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BADR UNIVERSITY IN ASSIUT  
جامعة بدر بنى سويف

**Badr University in Assiut**  
School of Artificial Intelligence & Data Management



### Midterm Exam – Academic Year 2024/2025

Course Name: Object Oriented Programming

Exam Time: 1 Hour

Course Code: CS82101

Date: 18/11/2024

Semester: ☒ Fall ☐ Spring ☐ Summer

Exam Set: Model A

#### Question Set 1: True/False Questions (10 Grades)

1	The command <code>java Welcome</code> executes the Java class file <code>Welcome.class</code> . <input checked="" type="checkbox"/>
2	Declaring <code>main</code> as <code>void</code> allows the JVM to invoke <code>main</code> without creating an instance of the class. <input checked="" type="checkbox"/>
3	The following for-loop headers results in equivalent numbers of iterations: A. <code>for (int q = 1; q &lt;= 100; q++)</code> B. <code>for (int q = 100; q &gt;= 0; q--)</code> C. <code>for (int q = 99; q &gt; 0; q -= 9)</code> D. <code>for (int q = 990; q &gt; 0; q -= 90)</code> <input checked="" type="checkbox"/>
4	<code>int total = 0;</code> <code>for (int i = 0; i &lt;= 20; i += 2)</code> <code>total += i;</code> The previous statement is equivalent to the next one. <code>int total = 0;</code> <code>for (int i = 0; i &lt;= 20; total += i, i += 2)</code> <input checked="" type="checkbox"/>
5	The body of a while loop is always executed at least once. <input checked="" type="checkbox"/>
6	An enumeration constant can be used in a switch statement in the expression after keyword <code>case</code> . <input checked="" type="checkbox"/>
7	The <code>continue</code> statement is used to continue after a switch statement. <input checked="" type="checkbox"/>
8	The conditional operator is a ternary operator, meaning that it takes three operands. <input checked="" type="checkbox"/>
9	The empty statement is denoted by semicolon (;). <input checked="" type="checkbox"/>
10	Using a condition for a while statement that is initially false is a logical error. <input checked="" type="checkbox"/>

#### Question Set 2: Multiple-Choice Questions (10 Grades)

11	Which of the following is not a valid Java identifier? A. my Value      B. \$ AAA1      C. width      D. m_x
12	Which is the output of the following statements? <code>System.out.print( "Hello ");</code> <code>System.out.println( "World" );</code> A. Hello World      B. HelloWorld      C. Hello World      D. World Hello
13	Which of the following statements would display the phrase Java is fun? A. <code>System.out.println( "hellois fun\rJava " );</code> <input checked="" type="checkbox"/> B. <code>System.out.println( 'Java is fun' );</code> <input checked="" type="checkbox"/> C. <code>System.out.println( "\"Java is fun\"");</code> <input checked="" type="checkbox"/> D. <code>System.out.println( Java is fun );</code> <input checked="" type="checkbox"/>
14	Multi-line comment can be done using A. /*      B. %      C. //      D. \$
15	Which is a correct static method call of Math class method <code>sqrt</code> ? A. <code>sqrt(900);</code> B. <code>math.sqrt(900);</code> C. <code>Math.sqrt(900);</code> <input checked="" type="checkbox"/> D. <code>Math math = new Math(); math.sqrt(900);</code>
16	Which of the following can be an argument to a method? A. Constants.      B. Variables      C. Expressions      D. All of the previous
17	Which of the following methods are overloaded with respect to one another? 1. <code>public int max (int a, int b) { ... }</code> 2. <code>public double max (double a, double b) { ... }</code> 3. <code>public int max (int a, int b, int c) { ... }</code> 4. <code>public double max (double a, double b, double c) { ... }</code>



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	A. 1 and 2 are overloaded; 3 and 4 are overloaded	B. 1 and 3 are overloaded; 2 and 4 are overloaded	C. 1, 2 and 3 are overloaded	D. All four methods are overloaded
18	Consider the following two Java code segments: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><i>Segment 1</i></p> <pre>int i = 0;  while (i &lt; 20) {     i++;     System.out.println(i); }</pre> </div> <div style="width: 45%;"> <p><i>Segment 2</i></p> <pre>for (int i = 0; i &lt;= 20; i++) {     System.out.println(i); }</pre> </div> </div> <p>Which of the following statements are true?</p>			
	A. The output from these segments is not the same	B. Both (a) and (b) are true	C. The scope of the control variable i is different for the two segments	D. Neither (a) nor (b) is true
19	<pre>class Test {     final static short i = 2;     public static int j = 0;     public static void main(String [] args){         for (int k = 0; k &lt; 3; k++)         {             switch (k){                 case i: System.out.print("0 ");                 case i-1: System.out.print("1 ");                 case i-2: System.out.print("2 ");             }         }     } }</pre>			
	A. 210100	B. 012122	C. 212012	D. Error
20	<pre>public class Test {     public static int doStuff(double x, double y)     { return (int)(x * y); }     public static void main(String[] aa) {         float x = 6.0f;         int y = 11;         x = Test.doStuff(y,x);         System.out.print("x="+x+", y="+y);     } }</pre>			
	A. x=66.0, y=66	B. x=11.0, y=11	C. x=66.0, y=11	D. x=6.0, y=11

**Question Set 3: Essay and Problem-Solving Questions (5 Grades)**

A. Write a function that inputs an integer and then returns the number with the digits reversed. For example, if the input is 12345, the output should be 54321.

B. Write a function to compute  $x^n$  for any given two integers x and y.

End of Questions