

Ms. Pozzebon
ICS3U – Introduction to Computer Science

Unit 0 - Foundations

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UPDATED MARK	PARENT SIGNATURE
694	

KNOWLEDGE	THINKING	COMMUNICATION	APPLICATION
12/15	4/8	6/9	35/5

5/8

KNOWLEDGE:

MATCHING – Use the scantron provided to record your answers.

[9]

Match the following terms to their definitions. Fill in the bubbles for both letters (e.g.: for [ab] fill in the [a] and [b] bubble on the scantron).

Terms:

[ab] Software
[ac] Information
[bc] Hertz

[ac] Hardware
[bc] BIOS
[cd] Data

[ad] Utility Programs
[bd] Operating System
[ee] Source Code

Definitions:

1. bd Software, BIOS, Manage the communication between the hardware and applications. Operating System
2. bc Flash memory inside your computer that provides the necessary information for your computer to work. BIOS
3. Ac Physical parts of the computer. Hardware
4. Ab Provides instructions to the computer for specific tasks. Software
5. Ac A collection of data like a complete mailing address. Information
6. ce A program written in a high-level language. Source code
7. cd Individual facts like first name, last name, address, city, postal code, country. Data
8. be The unit of measure used to measure the CPU's processing speed or cycles per second. Hertz
9. Ad Performs tasks related to the maintaining the health of the computer (i.e. hardware, data). Utility

MULTIPLE CHOICE – Use the scantron provided to record your answers and record your answers on the test page. [5]

10. Which of the following is an example of application software?
a) File Management System (i.e. Windows Explorer) ~~Operating System~~
b) Google search engine
c) Java Programming Language ~~Code~~
d) Linux ~~OS~~
e) All of the above ~~can't~~

11. Which of the following is NOT a function of the Information Processing Cycle?
a) Input
b) Output
c) Storage
d) Graphics
e) None of the above *In, Out, Proc, Sto*

12. Who was the creator of the first mechanical computer, the Analytical Engine??
a) Bill Gates
b) Charles Babbage
c) Ada Lovelace
d) Steve Jobs
e) None of the above

13. ALU stands for:
a) Application Log Upload
b) Arithmetic Logical Unit *ALU*
c) Assembly Language Utility
d) Active Login UserID
e) None of the above

14. What type of storage is required for data that is “filed away” for future use?
a) Virtual
b) Auxiliary
c) Primary
d) Cloud *Cloud*
e) All of the above

15. Which of the following types of memory is considered to be non-volatile?
a) Flash
b) ROM
c) Hard Drive
d) All of the above
e) None of the above

? *pls give mark*
does not disappear

COMMUNICATION: Answer the following questions in complete sentences

1. Describe the difference between system software and application software. Provide one example of each to support your answer. [4]

System is in the computer, like operating or utility. Application is the program being run on the computer. System is like windows and the storage health for windows. Application is like Minecraft which you could use and play. Application is dependant on software to work. Some application softwares can't be run on certain software, more on windows, mac then Linux.

3

Windows > Linux

2. In your opinion, which is the best operating system? Compare it to another one. [5]

In my opinion, it is Windows OS. Windows comes pre-installed on most personal computers. In addition, it runs almost every program. Furthermore it is very easy to use for everyone, beginners and professionals. Linux is worse, because it is much harder to use. You need to code to use the software itself. The only benefit is that it's free, but it cannot run nearly as many programs as windows.

I believe windows ^{having a} price is superior, because it is easy-to-use and runs more applications.

3

THINKING: Answer the following questions in complete sentences

1. Describe how an Interpreter works with Source Code [1]

It reads it line by line, and can discover errors, easier to fix since more precise.

2. Describe how an Interpreter works in the area of Memory Efficiency [1]

It is slow at processing, since line by line. Easy to find errors along the way - less memory

3. Describe how a Compiler works with Source Code [1]

It dissectes the whole code very quickly all at once and marks if mistakes are made. It, however, does not show what ^{were} mistakes are.

4. Describe how a Compiler works in the area of Memory Efficiency [1]

It is fast at processing, since all code at once.
Harder to spot errors.

more memory

5. Why did the arrival of high-level programming languages make it necessary to create interpreters and compilers? [4]

It is necessary, because high-level programming languages like Binary code, 0's and 1's, are only understood by computers. The interpreters and compilers turn languages we can speak or even learn to code, so that the computer understands our code. Us typing words would mean nothing, but as it turns to 0's and 1's, it will work and can process.

2

APPLICATION: Answer the following questions in complete sentences

The following types of computers are listed from lowest to the highest level of processing power:
i) personal computer ii) mainframe iii) supercomputer

~~Personal Computer Mainframe Super Computer~~

1. List and describe the three (3) factors used to determine the power of a computer. [3]

Speed → Faster = better, Slower = worse (not always bad/cheaper)

Storage → How much information it can store + process

Reliability → How accurate computer is.

Speed, how fast it process, Storage, how much information it can hold.

Reliability, how efficient and accurate results are.

2. Personal Computer - describe the primary purpose and explain why the level of processing power it possesses is sufficient. [1]

Used to access the internet, play games and is not as expensive as others. More power is used for weather forecast that needs a very high power. Having this power can be cheap enough, and enough power for casual browsing and all games, really.

3. Super Computer - describe the primary purpose and explain why the level of processing power it possesses is sufficient. [1]

The primary is to find really complex problems to solve. Like weather forecast, since it needs to be very accurate. NASA reads it for calculating distance and to ensure safety of Astronaut's lives.