

GUJARAT TECHNOLOGICAL UNIVERSITY**BE SEM-VI Regular Examination May 2011****Subject code: 160805****Subject Name: Advanced Microprocessors****Date: 23-05-2011****Time: 10.30 am – 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 Internal Architecture of 8086 Microprocessor. **07**
 (b) Explain typical configuration of 8086 Microprocessor Minimum mode. **07**
- Q.2** (a) Briefly describe memory bank of 8086 Microprocessor. **07**
 (b) Describe following signaling pins of 8086 Microprocessor **07**
 (i) NMI (ii) READY (iii) QS0(ALE) (iv) $\overline{\text{TEST}}$ (v) $\overline{\text{MN/MX}}$
- OR**
- (b) Explain the typical configuration of 8086 Microprocessor Maximum mode. **07**
- Q.3** (a) Write down the difference between 8-bit Microprocessor & 16-bit microprocessor. **07**
 (b) Describe the following assembler directive **07**
 (i) END (ii) EVEN (iii) EQU (iv) DB (v) ORG
- OR**
- Q.3** (a) Describe different addressing modes of 8086 Microprocessor **07**
 (b) Describe the following instruction of 8086 Microprocessor. **07**
 (i) LAHF (ii) LOOP (iii) TEST (iv) IMUL (v) SHR AL,3
- Q.4** (a) Give detailed classification of 8086 Microprocessor instructions set. **07**
 (b) Describe interrupt priority table also write details of type-0, type-1 & type-2 interrupt of 8086 Microprocessor. **07**
- OR**
- Q.4** (a) Write an assembly language program and draw a flow chart to read the temperature of cleaning bath solution and light one of the three lamps according to temperature read if temp<30°C a yellow lamp will be turn ON, if temp>=30°C and <40°C, a green lamp will be turn ON, if temp>=40°C will turn ON red lamp. **07**
 (b) (i) Write an assembly language program to find out average of two temperature named HI_temp and Lo_temp and put result into memory location AV_temp. **04**
 (ii) Explain the conditional branching operation of 8086 Microprocessor. **03**
- Q.5** (a) Explain the synchronization between 8086 and its Coprocessor also give configuration of Coprocessor **07**
 (b) Briefly describe Macros. **07**
- OR**
- Q.5** (a) (i) Write short notes on Nested Macros. **04**
 (ii) Describe type-3 and type-4 interrupt. **03**
 (b) (i) Explain the segment register of 8086 Microprocessor and give the example to generate 20-bit physical address. **04**
 (ii) Write down difference between 8086 Microprocessor and 8088 Microprocessor. **03**
