AC-1728
B. Sc. (I. T.) (Sem. - IV) Examination
March/April – 2015
Microprocessor & Assembly Language

Time : 3 Hours] [Total Marks : 70

Instruction :

1. Answered the following questions in detail : (Any Four) 16
   (1) Draw 80486 microprocessor block diagram.
   (2) Explain following pins of 8086 microprocessor.
      (a) BHE                   (b) RESET
      (c) AO-A19                (d) M/IO
   (3) Explain Interrupt vector table in detail.
   (4) Explain following instruction
      (a) RCR                   (b) ADC
   (5) Draw minimum mode timing diagram to write data in memory from 8086 micro processor.

2. Answer the following questions in detail : (Any Three) 18
   (1) Explain 8255 programmable peripheral interface IC.
   (2) List out "Addressing modes" and explain memory addressing mode in detail.
   (3) Make correction in given instructions and explain it.
      (1) MUL AX, BL            (2) ADC CL,DX
      (3) MOV SI, AL            (4) DEC AL, CL
      (5) NOT BL, AL            (6) PUSHF BL
   (4) Explain following directives with examples
      (1) DT (2) DB (3) OFFSET

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3 Answer the following questions in detail: (Any Two) 18

(1) Draw 8086 block diagram and explain instruction pointer, ALU and source index register.

(2) a) Draw 80286 microprocessor block diagram. 4
   b) Explain following instructions 5
      (a) CMP AX,CX  (b) SBB AL,CL
      (c) MOV [SI],BX  (d) OUT OxOA,AL
      (e) CLC

(3) a) Explain instruction template with example. 6
   b) Explain following directives 3
      (a) DQ  (b) SEGMENT

4 (A) Find out true or false from given sentences: 6

(1) DEC CL instruction execution is decrementing CL content by one in 8086 microprocessor.

(2) 8086 microprocessor is 8 bit microprocessor.

(3) Stack pointer is holding Next instruction address.

(4) Data-segment register is 16 bit address register.

(5) INC AL instruction is decrement value of AL register.

(6) Instruction queue can hold 8 byte of instructions in 8086.

(B) Answer following questions in detail: (Any two) 12

(1) Write program to arrange five consecutive memory locations content in ascending order and store it on 0x0700 to 0x0705 data segment memory locations.

(2) Explain following registers in detail
   (a) Instruction Pointer (IP)
   (b) Base Pointer (BP)
   (c) code segment register (CS)
   (d) Accumulator registrar(AX)
   (e) Instruction Queue
   (f) Destination Index(DI)

(3) Explain status flags from flag register of 8086 microprocessor.