**Test Collection(30mins)**

1.

Consider the following class:

public class IntPair

{

private int a;

private int b;

public void setA(int i){ this.a = i; }

public int getA(){ return this.a; }

public void setB(int i){ this.b = i; }

public int getB(int b){ return b; }

public boolean equals(Object obj)

{

return ( obj instanceof IntPair && this.a == ((IntPair) obj).a );

}

public int hashCode()

{

//1

}

}

Which of the following options would be valid at //1?

Select 4 correct options

a return 0;

b return a;

c return a+b;

d return a\*a;

e return a/2;

2.

Which of the following interfaces can be used to store a collection of non-duplicate objects in an unordered fashion ?

Select 1 correct option.

a List

b Map

c Set

d SortedList

e SortedSet

3.

Following is a program to capture words from command line and create two collections. One that keeps only unique words and one that keeps all the words in the order that they were entered. What should replace AAA and BBB?

import java.util.\*;

import java.io.\*;

public class TestClass

{

static Collection unique = new AAA();

static Collection ordered = new BBB();

public static void main(String args[]) throws Exception

{

BufferedReader bfr = new BufferedReader( new InputStreamReader( System.in

));

String s = bfr.readLine();

while(s != null && s.length() >0)

{

unique.add(s);

ordered.add(s);

s = bfr.readLine();

}

System.out.println(unique);

System.out.println(ordered);

}

}

Select 2 correct options

a Set, List

b LinkedList, HashSet

c HashSet, LinkedList

d HashSet, Vector

e Vector, TreeSet

4.

Which of the following statements are correct?

Select 1 correct option.

a A List stores elements in a Sorted Order.

b A Set keeps the elements sorted and a List keeps the elements ordered.

c A SortedSet keeps the elements ordered.

d An OrderedSet keeps the elements sorted.

e An OrderedList keeps the elements ordered.

6.

Consider the following class:

public class IntPair

{

private int a;

private int b;

public void setA(int i){ this.a = i; }

public int getA(){ return this.a; }

public void setB(int i){ this.b = i; }

public int getB(){ return b; }

public boolean equals(Object obj)

{

return ( obj instanceof obj && this.a == ((IntPair) obj).a && this.b == ((IntPair) obj).b );

}

public int hashCode()

{

//1

}

}

Which of the following options would NOT be valid at //1?

Select 1 correct option.

a return a;

b return a\*b;

c return a+b;

d return b;

e None of these is invalid.

7.

You are designing a class that will cache objects. This class should work by tracking the "last accessed times" of the objects.

Which collection class would you use to store the objects?

Select 1 correct option.

a HashSet

b ArrayList

c LinkedHashMap

d LinkedList

e TreeMap

8.

Which of the following are valid implementation of equals() method of a class TestClass?

1.

public boolean equals(TestClass tc)

{

return this == tc;

}

2.

public boolean equals(TestClass tc)

{

return this != tc;

}

3.

public boolean equals(Object tc)

{

return this == tc;

}

4.

public boolean equals(Object tc)

{

if( tc instanceof TestClass && this.someVar == ( (TestClass)tc).someVar )

{

if(this != tc) return true;

else return false;

}

else return false;

}

Select 1 correct option.

a 1

b 2

c 3

d 4

e None of these.

9.

Which of the following statments are correct regarding the equals() method?

Select 1 correct option.

a It must be symmetric but need not be transitive.

b It must be reflexive but need not be transitive.

c It must be symmetric and transitive but not reflexive.

d If passed a null, it must return false.

e None of these.

10.

Which of these statements concerning the collection interfaces are true?

Select 3 correct options

a Set extends Collection.

b List extends Collection.

c All methods defined in Collection are also defined in List.

d HashMap implements SortedMap.

e HashMap extends Hashtable

11.

What classes can be used to store key - value pairs?

Select correct options

a java.util.Hashtable

b java.util.Set

c java.util.SortedSet

d java.util.Map

e java.util.SortedMap

12.

1.import java.util.\*;

2. public class TestSet{

3. enum Example {one, Two , Three}

4. public static void main(String[] args)

{

5. Collection coll= new ArrayList();

6. coll.add(Example.Three);

7. coll.add(Example.Three);

8. coll.add(Example.Three);

9. coll.add(Example.Two);

10. coll.add(Example.Two);

11. coll.add(Example.One);

12. Set set=new HashSet(coll);

13.}

14.}

Which statement is true about the Set variable on line no 12?

A. The set variable contains all six elements from the coll collection, and the order is

guaranteed to be preserved.

B. The set variable contains only three elements from the coll collection, and the order is

guaranteed to be preserved.

C. The set variable contains all six elements from the coll collection, but the order is NOT

guaranteed to be preserved.

D. The set variable contains only three elements from the coll collection, but the order is

NOT guaranteed to be preserved.

13.

What will be the output of the program?

package foo; ////

import java.util.Vector; /\* Line 2 \*/

private class MyVector extends Vector //line 3

{

int i = 1; /\* Line 5 \*/

public MyVector()

{

i = 2;

}

}

public class MyNewVector extends MyVector

{

public MyNewVector ()

{

i = 4; /\* Line 15 \*/

}

public static void main (String args [])

{

MyVector v = new MyNewVector(); /\* Line 19 \*/

}

}

A. Compilation will succeed.

B. Compilation will fail at line 3.

C. Compilation will fail at line 5.

D. Compilation will fail at line 15.

14.

Given:

public static Iterator reverse(List list) {

Collections.reverse(list);

return list.iterator();

}

public static void main(String[] args) {

List list = new ArrayList();

list.add("1"); list.add("2"); list.add("3");

for (Object obj: reverse(list))

System.out.print(obj + ", ");

}

What is the result?

A. 3, 2, 1,

B. 1, 2, 3,

C. Compilation fails.

D. The code runs with no output.

E. An exception is thrown at runtime.

15.

Which of these methods from the Collection interface return the value true if the collection object was actually modified by the call?

Select 3 correct options

a add( )

b retainAll( )

c containsAll( )

d contains( )

e remove()