**MODULE 2 BIT-213 Platform Technologies Borres, Zyrenn Rose S. (BIT213K-KTa)**

**PART 1**. Decide on whether the following statements are True or False. Should your answer be false, offer 1 to 2 sentence explanation on what made the statement wrong. Each item with a TRUE answer is given four (4) points, while each FALSE answer is awarded eight (8) points, including the explanation. False answers without any explanation shall be awarded with two (2) points.

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| **STATEMENTS** | **TRUE / FALSE** | **EXPLANATION** |
| Programmers and developers are more inclined to consider computer organization over architecture, as the former deals with the instruction sets, memory addresses and the general rules in creating programs. | TRUE |  |
| Generally speaking, computer architecture is preserved in an organization, mainly because manufacturers want to protect the users' software investments. | TRUE |  |
| A cache memory is the same as the main memory, only smaller and slower. | FALSE | Because Cache Memory is a special very high-speed memory that is used to speed up and synchronizing with high-speed CPU. Cache memory is costlier than the Main memory. |
| A persistent storage is required in a computer system in order for the currently used data to be stored and processed more quickly. | TRUE |  |
| Each physical processor chip can have more than one core inside it. | TRUE |  |

**PART 2**. Answer the following question/statements by providing a short explanation (1 to 2 sentences). Each answer is worth five (5) points.

**A.** What is the main difference between computer organization and computer architecture?

**- The user's perception of a computer system's structure and behavior is referred to as computer organization. It is the point of contact between the hardware and the software. The way hardware components are joined together to produce a computer system is known as computer architecture.**

**B.** In simplest terms possible, define what a cache memory is.

**- A computer's cache memory is a type of extra memory that caches frequently used instructions and data in order for the computer's CPU to process them more quickly.**

**C.** Differentiate between persistent and non-persistent storage.

**- The data that is not available after the program has been closed completely is known as non-persistence data. The data that remains available after the program has been closed completely is known as persistent data. This type of information must be saved in a shared preference, a database, or a memory device, either internal or external.**

**D.** What is the single, most important negative effect that might happen if computer manufacturers shorten the span of time between changes in computer architecture? (e.g., what if tomorrow, processor manufacturer decides to release a 128-bit processor chip?)

**- When all of the available RAM is used up, the computer must start caching data on the hard drive, which is substantially slower. A computer's performance is greatly slowed by the frequent transfer of data between RAM and virtual memory (hard drive memory).**

**E.** In terms of overall performance, what can immediately make an impact in improving a computer system's performance: A change in architecture or organization?

**- I think a change in Computer architecture because the methods of interconnection for a computer's hardware components, as well as the mode of data flow and processing, are represented by computer architectures. In order to speed up data transfer and processing, various computer architectural configurations have been devised.**