Question 1

Answer saved

Marked out of 1.00

What is the output of the following program?

```
1: public class Dog {
2: public String name;
3: public void parseName() {
4: System.out.print("1");
5: try {
6: System.out.print("2");
7: int x = Integer.parseInt(name);
8: System.out.print("3");
9: } catch (NumberFormatException e) {
10: System.out.print("4");
11: }
12: }
13: public static void main(String[] args) {
14: Dog leroy = new Dog();
15: leroy.name = "Leroy";
16: leroy.parseName();
17: System.out.print("5");
18: } }
```

Select one or more:

- [ ] **a. The code does not compile.**
- [ ] **b. 1235**
- [ ] **c. 124**
- [ ] **d. An uncaught exception is thrown.**
- [ ] **e. 1234**
- [ ] **f. 12**
- [x] **g. 1245**

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Question 2

Answer saved

Marked out of 1.00

Which of the following statements is true about the performance of TreeSet and LinkedHashSet?

Select one or more:

- [ ] **a. TreeSet and LinkedHashSet both have O(1) time complexity for insertion but differ in lookup time.**
- [x] **b. LinkedHashSet is faster for insertion and lookup operations, with O(1) time complexity, while TreeSet has a time complexity of O(log n).**
- [ ] **c. Both TreeSet and LinkedHashSet have O(log n) time complexity for insertion and lookup operations.**
- [ ] **d. TreeSet has a time complexity of O(1) for insertion and lookup operations, while LinkedHashSet has a time complexity of O(log n).**

Question 3

Answer saved

Marked out of 1.00

At present father's age is thrice of son's age. After 15 years father's age will be double of son's age. What is son's present age?

Select one or more:

- [ ] **a. 16 years**
- [ ] **b. 10 years**
- [x] **c. 15 years**
- [ ] **d. 12 years**

Question 4

Answer saved

Marked out of 1.00

From a pack of 52 cards, two cards are drawn together at random. What is the probability of both the cards being kings?

Select one or more:

- [x] **a. 1/221**
- [ ] **b. 1/15**
- [ ] **c. 25/57**
- [ ] **d. 35/256**

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Question **5**

Answer saved

Marked out of 1.00

For the Given infix expression what will be the postfix expression?

"a+b*(c^d-e)^(f+g*h)-i"

Select one or more:

- [ ] **a. abcd^e-fgh+^*+i-**
- [ ] **b. abcd^e-fgh*+^*+i-**
- [x] **c. ab+cd^e-fgh*+^i-**
- [ ] **d. abc^de-fgh*+^*+i-**

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Question 6

Answer saved

Marked out of 1.00

Consider the following code where custom objects are used as keys in a HashMap and HashSet:

```
import java.util.HashMap;
import java.util.HashSet;
class Person {
    String name;
    int age;
    public Person(String name, int age) {
        this.name = name;
        this.age = age;
    }
}
public class Main {
    public static void main(String[] args) {
        HashSet<Person> set = new HashSet<>();
        Person p1 = new Person("John", 25);
        Person p2 = new Person("John", 25);
        set.add(p1);
        set.add(p2);
        HashMap<Person, String> map = new HashMap<>();
        map.put(p1, "Engineer");
        map.put(p2, "Doctor");
        System.out.println(set.size());
        System.out.println(map.get(p1));
    }
}
```

What will be the output of the above code?

Select one or more:

- [ ] **a. 1 and "Engineer"**
- [ ] **b. 1 and "Doctor"**
- [ ] **c. 2 and "Doctor"**
- [x] **d. 2 and "Engineer"**

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Question 7

Answer saved

Marked out of 1.00

The price of sugar is decreased by 10%. As a consequence, monthly sales is increased by 30%. Find out the percentage increase in monthly revenue.

Select one or more:

- [ ] **a. 19%**
- [ ] **b. 18%**
- [ ] **c. None of these**
- [x] **d. 17%**

Question 8

Answer saved

Marked out of 1.00

Consider the following Java code:

```
import java.util.TreeSet;
public class Main {
    public static void main(String[] args) {
        TreeSet<String> set = new TreeSet<>();
        set.add("apple");
        set.add("banana");
        set.add(null);  // Line A
        set.add("cherry");
        for (String fruit : set) {
            System.out.print(fruit + " ");
        }
    }
}
```

What will happen when the program reaches Line A?

