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AO—349—2018

FACULTY OF SCIENCE

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

MARCH/APRIL, 2018

COMPUTER SCIENCE

Paper VIII

(ALP Using 8086 Microprocessor)

(MCQ+Theory)

(Friday, 27-4-2018) **Time : 2.00 p.m. to 4.00 p.m.**

Time—2 *Hours* *Maximum Marks*—40

N.B. :— (*i*) Attempt *All* questions.

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

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

(*iv*) Draw figures wherever necessary.

(MCQ)

1. Choose the *correct* answer : 10

(*i*) Intel 8086 is having ..... bit address bus.

(A) 16 (B) 24

(C) 20 (D) 32

(*ii*) Intel 8086 has ..... segment registers.

(A) 4 (B) 2

(C) 6 (D) 8

(*iii*) Intel 8086 has ..... conditional flags.

(A) 5 (B) 6

(C) 3 (D) 9

(*iv*) The pointer is a ..... address element that is used to access data or code in memory.

(A) 1 byte (B) 2 word

(C) 3 byte (D) None of these

P.T.O.

(*v*) In 8086 there are ..... segments and ..... segments can be used at one time.

(A) 4, 4 (B) 8, 2

(C) 16, 4 (D) None of these

(*vi*) In 8086 microprocessor ..... registers are used as data registers.

(A) 13 (B) 4

(C) 6 (D) 8

(*vii*) In 8086 microprocessor instruction queue is ..... bytes long.

(A) 2 (B) 4

(C) 8 (D) 6

(*viii*) In 8086 ..... is not a stack related instruction.

(A) POP (B) PUSH

(C) CMP (D) POPF

(*ix*) ..... is used to convert ALP into machine language program.

(A) Linker (B) Debugger

(C) Editor (D) Assembler

(*x*) In arithmetic instructions ..... register used as destination register.

(A) AX (B) BX

(C) CX (D) None of these

(Theory)

2. (*a*) What is microprocessor ? Describe microarchitecture of 8086 microprocessor. 10

Or

Describe various programs and files involved in the program development life cycle. 5

(*b*) Explain working of the following instructions : 5

(*i*) XCHG

(*ii*) DAS

(*iii*) MOVSB

(*iv*) POPF

(*v*) SBB.

3. What is segmented memory ? Explain role of segment registers in 8086 microprocessor. 10

Or

(*a*) Explain repeat until control structure. 5

(*b*) Explain CALL and RET instructions. 5

4. Write short notes on (any *two*) : 10

(*a*) Status register

(*b*) Logical instructions

(*c*) Branch program structure if .... then ..... else

(*d*) Any four string handling instructions.