

Exam Id : **655020**

Term Name : **ACCP-Sem 2**

Module Name : **Application Development Fundamentals-I**

Exam Date :

Duration : **40 minutes**

Total Mark : **20**

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### STUDENT ANSWER SHEET

1. The \_\_\_\_ command is used to interpret and run the Java bytecode. *[1 Mark(s)]*

- A. javac
- B. java
- C. javap
- D. javadoc

2. Which of the following options are the correct implementations of a Queue? (Choose two correct answers) *[1 Mark(s)]*

- A. LinkedList
- B. ArrayList
- C. PriorityQueue
- D. CircularQueue

3. Which of the following area in the memory stores object references, method parameters, and its local variables? *[1 Mark(s)]*

- A. Stack
- B. Heap
- C. Accumulator
- D. Register

4. Which of the following is not the Java keyword? *[1 Mark(s)]*

- A. final
- B. super
- C. base
- D. static

5. Which of the following methods cannot have a body in Java? [1 Mark(s)]

- A. final
- B. static
- C. local
- D. native

6. The \_\_\_\_\_ class is declared without a name within a code block such as the body of a method. [1 Mark(s)]

- A. Local inner class
- B. Anonymous class
- C. Static Nested class
- D. Final class

7. Which of the following interface does not inherit from the Collection interface? [1 Mark(s)]

- A. Set
- B. List
- C. Map
- D. Queue

8. Consider the following method declaration? [1 Mark(s)]

```
Public short getInt() {  
    int s = 5;  
    return s;  
}
```

Which of the following statements is true regarding the method declaration?

- A. The method parameter list cannot be empty
- B. The method will not compile as the variable s needs to cast
- C. The method will compile successfully
- D. The statement int s = 5 throws runtime exception

9. The \_\_\_\_\_ keyword is used in an instance method or a constructor to refer to the current object. [1 Mark(s)]

- A. super
- B. static
- C. this
- D. new

10. Which of the following methods of an Exception class return the details about the exception that has occurred? [1 Mark(s)]

- A. getMessage()
- B. getCause()
- C. printStackTrace()
- D. StackTraceElement()

11. Given the statements: [1 Mark(s)]

```
SavingAccount objSA = new SavingAccount();  
Account objAcc = objSA;
```

Which of the following options correctly identifies the type of casting performed in these statements?

- A. Implicit
- B. Explicit
- C. Upcasting
- D. Downcasting

12. Consider the following declaration of a StringBuilder class: [1 Mark(s)]

```
StringBuilder objSb = new StringBuilder("ABC");
```

Which of the following methods of the StringBuilder class when used will display the output as ABC123?

- A. objSb.concat("123");
- B. objSb.insert(1, "123");
- C. objSb.insertLast("123");
- D. objSb.append("123");

13. Consider the following declaration: [1 Mark(s)]

```
double d = 15.3446;
```

Which of the following option shows the correct statement that produces the output, |015.345|?

- A. System.out.printf("|%07d\n", d);
- B. System.out.printf("|%07.3f\n", d);
- C. System.out.printf("|%07.3d\n", d);
- D. System.out.printf("|%07.3e\n", d);

14. Which of the following command is used to extract contents of a .jar file [1.5 Mark(s)]

- A. jar cf jar-file-name
- B. jar xf jar-file-name
- C. jar tf jar-file-name
- D. java -jar jar-file-name

**15. Which of the following keywords are used to explicitly raise an exception from a method? (Choose two correct answers) [1.5 Mark(s)]**

- A. try
- B. catch
- C. throw
- D. throws

**16. Which of the following statements are true regarding transient modifier? (Choose three correct answers) [2 Mark(s)]**

- A. Can only be used with instance variables
- B. Useful to prevent security sensitive data from being copied to a source in which no security mechanism has been implemented
- C. Informs the JVM not to store the variable when the object, in which it is declared, is serialized
- D. Involves performance issues and also increases cost

**17. Which of the following statements are true regarding local inner classes? (Choose two correct answers) [2 Mark(s)]**

- A. Associated with an instance of the enclosing class
- B. Cannot access private members of the enclosing class
- C. Can access any local variables, method parameters, or exception parameters within scope of the local method declared as final
- D. Can implement anonymous interfaces

## STUDENT ANSWER SHEET

1. Which of the following statements truly specifies the characteristics of static methods in Java? (Choose two correct answers) [1 Mark(s)]

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- A. Stack
- B. Heap
- C. Accumulator
- D. Register

5. Consider the following code snippet: [1 Mark(s)]

```
1. Iterator itr = arraylist.iterator();  
2. // insert code here  
3. {  
4.   System.out.println(itr.next());  
5. }
```

Which of the following statement added at line 2 will compile the code successfully?

