
BITCA3111

COMPUTER ARCHITECTURE

MODULE DETAILS

Course Location : Swaziland
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Commence Date : Week 1
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1. Define computer architecture
2. Answer the following:
 - a. CPU contains registers. Briefly explain the function of registers
 - b. Different slots such as the AGP and PCI Express (PCIe) are found on the motherboard. What is the purpose of the PCIe slot?
 - c. A system bus connects the major computer components through bus lines. Explain the three major functional groups/types of these bus lines?
3. With the aid of a well-labelled diagram, explain the following
 - a. A typical Bus interconnect structure
 - b. Instruction cycle
 - c. The PCIe protocol architecture
 - d. Two-Stage Instruction Pipeline
4. State the function of each of the following computer components:
 - a. ALU
 - b. Memory
 - c. Input
5. Briefly explain the following concepts:
 - a. Pipelining
 - b. Superscalar execution
 - c. Speculative execution
6. Explain the use/function of following registers:
 - a. PC
 - b. MAR
 - c. IR

7. The CPU uses the following to perform certain of its functions:
- address bus
 - data bus
 - control bus

Give the function carried out by each.

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