B.Tech. 4th Semester F-Scheme

Examination, May-2019

COMPUTER ARCHITECTURE AND

ORGANISATIONS

Paper-CSE-210-F

Time allowed : 3 hours]   *[Maximum marks : 100*

Note : ***Question No. 1 is compulsory.*** *Attempt any* ***five*** *questions,* ***one*** *from each section.*

1. Write short note on the following :   4×5=20

   (a) Locality of reference

   (b) MIPS and MILOPS

   (c) Interrupts of 80×86

   (d) Multiplexers and Demultiplexer

Section-A

2. (a) What is structured organization ? Explain multi-level view point of machine.   10

   (b) Explain Architecture of ISA in detail.   10

3. (a) Describe the Flynn's classification of Computers.   10

   (b) Explain JK and D-flip-flop with truth table. 10

Section-B

4. (a) Explain CISC and RISC with the help of their Architecture. Also differentiate between CISC and RISC.   12

    (b) Write short note on the following :   8

        (i)   Instruction set formats

5. Explain various types of addressing modes with the help of suitable example.   20

Section-C

6. (a) Explain the detailed path for a typical register based CPU.   10

    (b) What is instruction cycle ? Explain 3-stage CPU cycle in detail.   10

7. Define Cache memory. Explain the following mapping with example :   20

    (a)   Associative mapping

    (b)   Direct-Mapping

    (c)   Set-Associative Mapping

Section-D

8. (a) Describe the Amdahl's Law in detail.   10

    (b) What is parallelism ? Explain how through put is enhanced with the help of parallelism.   10

9. (a) Explain instruction level parallelism.   10

    (b) What is micro program sequence ? Explain in detail.   10