B.Tech. 4th Semester F-Scheme (CSE) Examination,
May–2018

COMPUTER ARCHITECTURE AND ORGANIZATION

Paper–CSE–210 F

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

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

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

   (a)   MSAM

   (b)   Master-slave flip-flop with its truth table

   (c)   Locality of Reference

   (d)   Interrupts

Section–A

2.   What do you mean by a multiplexer ? Describe a 4 * 1 multiplexer using AND, OR and NOR gate ?   20

3.   (a)   Explain Flynn's classification of computers in detail.   10

   (b)   Explain multilevel-viewpoint of a machine.   10

Section–B

4.   (a)   How arithmetic Expressions are evaluated in a stack based CPU ? Explain in detail.   10

    (b) How a computer instruction is executed ? Draw the instruction cycle.   10

5.   (a) Explain various types of addressing modes with example.   10

    (b) Explain CISC and RISC with example.   10

Section–C

6. Define Cache memory ? Explain following mapping with example :   20

    (a) Associative Mapping

    (b) Direct Mapping

    (c) Set-Associative Mapping.

7.   (a) Differentiate between static and Dynamic Random Access memory.   10

    (b) Write short note on 3-stage CPU cycle with the help of example.   10

Section–D

8. What is parallelism ? Explain various types of parallelism in detail.   20

9.   (a) State and Explain Amdahl's Law.   10

    (b) Write short note on memory hierarchy.   10