

**FIRST SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2024
(Regular/Improvement/Supplementary)**

**COMPUTER SCIENCE
FCSS1C05 – COMPUTER ORGANIZATION & ARCHITECTURE**

Time: 3 Hours**Maximum Weightage: 30****Section A: Short answer questions. Answer any *four* questions. Each carries *two* weightage.**

1. Define sequential circuits.
2. Draw block diagram and excitation table for SR Flip Flop.
3. Define instruction cycle.
4. Explain bit pair recording.
5. What is meant by interrupt nesting?
6. Write a note on instruction format.
7. What are the different types of 8085 instructions? Give examples.

(4 × 2 = 8 weightage)

Section B: Short essay questions. Answer any *four* questions. Each carries *three* weightage.

8. With the help of block diagram explain multiplexer circuits.
9. Describe the execution of a complete instruction.
10. Discuss about the bus organization.
11. Explain the working of fast adder circuit.
12. Give an overview of Booth's algorithm.
13. Explain memory hierarchy in detail.
14. Write a note on 8051 microcontrollers.

(4 × 3 = 12 weightage)

Section C: Essay questions. Answer any *two* questions. Each carries *five* weightage.

15. Give an overview of shift registers.
16. Explain in detail about control unit and its design.
17. Write a detailed note on DMA.
18. Demonstrate the architecture of 8085 microprocessor.

(2 × 5 = 10 weightage)