1.11

What is the etymology of the word Internet?

The word *internet* is derived from the word *internetworking* meaning to connect many smaller networks together.

1.12

Explain the parts of the following URLs:

1. chs.mcps.org/Faculty/math.html
2. java.sun.org/products/index.html

The first section is called the subdomain, or local name. The next section is the domain name, with the TLD at the end. Following the domain name is the path to the resource on the server.

1.13

What is the difference between a high-level language and machine language?

Machine language is a processor-dependent set of basic instructions. A high-level language builds on top of lower-level languages to make programming simpler, typically implementing an English-like syntax.

1.14

What is Java bytecode?

Java bytecode is similar to machine language code, except for its platform-independent nature, meaning it is able to run on a wide variety of processors and operating systems.

1.15

What is white space? Does it change program execution?

White space consists of spaces, tabs, and newlines and it provides a form of readability to a program. Other than being used to separate keywords, white space is generally ignored by the compiler, so it does not change program execution.

1.16

Which of the following are not valid Java identifiers? Why?

c. **1**2345

This is not a valid identifier because it begins with a digit, and not a character.

e. black**&**white

This is not a valid identifier because it contains a special character.

1.17

What do we mean by the syntax and semantics of a programming language?

The syntax rules of a programming language define how different keywords of a language can be combined. The semantics define exactly what each keyword means to the compiler, so there can only be a single interpretation of a statement.