24P162   (Pages: 2)   Name: ....

Reg.No: ....

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2024

(CBCSS - PG)

(Regular/Supplementary/Improvement)

CC19P CSS1 C05 - COMPUTER ORGANIZATION AND ARCHITECTURE

(Computer Science)

(2019 Admission onwards)

Time : 3 Hours   Maximum : 30 Weightage

Part-A

Answer any *four* questions. Each question carries 2 weightage.

1. Explain the logic gates with truth tables.

2. Explain subtractors with example.

3. What is direct and indirect addressing mode ? Explain with an example.

4. Write a short note on Logical and manipulation instructions.

5. What is a Micro-programmed control unit? What are its advantages?

6. Explain non- restoring division algorithm.

7. Distinguish between asynchronous and synchronous data transfer.

(4 × 2 = 8 Weightage)

Part-B

Answer any *four* questions. Each question carries 3 weightage.

8. Explain floating point representation in detail.

9. Explain the functions of various registers used in Computer architecture.

10. Draw flowchart for multiplication operation.Explain with an example.

11. Compare and contrast address space and memory space. Discuss address mapping using paging.

12. Distinguish between Isolated I/O and memory mapped I/O.

13. Write a short note on input-output processor.

14. Draw the functional block diagram of 8086.

(4 × 3 = 12 Weightage)

Part-C

Answer any *two* questions. Each question carries 5 weightage.

15. Mention the Flip-flops used in digital circuit.

16. Draw flowchart for add and subtract operations.Explain with an example.

17. Explain basic principle and working of cache memory. Differentiate between level I and Level II cache memory. Explain Associative and set associative cache mapping techniques.

18. What is the use of microcontroller? Using a proper diagram explain 8051 microcontroller.

(2 × 5 = 10 Weightage)

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