Started on	Tuesday, 1 July 2025, 12:14 PM
State	Finished
Completed on	Tuesday, 1 July 2025, 12:33 PM
Time taken	19 mins 4 secs
Marks	35.00/50.00
Grade	**70.00** out of 100.00

Question 1

Complete

Mark 0.00 out of 1.00

What will be the result of the following code?

```java
public class Test {

    public static void main(String[] args) {

        try {

            int x = 5 / 0;

        } catch (ArithmeticException e) {

            System.out.println("AE");

        } catch (Exception e) {

            System.out.println("E");

        }

    }

}
```

- ○ a.   AE
- ◉ b.   E
- ○ c.   Compilation Error
- ○ d.   Runtime Exception

Question 2

Complete

Mark 1.00 out of
1.00

What is the output of this program?


```
interface A {

    default void show() {

        System.out.println("A");

    }

}
class B implements A {

    public void show() {

        System.out.println("B");

    }

}
public class Test {

    public static void main(String[] args) {

        A obj = new B();

        obj.show();

    }

}
```

- a. Compilation error
- b. B
- c. A
- d. A B

Question 3

Complete

Mark 1.00 out of 1.00

What is the result of this code?

```
let foo = {

  bar: function() {

    return this;

  }

};

let fn = foo.bar;

console.log(fn());
```

- ● a.   window or global
- ○ b.   undefined
- ○ c.   foo
- ○ d.   Error

Question 4

Complete

Mark 1.00 out of 1.00

What does the following output?

```java
abstract class A {
    abstract void display();
    static void print() {
        System.out.println("Static in A");
    }
}
class B extends A {
    void display() {
        System.out.println("B");
    }
}
public class Test {
    public static void main(String[] args) {
        A.print();
        new B().display();
    }
}
```

- ○ a. Static in A B
- ○ b. Static in A
- ○ c. B Static in A
- ○ d. Compilation error

Question 5

Complete

Mark 0.00 out of 1.00

Consider two tables: orders(id, user_id) and users(id, name). Which query lists all users with or without orders?

- ⦿ a. RIGHT JOIN
- ○ b. INNER JOIN
- ○ c. LEFT JOIN
- ○ d. CROSS JOIN

Question 6

Complete

Mark 1.00 out of 1.00

What does the following query return?

SELECT COUNT(*) FROM employees WHERE hire_date BETWEEN '2023-01-01' AND '2023-12-31';

- ○ a. Syntax error
- ⦿ b. Number of employees hired in 2023
- ○ c. Total number of departments
- ○ d. Total number of employees

Question 7

Complete

Mark 1.00 out of 1.00

What will this query return?

SELECT name,
  CASE
    WHEN salary > 50000 THEN 'High'
    WHEN salary BETWEEN 30000 AND 50000 THEN 'Medium'
    ELSE 'Low'
  END AS salary_band
FROM employees;

- ⦿ a. Categorized salary levels
- ○ b. Only salary column
- ○ c. Only High salaries
- ○ d. Error due to ELSE

Question 8

Complete

Mark 1.00 out of 1.00

What is the output of the following string query?

SELECT LENGTH(TRIM(' Hello SQL '));

- ○ a. 10
- ○ b. 11
- ○ c. 12
- ⦿ d. 9

Question 9

Complete

Mark 1.00 out of
1.00

What does this query return?

SELECT DATE_FORMAT(order_date, '%Y-%m') AS month, COUNT(*)
FROM orders
GROUP BY month;

- ○ a.   Total orders
- ○ b.   Orders by user
- ○ c.   Syntax error
- ◉ d.   Orders grouped by year and month

Question 10

Complete

Mark 1.00 out of
1.00

How does useContext improve performance over prop drilling?

- ○ a.   By replacing all props with global variables
- ○ b.   By preventing unnecessary re-renders
- ◉ c.   By directly providing access to values without passing them down each level
- ○ d.   By automatically memoizing values

Question 11

Complete

Mark 1.00 out of
1.00

In RBAC, how are permissions typically determined?

- ○ a.   Based on user login count
- ◉ b.   Based on assigned roles and the permissions those roles allow
- ○ c.   Based on route paths
- ○ d.   Based on user input

Question 12

Complete

Mark 1.00 out of 1.00

What is the output of the following code?

```
for (var i = 0; i < 3; i++) {

  setTimeout(() => console.log(i), 100);

}
```

- ○ a. 0 1 2
- ⦿ b. 3 3 3
- ○ c. 0 0 0
- ○ d. 1 2 3

Question 13

Complete

Mark 1.00 out of 1.00

What will this code log?

```
let a = {};
let b = a;
a = null;
console.log(b);
```

- ○ a. undefined
- ⦿ b. {}
- ○ c. ReferenceError
- ○ d. null

Question 14

Complete

Mark 1.00 out of 1.00

What will be the output?
console.log(typeof null);