Select one or more:

- [ ] **a. The program will print null apple banana cherry.**
- [ ] **b. The program will ignore the null value and continue execution.**
- [ ] **c. The program will sort the elements and include null as the first element.**
- [x] **d. The program will throw a NullPointerException.**

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Question 9

Answer saved

Marked out of 1.00

Given the following class, which of the following lines of code can replace INSERT CODE

HERE to make the code compile? (Choose all that apply)

```
public class Price {
public void admission() {
INSERT CODE HERE
System.out.println(amount);
} }
```

Select one or more:

- [x] **a. int amount = 0b101;**
- [ ] **b. None of the above.**
- [x] **c. double amount = 0xE;**
- [ ] **d. int amount = 9L;**
- [ ] **e. int amount = 1_2_;**
- [x] **f. int amount = 0xE;**
- [ ] **g. double amount = 1_2_.0_0;**

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Question **10**

Answer saved

Marked out of 1.00

Consider the following Java code with a custom object implementing the Comparable interface:

```
import java.util.TreeSet;
class Person implements Comparable<Person> {
    String name;
    int age;
   Person(String name, int age) {
        this.name = name;
        this.age = age;
    }
   @Override
    public int compareTo(Person other) {
        if(this.name.compareTo(other.name)!=0)
            return this.name.compareTo(other.name);
        else
            return this.age- other.age;
    }
   @Override
    public String toString() {
        return name + ": " + age;
    }
}
public class Main {
    public static void main(String[] args) {
        TreeSet<Person> set = new TreeSet<>();
        set.add(new Person("Alice", 30));
        set.add(new Person("Bob", 25));
        set.add(new Person("Charlie", 35));
        set.add(new Person("Alice", 28));  // Different person with same name
       for (Person person : set) {
            System.out.println(person);
        }
    }
}
```

What will be the output of the above code?

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Select one or more:

- [x] **a. Bob: 25, Alice: 28, Alice: 30, Charlie: 35**
- [ ] **b. Bob: 25, Alice: 30, Charlie: 35**
- [ ] **c. Alice: 28, Alice: 30, Bob: 25, Charlie: 35**
- [ ] **d. Alice: 30, Bob: 25, Charlie: 35**

Question **11**

Answer saved

Marked out of 1.00

What is the output of the following code?

```
1: interface Nocturnal {
2: default boolean isBlind() { return true; }
3: }
4: public class Owl implements Nocturnal {
5: public boolean isBlind() { return false; }
6: public static void main(String[] args) {
7: Nocturnal nocturnal = (Nocturnal)new Owl();
8: System.out.println(nocturnal.isBlind());
9: }
10: }
```

Select one or more:

- [ ] **a. The code will not compile because of line 2.**
- [ ] **b. The code will not compile because of line 5.**
- [ ] **c. The code will not compile because of line 8.**
- [ ] **d. false**
- [ ] **e. The code will not compile because of line 7.**
- [x] **f. true**

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Question 12

Answer saved

Marked out of 1.00

How many times will the following code print "Hello World"?

```
3: for(int i=0; i<10 ; ) {
4: i = i++;
5: System.out.println("Hello World");
6: }
```

Select one or more:

- [ ] **a. The code will not compile because of line 5.**
- [ ] **b. 9**
- [x] **c. The code contains an infinite loop and does not terminate.**
- [ ] **d. 10**
- [ ] **e. The code will not compile because of line 3.**
- [ ] **f. 11**

Question 13

Answer saved

Marked out of 1.00

In which scenario would you prefer using a PriorityQueue over a LinkedList for implementing a Queue?

Select one or more:

- [x] **a. When you need to access elements in sorted order.**
- [ ] **b. When you need to maintain FIFO (First In, First Out) order.**
- [ ] **c. When you need constant-time insertion.**
- [ ] **d. When you need fast random access to elements.**

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Question
14

Answer saved

Marked out of 1.00

Consider the following code where LinkedList is used as a queue:

```
import java.util.LinkedList;
import java.util.Queue;
public class Main {
    public static void main(String[] args) {
        Queue<Integer> queue = new LinkedList<>();
        System.out.println(queue.poll());    // Line A
        System.out.println(queue.remove());  // Line B
    }
}
```

What will happen when the code reaches Line A and Line B?