- A. while (itr.moreElements())
- B. while (itr.hasElements())
- C. while (itr.hasNext())
- D. while (itr.next())

**6. Which of the following statements are true regarding the Java Virtual Machine? (Choose two correct answers) [1 Mark(s)]**

- A. It is an execution engine which creates a platform independent execution environment for executing compiled code
- B. The same implementation of JVM is available for different platforms
- C. The same bytecode can be executed by the same implementation of JVM
- D. It is an imitation of a Java processor on the physical machine

**7. Identify which of the following declarations of a class will generate errors during compilation? (Choose three correct answers) [1 Mark(s)]**

- A. class c1 { }
- B. class B implements i1 implements i2 { }
- C. class D extends c1, implements i2 { }
- D. class E extends i1, i2 { }

**8. Consider the following code: [1 Mark(s)]**

```
public class TestArray {  
    public static void main(String [] args) {  
        int arr[] = {1, 2, 3, 4};  
        for(int x = 1; x < arr.length; x++) {  
            System.out.print(arr[x++] + " ");  
        }  
    }  
}
```

What is the result of the code on execution?

- A. 1 3
- B. 2 3 4
- C. 1 2 3 4
- D. 2 4
- E.
- F.
- G.

**9. Consider a directory structure created on the Window system: A directory named AlphaProject has been created. It contains two sub-directories named source and classes. The source directory contains a Java file named MyProgram.java. Assume that the current directory has been set to AlphaProject. Then, what will be the result of the following command invocation on the command prompt, javac -d classes source/MyProgram.java. [1.5 Mark(s)]**

- A. If the command is executed successfully, then MyProgram.class file is added in the source directory
- B. If the command is executed successfully, then MyProgram.class file is added in the current directory
- C. If the command is executed successfully, then MyProgram.class file is added in the classes directory
- D. The MyProgram.java file is not compiled successfully because the command result in a error

**10. "Given that the root directory contains a subdirectory called ""BankApp"" that contains files for a Java application. The following command is invoked from the root directory in order to create a JAR file containing the ""BankApp"" directory: jar -cf X Y, where X and Y are arguments. Which of the following statements correctly identify the arguments X and Y in the jar command?" [1.5 Mark(s)]**

- A. X should be the file name of the JAR file, and Y should be "BankApp"
- B. X should be "BankApp", and Y should be the file name of the JAR file
- C. Both X and Y specifies file name of the JAR file
- D. If a file name is not specified, then file named BankApp.jar will be created

**11. Which of the following statements are true while using the import statement? (Choose three correct answers) [1.5 Mark(s)]**

- A. Not required to import classes present in the java.lang package
- B. import statement is not required for the classes inherited from some other package
- C. import statement is not required for the classes located in the same package
- D. Classes that are declared and used along with their package name do not require the import statement

**12. After the installation of JDK is completed on the system, a directory structure is created under the default directory, that is, C:\Program Files\Java. [1.5 Mark(s)]**  
Which of the following folder in the directory structure contains tools, such as compiler and JVM used for developing a Java application?

- A. bin
- B. db
- C. include
- D. lib

**13. Consider the following code:** *[1.5 Mark(s)]*

```
public class Test {  
    static int count = 0;  
    Test() { while(count < 10) new Test(++count); }  
    Test(int x) { }  
    public static void main(String[] args) {  
        new Test();  
        new Test(count);  
        System.out.println(count++);  
    }  
}
```

What is the output of the code on execution?

- A. 10
- B. 11
- C. 12
- D. Compilation fails

**14. Consider the following declarations: (Choose two correct answers)** *[1.5 Mark(s)]*

```
boolean b = false;  
int i = 7;  
double d = 1.23;  
float f = 4.56f;
```

Which of the following options are the correct format specifiers to format and print the value of these variables on the console?

- A. `System.out.printf(" %b", b);`
- B. `System.out.format(" %d", i);`
- C. `System.out.format(" %d", d);`
- D. `System.out.printf(" %i", i);`

**15. Identify which among the following are the valid development tools provided by Java Development Kit. (Choose two correct answers)** *[1.5 Mark(s)]*



- A. javah
- B. docjava
- C. javadoc
- D. jar

**16. Which of the following statements are true regarding transient modifier? (Choose three correct answers) [1.5 Mark(s)]**

- A. Can only be used with instance variables
- B. Useful to prevent security sensitive data from being copied to a source in which no security mechanism has been implemented
- C. Informs the JVM not to store the variable when the object, in which it is declared, is serialized
- D. Involves performance issues and also increases cost

## STUDENT ANSWER SHEET

1. Consider the following code snippet: [1 Mark(s)]

```
ArrayList marks = new ArrayList();  
marks.add(67);  
marks.add(90);  
marks.add(78);  
marks.add(90);  
marks.add(34);  
marks.add(56);  
Collections.sort(marks);  
System.out.println(marks);
```

What is the output of the code?