- ⦿ a. "object"
- ○ b. "null object"
- ○ c. "undefined"
- ○ d. "null"

Question 15

Complete

Mark 0.00 out of 1.00

What does this code output?

```
(async function() {
  return await 10;
})().then(console.log);
```

- ○ a. Error
- ○ b. 10
- ○ c. undefined
- ⦿ d. Promise { 10 }

Question 16

Complete

Mark 1.00 out of
1.00

What does this log?

console.log([...'hello']);

- a. "hello"
- b. TypeError
- c. undefined
- d. ['h', 'e', 'l', 'l', 'o']

Question 17

Complete

Mark 1.00 out of
1.00

What happens if obj is a new object on every render and used in the useEffect dependency array?

```
useEffect(() => {
  console.log("effect ran");
}, [obj]);
```

- a. It runs on every render
- b. It runs once only
- c. It throws error
- d. useEffect never runs

Question 18

Complete

Mark 0.00 out of 1.00

What is the output when useEffect sets count using setCount(count + 1) with an empty dependency array?

```
const [count, setCount] = useState(0);
useEffect(() => {
  setCount(count + 1);
}, []);
```

○ a.   Skips the update

○ b.   Throws error

○ c.   Sets count to 1 once

◉ d.   Renders infinitely

Question 19

Complete

Mark 0.00 out of 1.00

What is the correct way to navigate programmatically using useNavigate in React Router v6?
const navigate = useNavigate();

○ a.   navigate('/home')

○ b.   window.location = '/home'

◉ c.   navigate.push('/home')

○ d.   history.push('/home')

Question 20

Complete

Mark 0.00 out of 1.00

What does a JWT token contain in a secure application?

- ○ a. Signed user claims like userID, roles
- ⦿ b. Encrypted credentials
- ○ c. Plain text passwords
- ○ d. Only the username

Question 21

Complete

Mark 1.00 out of 1.00

What does useMemo primarily help with in React?

- ⦿ a. To cache expensive computations between renders
- ○ b. To memoize components for faster rendering
- ○ c. To fetch data from APIs
- ○ d. To schedule updates after rendering

Question 22

Complete

Mark 0.00 out of 1.00

What happens if run() is called directly instead of using start() on a Thread?

- ○ a. Code runs in current thread
- ○ b. New thread starts
- ○ c. Thread is terminated
- ⦿ d. Error is thrown

Question 23

Complete

Mark 0.00 out of 1.00

What happens if two threads access a synchronized method?

- ○ a. One waits until the other finishes
- ◉ b. Both execute concurrently
- ○ c. They create deadlock
- ○ d. They throw exception

Question 24

Complete

Mark 1.00 out of 1.00

What happens when a thread is started twice using start()?

- ◉ a. Throws IllegalThreadStateException
- ○ b. Runs normally
- ○ c. Creates duplicate thread
- ○ d. Stops the thread

Question 25

Complete

Mark 1.00 out of 1.00

What happens when an exception is not caught in a method?

- ◉ a. Exception is passed to the caller method
- ○ b. Compilation error occurs
- ○ c. The program continues normally
- ○ d. JVM silently handles it

Question 26

Complete

Mark 0.00 out of 1.00

What happens when an exception is thrown in a thread's run() method?

- ○ a.   The thread dies silently
- ● b.   The exception is logged automatically
- ○ c.   JVM halts
- ○ d.   The thread restarts

Question 27

Complete

Mark 1.00 out of 1.00

What is a potential issue with using axios.get in useEffect without dependencies?

- ○ a.   Nothing, it's safe
- ● b.   It may refetch on every render causing an infinite loop
- ○ c.   The component won't render
- ○ d.   It will fetch once

Question 28

Complete

Mark 1.00 out of 1.00

What is the difference between == and === in JavaScript?

- ○ a.   There is no difference
- ○ b.   == compares values and types; === compares only values
- ○ c.   === is slower
- ● d.   == does type coercion; === does not

Question 29

Complete

Mark 0.00 out of 1.00

What is true about abstract classes?

- ○ a. They cannot have static methods
- ○ b. They must contain only abstract methods
- ◉ c. They can be instantiated using new
- ○ d. They can have both abstract and concrete methods

Question 30

Complete

Mark 1.00 out of 1.00

What is true about finally block?

- ◉ a. Always executes even after return
- ○ b. Executes only when exception occurs
- ○ c. Executes only when catch is skipped
- ○ d. Never executes if there is an exception

Question 31

Complete

Mark 1.00 out of 1.00

What's the main difference between fetch and axios in terms of error handling?

- ○ a. Both handle errors the same way
- ○ b. fetch throws errors on HTTP errors automatically
- ◉ c. axios throws for HTTP errors; fetch does not
- ○ d. axios requires manual error parsing

Question 32

Complete

Mark 1.00 out of 1.00

When should you prefer useReducer over useState?

