**Chapter 2: Java Fundamentals**

**2.12 Which of the following are illegal variable names and why?**

- x

**- 99bottles** -illegal variable name due to variable name starting with a number

- july97

-theSalesFigureForFiscalYear98

**- r&d** illegal variable name due to variable name containing “&” sign. Can only use “$ or \_” symbol

- grade\_report

**2.13 Is the variable name Sales the same as sales? Why or why not ?**

No, the variable name “Sales” and sales are not the same due to Java being case sensitive. For example, “Sales” could be the name of the Java project, while “sales” could be the variable name

**2.14 Refer to the Java primitive data type listed in Table 2-5 for this question.**

**a) If the variable needs to hold whole numbers in the range 32 to 6,000, what primitive data type would be best?**

short

**b) If a variable needs to hold whole numbers in the range -40,000 to +40,000, what primitive data type would be best?**

int

**c) Which of the following literals use more memory? 22.1 or 22.1F?**

22.1F

**2.15 How would the number 6.31 x 10^17 be represented in E notation?**

6.31e17

**2.16 A program declares a float variable named number, and the following statement causes an error. What can be done to fix the error?**

**number = 7.4;**

float number = 7.4; (You have to first specify the data type and then the variable name afterwards)

**2.17 What values can Boolean variables hold?**The only values that Boolean variables can hold is true or false

**2.18 Write statement that do the following:**

**a) Declare a char variable named letter.**

char letter;

**b) Assign the letter A to the letter variable.**

char letter = ‘A’

**c) Display the contents of the letter variable.**

**System.out.println(A);**

**2.19 What are the Unicode codes for the characters ‘C’, ‘F’, and ‘W’?**

Unicode for ‘C’ : 67

Unicode for ‘F’: 70

Unicode for ‘W’: 87

**2.20 Which is a character literal, ‘B’ or “B” ?**

‘B’ is a character literal, while “B” is a string literal

**2.21 What is wrong with the following statement?**

**char letter = “Z”;**

The assignment statement is specified as a String literal with the double quotation. When in fact, it should be specified as a character literal with a single quotation.