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# CBCS-238

## B. Sc. (Hon's) (Second Semester) Examination, June 2024

**(CBCS Course)**

**COMPUTER SCIENCE**

***Paper : 201***

**(Computer System Architecture)**

***Time Allowed : Three hours***

***Maximum Marks : 60***

***Minimum Pass Marks : 20***

*Note : Question paper is divided into two sections. Attempt questions in each section as directed in that section.*

**Section-'A'**

**(Short Answer Type Questions)** **5×6=30**

*Note : Attempt all five questions. One question from each unit is compulsory. Each question carries 6 marks.*

## Unit-I

1. Draw the logic symbol and truth table of NAND and NOR gates.

Or

Explain combinational circuit and sequential circuit.

## Unit-II

2. Explain arithmetic logic micro operation and shift micro-operations.

Or

Explain the terms given below :

(a) Timing and control instruction cycles

(b) Input/output and interrupts

## Unit-III

3. Discuss about RISC and CISC in detail.

Or

Explain the functions of pipe-lining.

## Unit-IV

4. Differentiate between associative memory and cache memory.





Or

What do you mean by virtual memory? Explain its construction and working methodology.

## Unit-V

5. What are the factors that influence parallel processing?

Or

How can you define parallelism? Describe different types of parallelism.

## Section-'B'

**(Long Answer Type Questions)** **3×10=30**

*Note : Attempt any **three** questions. Each question carries 10 marks.*

6. What is Flip-Flop? Explain working of S-R Flip-Flop.

7. Explain basic computer organization and design with a neat diagram. Also discuss register organization in detail.

8. What do you mean by data transfer? Discuss different types of data transfer.

9. What are the peripheral devices? Explain one of the peripheral devices used in computer.

10. What is hardware multithreading? Throw light on the advantages and the approaches to hardware multithreading.