Started on	Tuesday, 27 May 2025, 3:20 PM
State	Finished
Completed on	Tuesday, 27 May 2025, 3:37 PM
Time taken	16 mins 38 secs
Marks	15.00/20.00
Grade	**75.00** out of 100.00

Question 1

Complete

Mark 1.00 out of 1.00

What is the output of the below Java code snippet on wrapper classes?

```
System.out.println(Byte.BYTES);
System.out.println(Character.BYTES);
System.out.println(Short.BYTES);
System.out.println(Integer.BYTES);
System.out.println(Long.BYTES);
System.out.println(Float.BYTES);
System.out.println(Double.BYTES);
```

a. 1
2
2
4
8
4
8

b. None of the above

c. 1
2
4
8
16
8
16

d. 8

Question 2

Complete

Mark 1.00 out of 1.00

The term _____ is used to refer to a row.

- a. Tuple
- b. Field
- c. Instance
- d. Attribute

Question 3

Complete

Mark 1.00 out of 1.00

What is the output of the Java program?

```
byte num = (byte)0b000_1000;
if(num >> 1 > 6)
{
 System.out.print(num);
}
else
{
 System.out.println(num>>1);
}
```

- a. 6
- b. Compiler error
- c. 4
- d. 8

Question 4

Complete

Mark 1.00 out of 1.00

Consider the classes shown below:

```
class A{
   public A() { }
   public A(int i) {   System.out.println(i );    }
}
class B{
   static A s1 = new A(1);
   A a = new A(2);
   public static void main(String[] args){
      var b = new B();
      var a = new A(3);
   }
   static A s2 = new A(4);
}
```

Which is the correct sequence of the digits that will be printed when B is run?

- a. 2, 3, 1, 4
- b. 1 ,4, 2 ,3
- c. 3, 1, 2, 4
- d. 2, 1, 4, 3
- e. 1 ,2 ,3 ,4

Question 5

Complete

Mark 1.00 out of 1.00

What are the values of the following Python expressions?

```
2**(3**2)
(2**3)**2
2**3**2
```

- a. 512, 512, 512
- b. 64, 512, 64
- c. 64, 64, 64
- d. 512, 64, 512

Question 6

Complete

Mark 1.00 out of 1.00

What will be the value of the following Python expression?

4 + 3 % 5

a. 1

b. 7

c. 4

d. 2

Question 7

Complete

Mark 1.00 out of 1.00

What will be the output of the following Python program?

```
def foo(x):
    x[0] = ['def']
    x[1] = ['abc']
    return id(x)
q = ['abc', 'def']
print(id(q) == foo(q))
```

a. Error

b. True

c. None

d. False

Question 8

Complete

Mark 1.00 out of 1.00

Which one of the following is a set of one or more attributes taken collectively to uniquely identify a record?

a. Sub key

b. Foreign key

c. Super key

d. Candidate key

Question 9

Complete

Mark 1.00 out of 1.00

What is the output of this code?

```
console.log('start');

setTimeout(() => {
  console.log('timeout');
}, 0);

Promise.resolve().then(() => {
  console.log('promise');
});

console.log('end');
```

a. start
promise
end
timeout

b. start
end
promise
timeout
promise

c. start
end
promise
timeout

d. start
end
timeout
promise

Question 10

Complete

Mark 0.00 out of 1.00

Which code can be inserted to have the code print 2?

```
public class BirdSeed {
 private int numberBags;
 boolean call;
 public BirdSeed() {
  // LINE 1
  call = false;
  // LINE 2
 }
 public BirdSeed(int numberBags) {
  this.numberBags = numberBags;
 }
 public static void main(String[] args) {
  BirdSeed seed = new BirdSeed();
  System.out.println(seed.numberBags);
 } }
```

a. Replace line 1 with this(2);

b. Replace line 2 with this(2);

c. Replace line 2 with new BirdSeed(2);

d. Replace line 2 with BirdSeed(2);

e. Replace line 1 with BirdSeed(2);

f. Replace line 1 with new BirdSeed(2);

Question 11

Complete

Mark 1.00 out of 1.00

Which of the following header must be included in java program to establish database connectivity using JDBC ?

