14PCSCE1001

M.SC. DEGREE EXAMINATION,APRIL 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. Differentiate microprocessor and microprogram.
2. What is arithmetic shift? What is logical shift?
3. What is an interrupt? What are its types?
4. What is pipelining?
5. What are the four types of data?
6. What is an Array Multiplier? What is its use?
7. Differentiate Isolated and Memory Mapped I/O.
8. Give the use of cache memory and associative memory.
9. Define Handshake.
10. What is Virtual memory?
11. Differentiate synchronous and asynchronous transfer.
12. What is the use of TLB?

## Section B $(5 \times 5 = 25 marks)$

Answer any FIVE questions

13. Discuss about Error detection codes .
14. Explain the different addressing modes.
15. With a block diagram explain BCD Adder.
16. Write about DMA.
17. Discuss about Cache memory in detail.
18. Differentiate hardwired and microprogrammed control.
19. Explain Instruction Pipeline with example.

## Section C $(3 \times 10 = 30 marks)$

Answer any THREE questions

20. Explain Arithmetic microoperations in detail.
21. Discuss RISC architecture in detail.
22. Explain the Booth algorithm.
23. Explain I/O interface in detail.
24. Explain memory management hardware.