UG/Integrated Even Semester Examination, 2025

COMPUTER SCIENCE

(4th Semester)

Course No.: CS-DSC-252

(Microprocessor and Assembly Language Programming)

Full Marks: 70

Pass Marks: 28

Time: 3 hours

The figures in the right margin indicate full marks for the question.
Answer any five questions selecting one from each unit.

UNIT-I

1. (a) Draw and discus the internal architecture of 8086 microprocessor. 10

   (b) Describe the function of the 8086 queue. 4

2. Discuss the working of 8237 DMA controller. Why is DMA data transfer faster than doing the same data transfer with program instruction. 7+7=14

UNIT-II

3. (a) Discuss about 8086 CALL and RET instructions. 7

   (b) Draw the stack diagram of 8086. How it can be used by CALL and RET instruction. 7

4. (a) What are the different assembler directives. Explain. 10

   (b) Discuss the structures of macro and procedure. 4

UNIT-III

5. (a) Draw and discuss the internal block diagram of 8255A. 10

   (b) Discuss different types of parallel data transfer. 4

6. (a) Discuss the construction and operation of common typs of keys. 8

   (b) Describe the three major tasks needed to get meaningful information from a matrix keyboard. 6

UNIT-IV

7. What are interrupts and discuss different types of interrupts and how they are processed by the CPU. 14

8. Draw and discuss the block diagram of 8259 priority interrupt controller. 14

UNIT-V

9. Draw and discuss the architecture of 8251 USART. 14

10. (a) What are the difference between parallel and serial data transfer? 7

    (b) Write short note on Asynchronous data transfer. 7

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