - c) Explain in brief 8257 CRT controller.
  - d) Give the operating modes of 8259 PIC.
  - e) List the important features of 8051 microcontroller.
  - f) Explain the memory structure of 8051 microcontroller.

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EC-504 (GS)

111