- A. [34, 56, 67, 78, 90, 90]
- B. [90, 90, 78, 67, 56, 34]
- C. [90, 78, 67, 56, 34]
- D. Compilation error

2. Which of the following statements truly specifies the characteristics of static methods in Java? (Choose two correct answers) [1 Mark(s)]

- A. Can access only static data
- B. Can invoke static and normal methods
- C. Can use super keyword
- D. Cannot use this keyword

3. The \_\_\_\_ command is used to interpret and run the Java bytecode. [1 Mark(s)]

- A. javac
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4. Which of the following options are the correct implementations of a Queue? (Choose two correct answers) [1 Mark(s)]

- A. LinkedList
- B. ArrayList
- C. PriorityQueue
- D. CircularQueue

5. **Consider the following code:** *[1 Mark(s)]*

```
public class TestArray {  
    public static void main(String [] args) {  
        int arr[] = {1, 2, 3, 4};  
        for(int x = 1; x < arr.length; x++) {  
            System.out.print(arr[x++] + " "); }  
        }  
    }
```

What is the result of the code on execution?

- A. 1 3
- B. 2 3 4
- C. 1 2 3 4
- D. 2 4
- E.
- F.
- G.

6. **Match the following modifiers with their description.** *[1 Mark(s)]*

7. **Consider the code snippet:** *[1 Mark(s)]*

Consider the code snippet:

```
int x =0;  
  
int y = 10;  
do {  
    y--;  
    ++x;  
} while (x < 5);  
  
System.out.print(x + "" + y);
```

What is the output of the following code?

- A. 5, 6

- B. 6, 5
- C. 5, 5
- D. 6, 6

**8. Which of the following statements are true regarding the static methods? (Choose two correct answers) [1 Mark(s)]**

- A. Can invoke only static methods and variables
- B. Cannot use this keyword
- C. Can invoke super class methods
- D. Can be used as static constructors

**9. Consider the following code: [1.5 Mark(s)]**

```
class Student {  
    String name;  
    int age;  
    boolean fullTimeCourse = true;  
    public void display() { System.out.println("Name: " + name); }  
    public boolean isFullTimeCourse() { return fullTimeCourse; }  
}  
class TestStudent {  
    public static void main(String[] args) {  
        Student jack = new Student();  
        Student jill = new Student();  
        jack.name = "Jack";  
        jack.age = 18;  
        jill = jack;  
        jill.name = "Jill";  
        System.out.println("Jack's Name:" + jack.name);  
    } }  
}
```

What is the output of the code on execution?

- A. Jack's Name:Jill
- B. Jack's Name:Jack
- C. Exception is thrown at runtime
- D. Jack's Name:

**10. Consider the following declaration of a class Account: [1.5 Mark(s)]**

```
public class Account {  
    int accountID = 110;
```

```
String holderName = "Jill Rock";
String accountType = "Current";
/* Initialization block */
{
    accountID = 100;
    holderName = "John Anderson";
    accountType = "Savings";
}
```

Which of the following statements are true with respect to the object instantiation for the class Account?

- A. The newly created object will be initialized with the values 110, Jill Rock, Current
- B. The newly created object will be initialized with the values 100, John Anderson, Savings**
- C. The newly object will be initialized with values 0, null, null as constructor is missing
- D. The object can be instantiated for the class Account as its compilation fails

**11. Consider the following code:** *[1.5 Mark(s)]*

```
public class Test {
    static int count = 0;
    Test() { while(count < 10) new Test(++count); }
    Test(int x) { }
    public static void main(String[] args) {
        new Test();
        new Test(count);
        System.out.println(count++);
    }
}
```

What is the output of the code on execution?

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**16. Which of the following statements are true with respect to exceptions in Java?**  
**(Choose two correct answers)** [1.5 Mark(s)]

- A. The try statement must be followed by only one catch or a finally block
- B. The Exception subclasses are used when the called method handles the exception
- C. Repeated re-throwing of the same exception must be avoided as it may slow down programs that are known for frequently raising exceptions
- D. Use the throw statement to throw an exception that a method does not handle by itself

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Module Name : **Application Development Fundamentals-I**

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**1. Which of the following methods of an Exception class return the details about the exception that has occurred? [1 Mark(s)]**

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- B. [getCause\(\)](#)
- C. [printStackTrace\(\)](#)
- D. [StackTraceElement\(\)](#)

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Account objAcc = objSA;
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Which of the following options correctly identifies the type of casting performed in these statements?

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Which of the following methods of the StringBuilder class when used will display the output as ABC123?

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