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**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_\_

**End Semester Examination – Nov/Dec - 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **09IT201/ 12IT204/ IT235** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **COMPUTER ARCHITECTURE** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | **Marks** |
| **PART-A(10X1=10 MARKS)** | | |
| 1. | Draw the memory Hierarchy diagrams. | (1) |
| 2. | Define access time. | (1) |
| 3. | List the Replacement Algorithms available. | (1) |
| 4. | What is a Word in memory? | (1) |
| 5. | Draw the block diagram of hardware for addition and subtraction. | (1) |
| 6. | Give an example for immediate addressing. | (1) |
| 7. | Program counter will hold……………… | (1) |
| 8. | Registers are at…………..level of memory hierarchy | (1) |
| 9. | Draw the block diagram of CPU with Internal Bus. | (1) |
| 10. | List the Categories of address of next instruction to be executed in Micro program. | (1) |

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| **PART B(5 X 3= 15 MARKS)** | | |
| 11 | Write the key characteristics of twos complement representation and arithmetic. | (3) |
| 12 | Draw the logic involved in Pentium Addressing Mode Calculation. | (3) |
| 13 | Compare RAM and ROM. | (3) |
| 14 | Draw and explain the basic instruction cycle. | (3) |
| 15 | What is Increment/decrement address latch? | (3) |

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| **PART C(5 X 15= 75 MARKS)** | | | |
| 16. |  | Draw the Top Level View and explain the computer components. | 15 |
| (OR) | | | |
| 17. |  | What are the Basic designs Elements of CACHE? | 15 |
| 18. |  | Explain in detail about Semiconductor main memory. | 15 |
| (OR) | | | |
| 19. |  | Explain in detail bout Direct Memory Access. | 15 |
| 20. |  | Draw the Flowchart and explain the Unsigned Binary Multiplication. | 15 |
| (OR) | | | |
| 21. | a. | List and explain the types of operands. | 7 |
| b. | Explain Pentium and PowerPC data types. | 8 |
| 22. |  | Enumerate the various stages of the Instruction cycle and discuss each of them in detail. | 15 |
| (OR) | | | |
| 23. |  | Elucidate in detail about Power PC processors. | 15 |
| 24. |  | Explain microinstruction sequencing in detail. | 15 |
| (OR) | | | |
| 25. |  | With a neat block diagram explain the architecture of Intel 8085. | 15 |

ALL THE BEST