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**Y—469—2019**

**FACULTY OF SCIENCE**

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

**NOVEMBER/DECEMBER, 2019**

**(CGPA Pattern)**

**COMPUTER SCIENCE**

**Paper VIII**

**(ALP Using 8086 Microprocessor)**

**(MCQ + Theory)**

**(Friday, 13-12-2019)**

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

*Time— Two Hours*

*Maximum Marks—40*

*N.B. :— (i) Attempt All questions.*

*(ii) Assume suitable data, if necessary.*

**(MCQ)**

1. Select the *correct* answer for the following : 10

(i) ..... is the part of instruction that identifies the operation to be performed :

- (a) Operand (b) Opcode  
(c) Data (d) None of these

(ii) 'ADD AX, BX'—In this instruction 'AX' is called.....

- (a) Source operand (b) Destination operand  
(c) Register (d) Mnemonic

(iii) The machine language output produced by the assembler is called :

- (a) Object code (b) Source code  
(c) Mnemonic (d) Data code

P.T.O.

- (iv) Architecture of 8086 microprocessor contains two processing units one is bus interface unit and other is .....
- (a) Data unit (b) Code unit  
(c) Execution unit (d) Micro unit
- (v) Data segment is .....bit register.
- (a) 64 (b) 08  
(c) 32 (d) 16
- (vi) .....instruction is used to transfer data.
- (a) CPY (b) MOVE  
(c) MOV (d) XCHG
- (vii) ..... is kind of jump permits jump from one code segment to another.
- (a) Intrasegment jump (b) Intersegment jump  
(c) Both of these (d) None of these
- (viii) In case of ASCII subtraction ..... instruction is used.
- (a) AAS (b) DAS  
(c) SUB (d) SBB
- (ix) .....Instruction is used to add one to an operand.
- (a) ADD (b) ADC  
(c) DAA (d) INC
- (x) .....means a series of data words or bytes that reside in consecutive memory locations.
- (a) String (b) Data  
(c) Operands (d) None of these

**(Theory)**

2. Describe the software model of 8086 microprocessor. 10

Or

Explain in detail various addressing modes. 10

3. (a) Explain ADC, 'SBB' and 'DAA' instructions with example. 5  
 (b) Explain rotate instructions with example. 5

*Or*

Write an assembly language program to add to 16-bit numbers. 10

4. (a) Explain PUSH and POP instructions with example. 5  
 (b) Explain unconditional jump instruction with example. 5

*Or*

(c) Explain instructions used to scan the string with example. 5

(d) Write an assembly language program to find largest among three of bit numbers. 5