

P1	P2	P3	P4	Tot
11/15	9/10	3.25/10	0/10	23.25/45

HiLCoE
School of Computer Science and Technology
Object Oriented Programming (CS224)
Mid Exam
Spring 2016

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Time Allowed: 2:00

PART I - MULTIPLE CHOICE QUESTIONS

INSTRUCTION- Below are 10 multiple choice questions. For each question, choose the best answer from the choices given and put the letter of your choice in the space provided

- B** 1. Which of the following is not valid java variable name?
- A. \$cursed ✓
 B. my+Fate
 C. _class ✓
 D. Total9999999
 E. B and C
- D** 2. Which of the following signature(s) is (are) valid for the main() method entry point of an application? (Choose all that apply.)
- A. public static void main()
 B. public static void main(String arg)
 C. public void main(String[] arg)
 D. public static void main(String[] args)
 E. public static int main(String[] arg)
- A, D** 3. Given the declarations x, y and z are int, float and double variables respectively, which of the following statement(s) is (are) likely to result in error? (Choose all that apply.)
- A. x = y;
 B. x = z;
 C. y = x;
 D. y = z;
 E. z = x;
- B** 4. One of the following is a Java Program that is related to web sites and runs on a client machine
- A. Servlets
 B. Applets
 C. Applications
 D. JavaBeans
 E. All of the above
- A, B** 5. One of the following is an OOP pillar that allows objects to respond in different ways for the same message.
- A. Polymorphism
 B. Inheritance
 C. Class
 D. Encapsulation
 E. Portability
- D** 6. It is a Java development tools used to run or execute java application program
- A. javac
 B. java
 C. javadoc
 D. java.exe
 E. All of the above

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~~C~~ 7. One of the following is not the characteristics of Java Programming Language

- A. Portable
- B. Simple
- ☒ C. Supports multiple programming paradigm
- D. Secured
- ☒ E. All are correct

~~C~~ 8. How many times the following code is executed?
`while (true) {`
`}`

- D. Does not run.
- E. None of the above

- A. Once
- B. Zero times
- ☒ C. Infinite

~~E~~ ~~D~~ 9. Which of the following is true about class and object?

- A. Classes are template and objects are instances of the template
- B. Objects of the same class must have all attributes/data members listed in the class
- C. object's data value can be accessed through their reference
- D. Class is abstracted as a combination of important fields and behaviors.
- ☒ E. All of the above.

~~D~~ 10. One of the following is the characteristics of Object Oriented Programming paradigm.

- A. Deals with how to write the logic
- B. Separates the data from the operation
- C. Unit programming is function
- D. Focus on both the data and operation
- ☒ E. All of the above

~~E~~ 11. One of the following is the output of the following code

```
Public class Output(  
    public static void main(String args[])  
    {  
        int A[];  
        int B [] = {10, 20, 30, 40, 50};  
        A = B;  
        A[0] = 0;  
        for(int i = B.length-1; i>=0; i--)  
            System.out.print(B[i]+" ");  
    }  
}
```

- A. 10 20 30 40 50
- ☒ B. 0 20 30 40 50
- C. Error

- D. No output
- E. 50 40 30 20 0

~~B~~ 12. Which one of the following Java Editions targeted for handheld computing device such as PDA, Cell Phones etc.

- A. The Standard Edition
- ☒ B. The Micro Edition
- C. The Enterprise Edition

- D. B and C
- E. None of the above

13. One of the following gives different result?

- A. `for(int a = 10; a < 10; a++)
System.out.println(a);`
- B. `int a = 10;
while(a < 10) {
System.out.println(a);
a++;`

- C. `int a = 10;
do {
System.out.println(a);
a++;
} while(a < 10);`
- D. All of them have the same result
- E. None of the above

14. Which one of the following is not the reference data type?

- A. String
- B. Array
- C. double

- D. Class
- E. None of the above

15. We can use System and String class in our program without importing the package explicitly. It is because the package is automatically included in any Java program. Which one of the following is this package?

- A. `java.util`
- B. `java.lang`
- C. `javax.math`

- D. `java.io`
- E. All of the above

PART II- MATCHING

INSTRUCTION: Match phrases/words in column A with their corresponding concept (definition) in column B and place the letter of your choice in the space provided

A

B

- H 1. At least one iteration will be executed
- I 2. Compiler
- L 3. Array
- C 4. `length()`
- O 5. Bytecode
- E 6. Hiding information
- J 7. javadoc
- A 8. Default value for boolean
- P 9. large collection of ready-made software components
- D 10. used to develop server-side applications

- 8 A. false
- B. `/* */`
- C. String
- D. J2SE
- E. encapsulation
- F. JVM
- G. java command
- H. do...while loop
- I. javac command
- J. `/** */`
- K. While loop
- L. uses index 0 to n-1
- M. polymorphism
- N. true
- O. Java's intermediate code
- P. Java API
- Q. J2EE

PART III: SHORT ANSWER

INSTRUCTION: Write your answers clearly and precisely on the answer sheet provided.

1. Write the data types of java according to the group families: (2 Pts.)

Integer:

Floating-point:

Character:

True/False:

Primitive datatype: int, short, long
Primitive datatype: float, double.
Primitive datatype: ~~integer~~ char, byte.
Boolean

2. List the three types of variables and give a brief description for each one. (1.5 Pts.)
3. What is the output after the following code is executed? Assume every necessary components of the program are included. (1 Pt.)

```
char grade = 'A';
switch (grade) {
    case 'A':
        System.out.println("A ");
    case 'B':
        System.out.println("B ");
        break;
    case 'C':
        System.out.println("C ");
        break;
    default:
        System.out.println("F ");
}
```

4. Write the output of the following program? Assume every necessary components of the program are included. (1.5 Pts.)

```
public class Mystery{
    public static void main(String args[]){
        int row = 5, col;
        while(row >= 1) {
            col = 1;
            while(col <= 5){
                if(row % 2 == 1)
                    System.out.print("<");
                else
                    System.out.print(">");
                ++col;
            }
            row--;
            System.out.println( );
        }
    }
}
```

- ```

public class OutputQ {
 public static void main(String[] args) {
 int num[] = new int[10];
 for(int i=0; i<5; i++) {
 num[i] = (i*5);
 }
 for(int a:num)
 System.out.print(a+" ");
 }
}

```

- ```
import java.lang.*;
package midExam;
public class ErrorQ {
    System.out.println("Welcome to my Program");
    public static void main(String args[]) {
        Scanner s = new Scanner(System.in);
        int num;
        String str;
        System.out.println("Enter the number");
        num = s.nextInt();
        System.out.println("Enter the string");
        str = s.next();
    }
}
```

PART IV – WORKOUT

1. Write full Java program that generates the following receipt. The number of items will be decided during the sales transaction. If the **subtotal** is less than 1000 VAT will be 0% otherwise it will be 15%.

Cash Sales Attachment					
Item Code	Item Name	Unit	Quantity	Unit Price	Total Price
				Subtotal	
				Vat (15%)	
				Grand Total	