CS 1301

Exam1

40pts

Name:

1. What value is contained in the integer variable **length** after the following statements are executed? (2pts)

int length = 1;

length += 2;

length \*= 3;

9

1. Identify and fix the syntax errors in the following code: (4pts)

public class Welcome {

public static void main (String [ ] args ) {

System.out.println (“Welcome to Java!”);

}

}

1. Given the following declarations, what result is stored by each of the following assignment statement? (4pts)

int iResult, num1 = 7, num2 = 5;

double fResult, val1 = 5.5, val2 = 2.4;

a. fResult = val1 / num2; // 1.1

b. iResult = (int) val2 / num1; // 0

1. Multiple choice problems: (12 x 1.5 = 18)

If a program compiles fine and no error message generated, but it produces incorrect result, then the program suffers

a. a compilation error

b. a runtime error

c. a logic error

The main method header is written as:

1. public static void main(string[ ] args)

1. public static void Main(String[ ] args)
2. public static void main(String[ ] args)

d. public static main(String[ ] args)

e. public void main(String[ ] args)

What is syntax?

a. Words that have a special meaning in the programming language

b. Rules that must be followed when writing a program

c. Punctuation

d. Symbols or words that perform operations

Which of the following statements correctly creates a Scanner object for keyboard input?

a. Scanner kbd = new Scanner(System.keyboard);

b. Scanner keyboard(System.in);

c. Scanner keyboard = new Scanner(System.in);

d. Keyboard scanner = new Keyboard(System.in);

Which of the following is a legal Java identifier?

a. 1ForAll

b. oneForAll

c. one/4/all

d. 1\_4\_all

e. 1forall

What is the value of (double)(5/2)?

a. 2

b. 2.5

c. 3

d. 2.0

e. 3.0

Which of these data types requires the most amount of memory?

a. long

b. int

c. short

d. byte

Of the following types, which one cannot store a numeric value?

a. int

b. byte

c. float

d. char

e. all of these can store numeric values

If x is an int and y is a float, all of the following are legal except which assignment statement?

a. y = x;

b. x = y;

c. y = (float) x;

d. x = (int) y;

e. all of these are legal

What value will z have if we execute the following assignment statement? int z = 50 / 10.00;

a. 5

b. 5.0

c. 50

d. 10

e. none of these, a run-time error arises because z is an int and 50 / 10.00 is not

35. What is the result of the following expression? 10 + 5 \* 3 - 20

a. -5

b. 5

c. 25

d. -50

Suppose x is 1. What is x after x -= 1?

a. 0

b. 1

c. 2

d. -1

e. -2

1. What will be output of each of the following? If some expression is invalid, write invalid. (4pts)
2. 4 % 5 // 4
3. 5 % 4 // 1
4. 4 % 1 // 0
5. 0 % 1 // 0
6. Write a program that prompts the user to enter the radius of a circle from the keyboard as a double and prints the circle’s diameter, circumference, and area using the floating point value 3.14159 for π.. Use the following formulas (r is the radius):

diameter = 2r

circumference = 2πr

area = πr 2 (8 points)

1 import java.util.\*; (1 point)  
 2   
 3 public class Exam\_1  
 4 {  
 5 public static void main(String [] args)  
 6 {  
 7 Scanner input = new Scanner(System.in); (1 point)  
 8   
 9 double radius = input.nextDouble(); (1 point)  
10   
11 final double PI = 3.14159; (1 point)   
12   
13 double diameter = 2\*radius; (1 point)  
14 double circumference = 2\*PI\*radius; (1 point)  
15 double area = PI\*radius\*radius; (1 point)  
16   
17 System.out.println("Diameter: "+diameter);  
18 System.out.println("Circumference: "+circumference);  
19 System.out.println("Area: "+area); (1 point)   
20 }  
21 }