21P166   (Pages: 2)   Name: ....

Reg.No: ....

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

(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 Binary arithemetic rules and examples

2. Differentiate sequential circiut and combitional circuits

3. Distinguish between direct and indirect addressing modes with examples.

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

5. Write a note on general register organization in Computer architecture.

6. What is array multiplier?

7. What are the different types of interrupt?Explain in detail.

(4 × 2 = 8 Weightage)

Part-B

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

8. Explain encoder and decoder.

9. What is a control unit? Draw the internal architecture of control unit.

10. Explain signed 2's complement addition and subtraction operations.

11. What is mapping in cache memory? Explain any two mapping techniques in detail.

12. Write a note on I/O interface. Use suitable dlock diagrams.

13. Explain handshaking methode of asynchronous data transfer with suitable block and timing diagrams.

14. Draw pin of 8085 microprocessor.

(4 × 3 = 12 Weightage)

Part-C

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

15. a. Simplify the following Boolean function in sum of products form using K-Map F (P, Q, R, S) =Σ (1,2,3,7,8,9,10,13,14)

    b. Simplify the following Boolean function in product of sum form using K-Map F (I, J, K, L) =Π (2,4,6,7,8,9,10)

16. Explain the multiplication using Booth algorithm.

17. What is the significance of DMA? Explain DMA with proper diagram.

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

(2 × 5 = 10 Weightage)

****