Select one or more:

- [x] **a. Line A will print null, and Line B will throw a NoSuchElementException.**
- [ ] **b. Both Line A and Line B will print null.**
- [ ] **c. Both Line A and Line B will throw NoSuchElementException.**
- [ ] **d. Line A will throw NoSuchElementException, and Line B will print null.**

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Question 15

Answer saved

Marked out of 1.00

Consider the following Java code that uses linear probing to handle collisions in a hash table:

```
import java.util.Arrays;
class HashTable {
    private int[] table;
    private int size;
    public HashTable(int size) {
        this.size = size;
        table = new int[size];
        Arrays.fill(table, -1); // -1 indicates an empty cell
    }
    private int hash(int key) {
        return key % size;
    }
   public void insert(int key) {
        int hashValue = hash(key);
        int i = 0;
        while (table[(hashValue + i) % size] != -1) {
            i++;
        }
        table[(hashValue + i) % size] = key;
    }
   public void printTable() {
        System.out.println(Arrays.toString(table));
    }
}
public class Main {
    public static void main(String[] args) {
        HashTable ht = new HashTable(7);
        ht.insert(10);
        ht.insert(20);
        ht.insert(15);
        ht.insert(7);
        ht.insert(8);
        ht.insert(14);
        ht.printTable();
```

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```
    }
}
```

What will be the final state of the hash table after all insertions?

Select one or more:

- [ ] **a. [15, 7, 8, 14, -1, 20, 10]**
- [ ] **b. [10, 20, 15, 7, 8, 14, -1]**
- [x] **c. [7, 15, 8, 20, 14, -1, 10]**
- [ ] **d. [7, 15, 8, 10, 14, -1, 20]**

Question **16**

Answer saved

Marked out of 1.00

Two dice are thrown simultaneously. What is the probability of getting two numbers whose product is even?

Select one or more:

- [ ] **a. 1/2**
- [ ] **b. 5/8**
- [x] **c. 3/4**
- [ ] **d. 7/9**

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Question 17

Answer saved

Marked out of 1.00

Which are true of the following code? (Choose all that apply)

```
1: public class Rope {
2: public static void swing() {
3: System.out.print("swing ");
4: }
5: public void climb() {
6: System.out.println("climb ");
7: }
8: public static void play() {
9: swing();
10: climb();
11: }
12: public static void main(String[] args) {
13: Rope rope = new Rope();
14: rope.play();
15: Rope rope2 = null;
16: rope2.play();
17: }
18: }
```

Select one or more:

- [ ] **a. If the lines with compiler errors are removed, the output is swing swing.**
- [ ] **b. There is exactly one compiler error in the code.**
- [ ] **c. The code compiles as is.**
- [x] **d. If the lines with compile errors are removed, the code throws a NullPointerException.**
- [ ] **e. If the lines with compiler errors are removed, the output is climb climb.**
- [x] **f. There are exactly two compiler errors in the code.**

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Question 18

Answer saved

Marked out of 1.00

Ram spends 20% of is salary on food, 15 % of remaining on cloths, and 400 on entertainment. If his salary is 10000, how much he spends on cloths?

Select one or more:

- [x] **a. 1200**
- [ ] **b. 1000**
- [ ] **c. 1500**
- [ ] **d. 1100**

Question 19

Answer saved

Marked out of 1.00

What is the result of the following code?

```
3: String s = "purr";
4: s.toUpperCase();
5: s.trim();
6: s.substring(1, 3);
7: s += " two";
8: System.out.println(s.length());
```

Select one or more:

- [ ] **a. 10**
- [ ] **b. 2**
- [ ] **c. 4**
- [ ] **d. An exception is thrown.**
- [x] **e. 8**
- [ ] **f. The code does not compile.**

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Question **20**

Answer saved

Marked out of 1.00

Consider the following Java code using a stack:

```
import java.util.Stack;
public class Main {
    public static void main(String[] args) {
        String str = "abcd";
        Stack<Character> stack = new Stack<>();
        for (char c : str.toCharArray()) {
            stack.push(c);
        }
        String res = "";
        while (!stack.isEmpty()) {
            res += stack.pop();
        }
        System.out.println(res);
    }
}
```

What will be the output of the above code?

Select one or more:

- [ ] **a. A NullPointerException will be thrown.**
- [ ] **b. abcd**
- [x] **c. dcba**
- [ ] **d. A ConcurrentModificationException will be thrown.**

Quiz Navigation

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Finish attempt ... (http://kmitonline.com/mod/quiz/summary.php?attempt=475093)

Time left **0:00:38**

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