

题号	一	二	三	四	五	六	七	八	九	十	总分	总分人
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Part I. Single Choice Questions for Basic Concept (3 Points each, 45 Points total).

1	2	3	4	5	6	7	8	9	10

- An error in a program that results in the program outputting \$100 instead of the correct answer, \$250 is
 - a programmer error
 - a syntax error
 - a run-time error
 - a logical error
- Which of the following is a legal Java identifier?
 - 1ForAll
 - oneForAll
 - one/4/all
 - 1_4_all
- If x is an int and y is a float, all of the following are legal except which assignment statement?
 - y = x;
 - x = y;
 - y = (float) x;
 - x = (int) y;
- If a, b, and c are int variables with a = 5, b = 7, c = 12, then the statement
int z = (a * b - c) / a; will result in z equal to
 - 0
 - 4
 - 5
 - 5

- What is output with the statement System.out.println(""+x+y); if x and y are int values where x=10 and y=5?
 - 15
 - 10 5
 - 105
 - An error since neither x nor y is a String
- Suppose that String name = "Frank Zappa". What will the instruction name.toUpperCase().replace('A', 'T'); return?
 - "FRANK ZAPPA"
 - "FRINK ZIPPI"
 - "Frink Zippi"
 - "Frank Zappa"
- Since you cannot take the square root of a negative number, you might use which of the following instructions to find the square root of the variable x?
 - Math.sqrt(x*x);
 - Math.sqrt((int) x);
 - Math.sqrt(Math.abs(x));
 - Math.abs(Math.sqrt(x));
- Which of the following will yield a pseudorandom number in the range [-5, +5) given the following:
 - Math.random() * 10 - 5
 - Math.random()* 10 - 5 - 1
 - Math.random()* 10 - 5 + 1
 - None above
- In order to preserve encapsulation of an object, we would do all of the following except for which one?
 - Make the instance data private
 - Define the methods in the class to access and manipulate the instance data
 - Make the methods of the class public
 - Make the class final
- If x is an int where x = 1, what will x be after the following loop terminates?
while (x < 100)
x *= 2;
 - 64
 - 100
 - 128
 - None of the above, this is an infinite loop

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11. Given that s is a String, what does the following loop do?
for (int j = s.length(); j > 0; j--)
 System.out.print(s.charAt(j-1));
- a) it prints s out backwards
b) it prints s out forwards
c) it prints s out backwards after skipping the last character
d) it yields a run-time error because there is no character at s.charAt(j-1) for j = 0
12. All classes in Java are directly or indirectly subclasses of the _____ class.
a) Wrapper
b) String
c) Reference
d) Object
13. In order to determine the type that a polymorphic variable refers to, the decision is made
a) by the programmer at the time the program is written
b) by the compiler at compile time
c) by the operating system when the program is loaded into memory
d) by the Java run-time environment at run time
14. A Java program can handle an exception in several different ways. Which of the following is not a way that a Java program could handle an exception?
a) ignore the exception
b) handle the exception where it arose using try and catch statements
c) propagate the exception to another method where it can be handled
d) throw the exception to a pre-defined Exception class to be handled
15. Giving the following definition:
public class Upton{
 public static void main(String argv[]){
 }
 public void amethod(int i){}
 //Here
}
- After //Here, which statement is legal:
a) public int amethod(int z){ return 99; }
b) public int amethod(int i,int j){return 99;}
c) void amethod(long l){ return 99}
d) private int anothermethod(){ }

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Part II. Analysis programs and give result (25 Points total)

1. Consider that you want to extend AClass to BClass. BClass will have a third int instance data, z. Which of the following would best define BClass' constructor? (5 Points)
- a) public BClass(int a, int b, int c){
 super(a, b, c);
}
- b) public BClass(int a, int b, int c){
 x = a;
 y = b;
 z = c;
}
- c) public BClass(int a, int b, int c){
 z = c;
}
- d) public BClass(int a, int b, int c){
 super(a, b);
 z = c;
}
- e) public BClass(int a, int b, int c){
 super();
}
- Your answer:
2. If method question is called as question(8, 3), what is returned? (6 Points)
- ```
public int question (int x, int y) {
 if (x == y) return 0;
 else return question (x-1, y) + 1;
}
```
- a) 11  
b) 8  
c) 5  
d) 3  
e) 24

Your Answer:

3. (7 points)

```
public class Test2008 {
 public static void main(String args[]) {
 int a[][] = new int[5][5];
 int i, j, k = 10;
 for (i = 0; i < 5; i++) {
 for (j = 0; j < 5; j++) {
 if ((i + j) < 5) {
 a[4-i][4-j] = k;
 k++;
 }
 else {
 a[4-i][4-j] = i + j;
 }
 }
 }
 for (i = 0; i < 5; i++) {
 for (j = 0; j < 5; j++) {
 System.out.print(a[i][j] + "\t");
 }
 System.out.println();
 }
 }
}
```

Your Answer:

4. What will be output if you try to compile and run the following code, but there is no file called Hello.txt in the current directory?. (7 points)

```
import java.io.*;
public class Mine {
 public static void main(String argv[]) {
 Mine m=new Mine();
 System.out.println(m. amethod());
 }
 public int amethod() {
 try {
 FileInputStream dis=new FileInputStream("Hello.txt");
 }catch (FileNotFoundException fne) {
 System.out.println("No such file found");
 return -1;
 }catch(IOException ioe) {
 } finally{
 System.out.println("Doing finally");
 }
 return 0;
 }
}
```

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Part III. Application (30 Points)

1. Finish the method to sort array of numbers in the ascending order. Then write a search method to find a number from the sorted array above and to return the array index. (15 points)

```
void sort(int numbers[]){
```

```
 }
 int onArray(int numbers[], int num){
```

```
 }
```

2. Write a completed Java program to meet the following requirement(15 points):

- 1) Read real numbers from the binary file located in “c:\temp\data.dat”
- 2) Calculate the average value and max value of numbers read above
- 3) Write the result to another file named “result.dat”
- 4) DO NOT use random access method.