- ● a.   When state updates depend on previous state or are complex
- ○ b.   When you need performance optimizations
- ○ c.   Always, since it's newer
- ○ d.   When managing global state

Question 33

Complete

Mark 1.00 out of 1.00

Which constraint enforces the relationship between two tables?

- ○ a.   UNIQUE
- ○ b.   NOT NULL
- ○ c.   CHECK
- ● d.   FOREIGN KEY

Question 34

Complete

Mark 1.00 out of 1.00

Which interface must be implemented to create a thread?

- ○ a.   Callable
- ● b.   Runnable
- ○ c.   Threadable
- ○ d.   Executor

Question 35

Complete

Mark 0.00 out of
1.00

Which is a feature of an abstract class?

- ○ a. Cannot implement interfaces
- ● b. Cannot extend another class
- ○ c. Can have final methods
- ○ d. Must have default constructor

Question 36

Complete

Mark 0.00 out of
1.00

Which is true about interfaces in Java 8+?

- ● a. Interfaces must have only abstract methods
- ○ b. Interfaces can have default and static methods
- ○ c. Interfaces can have private static methods
- ○ d. Interfaces can have constructors

Question 37

Complete

Mark 1.00 out of
1.00

Which JOIN returns all rows from the left table and matching rows from the right?

- ○ a. INNER JOIN
- ● b. LEFT JOIN
- ○ c. FULL JOIN
- ○ d. RIGHT JOIN

Question 38

Complete

Mark 1.00 out of 1.00

Which keyword is used to handle multiple exceptions in a single catch block?

- a.   &
- ⦿ b. |
- c.   ,
- d.   finally

Question 39

Complete

Mark 1.00 out of 1.00

Which of the following is a correlated subquery?

- a.   Subquery that runs only once
- ⦿ b.   Subquery using values from outer query row-by-row
- c.   Subquery with only constants
- d.   Subquery with GROUP BY

Question 40

Complete

Mark 0.00 out of 1.00

Which of the following is correct about Thread.sleep()?

- ⦿ a.   Pauses thread and releases lock
- b.   Throws checked exception at runtime
- c.   Releases the lock on the object
- d.   Does not release the lock

Question 41

Complete

Mark 1.00 out of
1.00

Which of the following is TRUE about a PRIMARY KEY constraint?

- ○ a. Allows duplicates
- ◉ b. Combines uniqueness and non-null constraints
- ○ c. Allows nulls
- ○ d. A table can have multiple primary keys

Question 42

Complete

Mark 0.00 out of
1.00

Which of the following is true about JavaScript closures?

- ◉ a. They cannot access outer scope variables
- ○ b. They only work with var
- ○ c. They are only used in classes
- ○ d. They are functions with private variables

Question 43

Complete

Mark 1.00 out of
1.00

Which of the following methods is defined in the Thread class?

- ○ a. invoke()
- ◉ b. start()
- ○ c. submit()
- ○ d. execute()

Question 44

Complete

Mark 0.00 out of 1.00

Which of the following statements about `let` and `var` is TRUE?

- ○ a. Both are block scoped
- ○ b. let declarations are hoisted but not initialized
- ○ c. var cannot be re-declared in the same scope
- ● d. var is block scoped while let is function scoped

Question 45

Complete

Mark 1.00 out of 1.00

Which of the following will compile and run without error?

- ○ a. A thread without a run() method
- ● b. An abstract class without any abstract method
- ○ c. An interface with instance variables
- ○ d. A try block without catch/finally

Question 46

Complete

Mark 1.00 out of 1.00

Which of these can an interface contain in Java 8+?

- ○ a. Constructors
- ● b. Static methods
- ○ c. Private variables
- ○ d. Instance fields

Question 47

Complete

Mark 1.00 out of
1.00

Which of these is not a checked exception?

- ○ a. SQLException
- ● b. ArithmeticException
- ○ c. IOException
- ○ d. FileNotFoundException

Question 48

Complete

Mark 1.00 out of
1.00

Which option correctly describes JavaScript's event loop?

- ● a. It executes synchronous code, then processes the callback queue
- ○ b. It runs only setInterval and setTimeout
- ○ c. It handles async code before sync code
- ○ d. It blocks until all I/O is done

Question 49

Complete

Mark 1.00 out of
1.00

Which SQL clause is used with GROUP BY to filter aggregated results?

- ● a. HAVING
- ○ b. LIMIT
- ○ c. ORDER BY
- ○ d. WHERE

Question 50

Complete

Mark 1.00 out of 1.00

Which statement is true about Callable?

- ○ a. It returns void
- ○ b. It is not part of Java standard
- ○ c. It must be used with Runnable
- ◉ d. It returns a value and can throw exceptions