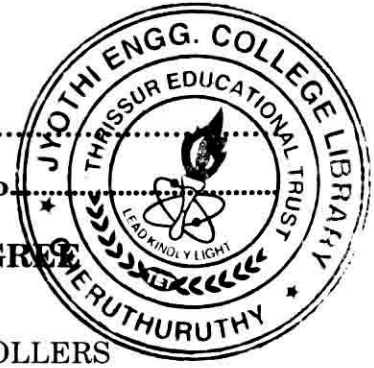


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Name.....

Reg. No.....



**SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, APRIL 2014**

EE/PTEE 09 601—MICROPROCESSORS AND MICROCONTROLLERS

(2009 Scheme)

[Regular/Supplementary/Improvement]

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.

Each question carries 2 marks.

1. What is meant by program relocation ?
2. What is the role of linker and loader in the generation of the run file ?
3. Explain how DAA instruction functions.
4. Distinguish between simplex and duplex communication.
5. Explain the difference between microprocessor and microcontroller.

(5 × 2 = 10 marks)

Part B

Answer any four questions.

Each question carries 5 marks.

6. Give the difference between minimum mode and maximum mode operation of 8086.
7. Write the 8086 flag register format and explain.
8. Write the control word format of 8255 and explain.
9. Explain A/D conversion. Also explain successive approximation A/D conversion technique.
10. What is meant by on-chip I/O port of 8051 ?
11. How to program the 8-bit timer/counter of 8051 ?

(4 × 5 = 20 marks)

Part C

Answer all questions.

Each question carries 10 marks.

12. Draw the architecture of 8086 microprocessor. Explain briefly about execution unit.

Or

Turn over

13. (a) Explain the super scalar architecture of Pentium processor. (5 marks)
(b) Draw execution unit of Pentium processor and explain its operation. (5 marks)
14. (a) What is the use of DOS function calls in assembly programming ? (4 marks)
(b) Explain the basic concept of modular programming. (6 marks)

Or

15. Explain different addressing modes of 8085 with one example for each.
16. Explain the operation of 8279. Also explain the terms (i) N key roll over ; and (ii) Keyboard debounce.

Or

17. Draw the block diagram of 8253 programmable interval timer and explain its working.
18. Name any *five* special purpose registers of 8051 and explain their function.

Or

19. Explain with necessary diagrams the procedure of interfacing 8255 with 8051 microcontroller.

[4 × 10 = 40 marks]