M.Sc. DEGREE EXAMINATION,NOVEMBER 2018
I Year I Semester
Core Elective -I
COMPUTER ARCHITECTURE

Time : 3 Hours **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer any **TEN** questions

1. What is system bus?
2. What is Address Sequencing?
3. Give the categories of user-visible registers.
4. What is pipelining?
5. Give the arithmetic functions on numbers in 2's complement representation.
6. What are the four basic phases of the algorithm for addition and subtraction?
7. Draw the block diagram of a typical DMA.
8. What are the major functions of an I/O module?
9. What are the advantages of using a glass substrate for a magnetic disk?
10. What is the use of DRAM?
11. What are the two types of implementation of control unit?
12. List the advantages and disadvantages of microprogramming.

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

13. Explain the structure of micro-programmed control unit.
14. Explain the internal structure of CPU.
15. Explain the floating-point representation with an example.
16. Write a brief note on I/O channel architecture.
17. Write a short note on memory hierarchy.
18. Discuss the RISC Pipelining in detail.
19. Explain briefly the modules of interconnection structures.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Explain in detail about various Micro Operations.
21. Describe the various addressing mode techniques.
22. Explain the Booth's Multiplication algorithm with an example.
23. Explain in detail the programmed I/O and Interrupt driven I/O operations.
24. Discuss the mapping techniques in cache memory.

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