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**SIXTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE  
EXAMINATION, APRIL 2016**

**EE/PTEE 09 601—MICROPROCESSORS AND MICROCONTROLLERS**

Time : Three Hours

Maximum : 70 Marks

**Part A**

*Answer all questions.  
Each question carries 2 marks.*

1. Name the dedicated interrupts in 8086.
2. What is an interrupt vector ?
3. Give the control word format of BSR mode.
4. What are the register banks in 8051 ?
5. What is the function of over flow flag in 8051 ?

(5 × 2 = 10 marks)

**Part B**

*Answer any four questions.  
Each question carries 5 marks.*

6. Draw the timing diagram of an I/O write cycle of 8086.
7. Explain modular programming.
8. Discuss the control word format of 8255 in I/O and BSR model.
9. Explain the following terms in relation to 8279 (a) left entry ; (b) right entry.
10. Explain how stacks are accessed in 8251.
11. Write a program to multiply two numbers which are stored in program ROM location 0100H and 0101H and save the result in any RAM location of 8051.

(4 × 5 = 20 marks)

**Part C**

*Answer all questions.  
Each question carries 10 marks.*

12. (a) Explain the minimum mode and maximum mode configuration in 8086.

*Or*

- (b) Draw the discuss flag registers of 8086 in detail.

Turn over

13. (a) Explain the memory organization in 8086 with block diagram.

Or

(b) Write a program to generate a square waveform using 8086.

14. (a) Explain the different modes of operation of Intel 8237.

Or

(b) Discuss in detail about the different modes of operation of 8279.

15. (a) Discuss the architecture of 8051 microcontroller.

Or

(b) Explain the interfacing of keyboard of 8051 with a neat circuit diagram.

(4 × 10 = 40 marks)