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**R—354—2017**

**FACULTY OF SCIENCE**

**B.Sc. (Second Year) (Fourth Semester) EXAMINATION**

**MAY/JUNE, 2017**

**COMPUTER SCIENCE**

**Paper VIII**

**(ALP Using 8086 Microprocessor)**

**(MCQ+Theory)**

**(Thursday, 4-5-2017)**

**Time : 2.00 p.m. to 4.00 p.m.**

*Time—2 Hours*

*Maximum Marks—40*

*N.B. :— (i) All questions are compulsory.*

*(ii) Figures to the right indicate full marks.*

**(MCQs)**

1. (i) 8086 can directly address upto .....memory locations. 10
  - (a) 1 M byte
  - (b) 2 M byte
  - (c) 3 M byte
  - (d) all of these
- (ii) 8086 microprocessor contains ..... bit flag register.
  - (a) 8
  - (b) 16
  - (c) 20
  - (d) All of these
- (iii) Active flags in 8086 microprocessor are .....
  - (a) Four
  - (b) Five
  - (c) Nine
  - (d) All of these
- (iv) OF stands for ..... in 8086 flag register.
  - (a) Object flag
  - (b) Overflow flag
  - (c) Odd flag
  - (d) All of these
- (v) JNC instruction stands for .....
  - (a) Jump
  - (b) Jump if not carry
  - (c) Both (a) and (b)
  - (d) None of these

P.T.O.

- (vi) SI register stands for .....
- Source index register
  - Serial index register
  - Static index register
  - All of the above
- (vii) NEG instruction is used for :
- One's complement
  - Two's complement
  - Both (a) and (b)
  - None of the above
- (viii) ADC instructions stands for :
- Add with carry
  - Add without carry
  - Both (a) and (b)
  - None of these
- (ix) BIU stands for ..... in 8086.
- Byte instruction unit
  - Bus interface unit
  - Both (a) and (b)
  - None of these
- (x) 8086 operates in ..... modes.
- one
  - two
  - three
  - four

**(Theory)**

2. Explain software architecture of 8086 microprocessor. 10

*Or*

Write short notes on :

- The role of segment registers in memory segmentation. 5
- Any *five* logical instructions with example. 5

3. Explain program development cycle of assembly language program. 10

*Or*

Write short notes on :

- (a) Explain working of status flag register of 8086. 5
- (b) Explain multiplication and division instructions used in 8086 microprocessor. 5
4. Write ALP for addition of two 8-bit numbers. 10

*Or*

Write short notes on :

- (a) Explain CALL and RET instructions in 8086 ALP. 5
- (b) Explain any *four* string instructions with example. 5