

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-VIII (OLD) EXAMINATION – SUMMER 2019**

**Subject Code: 181104**

**Date: 09/05/2019**

**Subject Name: Advanced Microprocessors**

**Time: 10:30 AM TO 01:00 PM**

**Total Marks: 70**

**Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

**Q.1 (a)** Explain the difference between 8086 features and its internal architecture. **07**

**(b)** Draw and explain 8086 pin diagram. **07**

**Q.2 (a)** Explain 8086 Memory Interfacing and the signals used in it. Show with schematic Explain how the two memory banks are separated? **07**

**(b)** Explain Base plus index addressing mode in 8086 microprocessor **07**

**OR**

**(b)** Explain in brief: I/O interfacing in 8086 **07**

**Q.3 (a)** Write an assembly language program using 8086 instruction to Add block of ten numbers from one location and store to another memory location **07**

**(b)** Write an assembly language program using 8086 instruction to arrange an array of five numbers in ascending order. **07**

**OR**

**Q.3 (a)** Explain following 8086 instructions with an example. (i) XLAT (ii) LOOPZ (iii) LEA (iv) STOSB **07**

**(b)** Explain the special purpose registers of 8086 microprocessor **07**

**Q.4 (a)** Describe the functions of following 8086 pins. (i) HLDA (ii) NMI (iii) READY (iv) CLK **07**

**(b)** Explain how the OUT DX,AX instruction operates. **07**

**OR**

**Q.4 (a)** Explain stack memory addressing mode in 8086 microprocessor. **07**

**(b)** Describe the operation of the IMUL BX,DX,100H instruction. **07**

**Q.5 (a)** Explain the multipurpose registers of 8086 microprocessor **07**

**(b)** List the important features of 80186 micro-processor. Explain the function of DMA unit of 80186 microprocessor. **07**

**OR**

**Q.5 (a)** Explain Pentium-IV Processors in brief and discuss advancements as compared to previous processors in x86 Family. **07**

**(b)** Briefly describe branching and fusion mechanism in Core 2 Duo processor. **07**

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