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Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 21412

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015

Seventh Semester

Electronics And Communication Engineering

EC 2027/EC 704/10144 ECE 31 — ADVANCED MICROPROCESSORS

(Regulations 2008/2010)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the hardware enhancements added to 80186 that are not present in the 8086?

2. What is the purpose of the end-of-interrupt (EOI) register?

3. If the Pentium operates at 66 MHz, what is the frequency of clock signal applied to the CLK pin?

4. What is the size of the level 1 cache in the Pentium II microprocessor?

5. What is register read port saturation?

6. Define store coloring.

7. Compare CISC and RISC processor.

8. Draw Intel i960 CA pipeline stages.

9. What is 16 bit ISA? Compare it with 8 bit ISA.

10. Compare memory mapped I/O with I/O mapped I/O.

PART B — (5 × 16 = 80 marks)

11. (a) Draw and explain about the internal architecture of 80386. (16)

Or

(b) (i) Describe the various steps involved in the execution of LDA 5000H with the help of timing diagrams. (6)

(ii) Illustrate with examples, the various addressing modes used in 80286. (10)

12. (a) (i) What are the special registers of Pentium microprocessors?

(ii) Explain the memory management unit of Pentium processor.

Or

(b) Discuss the architecture of Pentium IV Architecture with block diagram. (16)

13. (a) Briefly explain Instruction fetching, execution and branch prediction of RISC processors. (16)

Or

(b) Explain different stages of Integer pipeline and floating point pipeline of Pentium processor. (16)

14. (a) Explain the Intel IA 32 processor with respect to instruction format, core pipeline stages and the functionality. (16)

Or

(b) Compare Super SPARC and Ultra SPARC processor. Draw and explain in brief the architecture of Ultra SPARC processor.

15. (a) Explain the functions blocks and interconnections of PC Hardware. (16)

Or

(b) Write a short note on: (16)

(i) EISA

(ii) VESA
