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Question Paper Code : 60412

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

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 does 80386 SL address?
2. Compare real mode memory and protected mode memory.
3. When will a system be compatible to SMM mode?
4. Compare 80486 microprocessor and pentium microprocessor.
5. What is register read port saturation?
6. Define store coloring.
7. What are features of Motorola 88110?
8. Justify that i960 processor is a superscalar processor.
9. Give four features of PCI Express bus.
10. State the use of following in networking : Repeaters, Routers Gateways, Bridge.

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 5000 H with the help of timing diagrams. (6)
(ii) Illustrate with examples, the various addressing modes used in 80286. (10)

12. (a) For Pentium microprocessor write the function of AHOLD, AP, BREQ, CLK, HOLD, INV, IBT and PWT. (16)

Or

- (b) Write the functions of control bits of Pentium microprocessor. (16)
13. (a) Describe the Basics of P6 micro architecture and memory subsystem.

Or

- (b) Describe Instruction fetching, branch prediction and instruction dispatching in power PC 620.
14. (a) With block diagram describe the architecture of Motorola MC 88110 hardware. (16)

Or

- (b) Write the characteristic features of SPARC implementation. Explain the axioms of TSO specification of SPARC architecture. (16)
15. (a) (i) Explain the functional operations of ISA and EISA. (10)
(ii) Draw block diagram of CD drive. And state the principle of operation of CD drive. (6)

Or

- (b) Draw the functional block diagram of Pentium IV motherboard Showing the following components : Power connector, RAM, Chipset. (16)