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Reg. No...............................

Name.................................

B.TECH. DEGREE EXAMINATION, MAY 2010

Fourth Semester

Branch : Computer Science and Engineering

ADVANCED MICROPROCESSORS AND PERIPHERALS (R)

[2008 admissions—Regular/2007 admissions—Improvement/Supplementary]

Time : Three Hours   Maximum : 100 Marks

Part A

*Answer **all** questions briefly.*
Each question carries 4 marks.

1. Explain the various modes of operation of 8255.
2. Explain the basic functions and applications of 8251 interface.
3. Explain the salient features and advantages of microcontrollers over microprocessors.
4. Draw the interfacing of a D/A converter with 8085 processor.
5. Explain the use of segment registers in 8086.
6. List the stack memory addressing modes in 8086.
7. What are the string instructions in 8086 ?
8. What are the additional features of 80286 over 8086 ?
9. Explain the paging mechanism in 80386.
10. Write a short note on RISC architecture.

(10 × 4 = 40 marks)

Part B

*Answer **either** (a) or (b) of each module.*
Each question carries 12 marks.

Module I

11. (a) Explain with neat block diagram the functions of 8279 keyboard and display interface.

Or

    (b) (i) Explain the BSR mode of operation of 8255.
        (ii) Draw the internal block diagram of 8252.

Module II

12. (a) With neat diagram, explain the interfacing of keyboard with 8085 processor.

Or

    (b) Explain the interfacing of an ADC with 8085 processor with necessary diagrams.

Turn over

Module III

13. (a) Draw the block diagram of 8086 processor architecture and explain each block.

Or

    (b) (i) List the differences between 8086 and 8088 processors.

    (ii) What are the various memory addressing modes in 8086 ? Give one example in each.

Module IV

14. (a) (i) What are the various flag bits in 8086 ?

    (ii) Write an assembly language programme using 8086 instruction set to find the number of even and odd numbers from a given series of 16 bit hexadecimal numbers.

Or

    (b) (i) What do you mean by a descriptor ? Discuss the structure of a 80286 descriptor.

    (ii) Discuss the real mode and protected mode of operation of 80286.

Module V

15. (a) (i) Explain the interfacing of coprocessors in 80386.

    (ii) What are the special features of Pentium Processors ?

Or

    (b) Write short notes on the following :—

        (i) Latest Intel Processors.

        (ii) Hyperthreading in advanced processors.

        (iii) Advantages of RISC processors.

                                                    (5 × 12 = 60 marks)