

## Java Test –II

Max Marks: 30

Duration : 1 hr

1 Which of the following have synchronized methods.

1 HashSet   2 Vector   3     HashTable

A 1 & 2

B 1,2,3

C 2 & 3

D Only 1

2 Which of these support duplicate elements

A List

B Set

C HashMap

D HashSet

3.

Which of the following is/are false regarding a Map.

1 A Map Stores key-value pairs.

2 Can have duplicate values but not keys.

3 Can have duplicate keys but not values

4 Does not support Iterator

5 Derives from Collection interface.

4

Which collection class allows you to access its elements by associating a key with an element's value, and provides synchronization?

- A. java.util.SortedMap
- B. java.util.TreeMap
- C. java.util.TreeSet
- D. java.util.HashMap
- E. java.util.Hashtable

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Which of the following classes do not implement Comparable Interface

- a Byte
- b Integer
- c String
- d Object

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Given the following,

1. class MyThread extends Thread {
- 2.
3. public static void main(String [] args) {
4. MyThread t = new MyThread();
5. t.run();
6. }
- 7.
8. public void run() {
9. for(int i=1;i<3;++i) {
10. System.out.print(i + "..");
11. }
12. }
13. }

what is the result?

- A. This code will not compile due to line 4.

- B. This code will not compile due to line 5.
- C. 1..2..
- D. 1..2..3..
- E. An exception is thrown at runtime.

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Which of the following methods are defined in the Thread Class.

- A run()
- B start()
- C join()
- D wait()
- E all

8. The following block of code creates a Thread using a Runnable target:

```
Runnable target = new MyRunnable();
Thread myThread = new Thread(target);
```

Which of the following classes can be used to create the target, so that the preceding code compiles correctly?

- A. public class MyRunnable extends Runnable{public void run(){} }
- B. public class MyRunnable extends Object{public void run(){} }
- C. public class MyRunnable implements Runnable{public void run(){} }
- D. public class MyRunnable implements Runnable{void run(){} }
- E. public class MyRunnable implements Runnable{public void start(){} }

9 Given the following,

1. class MyThread extends Thread {
- 2.
3. public static void main(String [] args) {
4. MyThread t = new MyThread();
5. t.start();

```

6. System.out.print("one. ");
7. t.start();
8. System.out.print("two. ");
9. }
10.
11. public void run() {
12. System.out.print("Thread ");
13. }
14. }

```

what is the result of this code?

- A. Compilation fails
- B. An exception occurs at runtime.
- C. Thread one. Thread two.
- D. The output cannot be determined.

10

Which class or interface defines the wait(), notify(), and notifyAll() methods?

- A. Object
- B. Thread
- C. Runnable
- D. Class

11 Which two are *true*?

- A. A static method cannot be synchronized.
- B. If a class has synchronized code, multiple threads can still access the nonsynchronized code.
- C. Variables can be protected from concurrent access problems by marking them with the synchronized keyword.
- D. When a thread sleeps, it releases its locks.
- E. When a thread invokes wait(), it releases its locks.

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Which of the following Classes when instantiated creates a file if it is not existing.

- A    `FileOutputStream`
- B    `FileWriter`
- C    `File`
- D    All the above

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Which of the following are marker Interfaces

- A    `Externalizable`
- B    `Serializable`
- C    `Thread`
- D    `Comparable`

14

Which of the following are correct statements.

- A    `FileWriter fw=new FileWriter("test.txt");`
- B    `FileWriter fw=new FileWriter(new File("test.txt"));`
- C    `FileOutputStream fout=new File("test.txt");`
- D    `File f1=new File("test.txt","rw");`

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Which of the classes have methods to read and write a specific data like int,char,float,boolean etc data from/to a file.

- A    `FileWriter`
- B    `FileOutputStream`

C RandomAccessFile

D BufferedWriter

16.

Study the following code and answer the questions:

class A (5 marks)

```
{  
    public void m1()  
    {  
        //statement 1  
        //statement 2  
        //statement 3  
    }  
}
```

1. What are the different ways of making method m1 thread safe.  
Rewrite the above code (4)
- 2 What happens when you make m1() static.? (1)

17 (5 marks)

```
TreeSet<Item> its=new TreeSet<Item>();  
its.add(new Item(34,"chocolates",14.5));  
its.add(new Item(12,"nuts",190.0));  
its.add(new Item(18,"sauce",200));  
its.add(new Item(15,"notebook",35));
```

```
System.out.println(its);
```

- A When is a TreeSet used.
- B What Exception above code throws.
- C Which interface should the class containing the code implement.
- D Which method should be implemented
- E What type does the method return.

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Complete the following programs.write code in place of comments.

(5 marks)

```
public class Demo{  
    //main  
    {  
        //Open a file test.txt for reading  
        //read and print the content of the file on the console.  
    }  
}
```

1. Handle the specific exceptions in the above code .
2. Use proper coding practices.

Coding 3 marks

Exceptions and coding practice 2 marks