a. Import java.jdbc.*;

b. Import java.sql.jdbc.*;

c. Import java.sql.*;

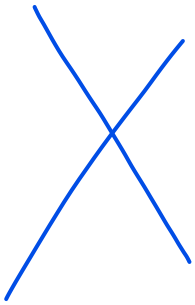
d. Import java.sql.odbc.jdbc.*;

Question 12

Complete

Mark 0.00 out of 1.00

Following code snippet is the function to insert a string in a trie. Find the missing line.



```
private void insert(String str)
  {
     TrieNode node = root;
     for (int i = 0; i < length; i++)
     {
        int index = key.charAt(i) - 'a';
        if (node.children[index] == null)
           node.children[index] = new TrieNode();

        _____________________
     }

     node.isEndOfWord = true;
  }
```

a. node = node.children[str.charAt(i + 1)];

b. node = node.children[index++];

c. node = node.children[index];

d. node = node.children[str.charAt(i)];

Question 13

Complete

Mark 1.00 out of 1.00

Which of the following should be used to find all the courses taught in the Fall 2009 semester but not in the Spring 2010 semester .

a. (SELECT course id
FROM SECTION
WHERE semester = 'Spring' AND YEAR= 2010)

b. SELECT DISTINCT course id
FROM SECTION
WHERE semester = 'Fall' AND YEAR= 2009 AND
course id NOT IN (SELECT course id
FROM SECTION
WHERE semester = 'Spring' AND YEAR= 2010);

c. SELECT COUNT (DISTINCT ID)
FROM takes
WHERE (course id, sec id, semester, YEAR) IN (SELECT course id, sec id, semester, YEAR
FROM teaches
WHERE teaches.ID= 10101);

d. SELECT DISTINCT course_id
FROM instructor
WHERE name NOT IN ('Fall', 'Spring');

Question 14

Complete

Mark 1.00 out of 1.00

What will be the output of the following Python code?

```
i = 1
while True:
    if i%3 == 0:
        break
    print(i)

    i + = 1
```

a. 1 2 3

b. none of the mentioned

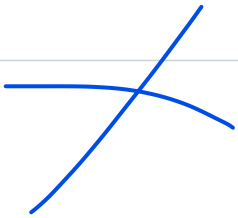
c. 1 2

d. error

Question 15

Complete

Mark 0.00 out of 1.00



What is the final output?

```
async function f1() {
  throw 'Error in f1';
}

async function f2() {
  try {
    await f1();
  } catch (e) {
    console.log('Caught: ', e);
  } finally {
    return 'Done';
  }
}

f2().then(console.log);
```

a. Done
Caught: Error in f1

b. Unhandled Promise Rejection
Done

c. Caught: Error in f1
Done

d. Error in f1
Done

Question 16

Complete

Mark 1.00 out of 1.00

What will the following code output?

```
for (var i = 0; i < 3; i++) {
  setTimeout(() => console.log(i), 100);
}
```

a. undefined
undefined
undefined

b. 0
1
2

c. 0
0
0

d. 3
3
3

Question 17

Complete

Mark 1.00 out of 1.00

Which is the simplest of all binary search trees?

a. Treap

b. AVL tree

c. Splay tree

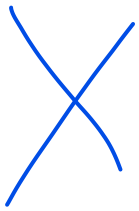
d. Binary heap

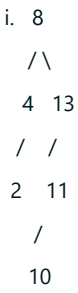
Question 18

Complete

Mark 0.00 out of 1.00

Which of the below diagram is following AVL tree property?



i.


ii.


- a. i is not a binary search tree
- b. both i and ii
- c. only i
- d. only ii

Question 19

Complete

Mark 1.00 out of 1.00

What does the following print?

```
const obj = {
  count: 10,
  inc: function () {
    setTimeout(() => {
      this.count++;
      console.log(this.count);
    }, 100);
  }
};
obj.inc();
```

- a. 11
- b. NaN
- c. 10
- d. undefined

Question 20

Complete

Mark 0.00 out of 1.00

The postfix form of the expression (A+ B)*(C*D- E)*F / G is?

- a. AB + CD* E – *F *G /
- b. AB+ CD*E – FG /**
- c. AB + CD* E – F **G /
- d. AB + CDE * – * F *G /