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**PRESIDENCY UNIVERSITY  
BENGALURU**

**SCHOOL OF ENGINEERING**

**MAKEUP EXAMINATION – JAN 2023**

**Date:** 23-JAN-2023

**Course Code:** BCA2017

**Time:** 09:30AM – 12:30 PM

**Course Name:** Computer Organization

**Max Marks** 100

**Program** : BCA

**Weightage:** 50 %

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**Instructions:**

(i) *Read the all questions carefully and answer accordingly.*

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**Part A [Memory Recall Questions]**

**Answer all the Questions. Each question carries TWO marks.**

**(10Qx 2M= 20M)**

1. Distinguish b/w Computer Architecture VS Computer Organization
2. Write the different types of number systems with example?
3. Write the basic operational concept of instruction
4. State the performance equation
5. What are the various types of operations required for instructions?
6. What is memory cycle time.
7. What is the function of i/o interface?
8. Write the acronym for the Following: 1. MAR, 2 MDR, 3 LOR, 4 MFC,
9. What is Bus. and its types
10. Write the diagram of Memory Hierarchy (W.r.t Speed, Size, and Cost)

## Part B [Thought Provoking Questions]

**Answer all the Questions. Each question carries TEN marks.**

**(5Qx10M=50M)**

11. With a neat block diagram explain the Functional Units of computer.  
(C.O.No.3) [Comprehension Level]
12. What is addressing modes? Explain various addressing modes with the help of examples  
(C.O.No.2) [Comprehension Level]
13. List the steps needed to execute the machine instruction: Add R4, R2, R3  
(C.O.No.2) [Comprehension Level]
14. With a neat diagram, Explain Memory Hierarchy (W.r.t Speed, Size, and Cost)  
(C.O.No.3) [Comprehension Level]
15. Draw the connection between processor and memory? Mention the functions of each component in the connection  
(C.O.No.3) [Comprehension Level]

## Part C [Problem Solving Questions]

**Answer all the Questions. Each question carries FIFTEEN marks.**

**(2Qx15M=30M)**

16. With the neat diagram explain the operation of a 4 bit carry look-ahead adder and conclude the equation of each bit with logical representation  
(C.O.No.4) [Application Level]
17. With a neat diagram, write the operation of internal organization of 4X8 Configuration RAM memory chip and Find the External Connection details?  
(C.O.No.4) [Application Level]