SE| comp|CSE-AIML| CS-IT|CS-BS/ NEP 2020| DEC-23 -
SEM-III
Q.P. code!- 98169   -10/12/23 -

Time: 2 Hours   Marks : 60

Notes:
1. Question No. 1 is Compulsory.
2. Attempt any THREE from Q2. To Q6.
3. All questions carries equal mark.
4. Calculator having number conversion function is not allowed.

Q1 **Attempt any THREE**

A Convert the following decimal number to Binary, Octal and Hexadecimal number.   5

     a) $(345.35)_{10}$ b) $(818.55)_{10}$

B Explain addressing modes of 8086 with suitable example.   5

C Explain Associative memory with its usages.   5

D Explain ISA, PCI and USB buses.   5

Q2 **A** Draw flowchart for non restoring division algorithm and implement for (13/3)   8

B Explain memory hierarchy with diagrams and characteristics of memory.   7

Q3 **A** A computer has 64MB main memory and 32KB cache memory. Each line in cache stores 8bytes.   8
Show the format for memory address for Direct and Associative mapping.

B Explain and compare programmed I/O, interrupt-driven I/O, and DMA.   7

Q4 **A** Explain micro- programmed control unit with suitable diagram.   8

B Draw and explain the various pipeline hazards and method to resolve it.   7

Q5 **A** Explain with suitable diagram Architecture of 8086 microprocessor.   8

B Multiply $(12)_{10}$ and $(-5)_{10}$ using Booth's algorithm.   7

Q6 **A** Explain bus arbitration with examples   5

B Explain Flynn's classification.   5

C Differentiate horizontal and vertical microinstruction.   5

98169   **Page 1 of 1**