

D 50626

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Name

Reg. No.

**FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE [REGULAR/
SUPPLEMENTARY] EXAMINATION, NOVEMBER 2013**

AI 09 501—ADVANCED MICROPROCESSOR AND MICROCONTROLLER

Time : Three Hours



Maximum 20 Marks

Part A

*Answer any five questions.
Each question carries 2 marks.*

1. What is a Macro ? Give an example.
2. What are the advantages of super scalar architecture ?
3. What is the purpose of SFR in 8051 ?
4. Find the baud rate if THF-2, SMOD = 1 and XTAL = 12 MHz.
5. Why 8087 coprocessor is needed in 8086 processor ?

(5 × 2 = 10 marks)

Part B

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

6. Explain how a 20 bit address is generated in 8086.
7. Explain about FPV in Pentium.
8. Explain about Data memory and Program memory of 8051.
9. Two switches are connected to pins P 3.2 and P 3.3. Write a program to :
 - (a) to light all LED's connected to port 0, if the first switch is pressed and
 - (b) light all LED's connected to port 2, if the second switch is pressed.
10. What is real and protected mode of 8086 ? Explain.
11. With the help of timing diagram, explain the memory read and write cycle.

(4 × 5 = 20 marks)

Part C

*Answer any four questions.
Each question carries 10 marks.*

12. Explain the minimum mode operation of 8086.

(10 marks)

Or

13. With an example show how 4K × 8 RAM and 2K × 8 ROM in interfaced with 8086.

(10 marks)

Turn over

14. (a) Explain the paging mechanism of 80386.

(7 marks)

(b) What are the special features of pentium ?

(3 marks)

Or

15. Describe the architecture of 80386.

(10 marks)

16. Discuss the signals present in 8051.

(10 marks)

Or

17. (a) Explain the addressing modes of 8051 with examples.

(b) Explain the modes of operation of timer of 8051.

(10 marks)

Or

18. Discuss how a stepper motor can be interfaced with 8051.

(10 marks)

[4 × 10 = 40 marks]