Interview Questions References

Question.1 Section.1

What will be the output of below program

```
public class A {
    A() {
        System.out.println("Constructor");
    }
    static {
        System.out.println("Static Block");
    }

    {
        System.out.println("Initialization Block");
    }


    public static void main(String[] args) {
        System.out.println("Main Method");
    }
}
```

Choose from below options

- Static Block
  Main Method
- Static Block
  Initialization Block
  Main Method
- Main Method
  Static Block
  Initialization Block
- Static Block
  Initialization Block
  Constructor
  Main Method

Question.2 Section.1

How many SOLID principle does the following code not follow ?

```
void DrawShape(const Shape &s)

{

   if (s instanceof Square)

       DrawSquare((Square)s);

   else if (s instanceof Rectangle)

       DrawRectangle((Rectangle)s);

   else if (s instanceof Circle)

       DrawCircle((Circle)s);
```

Choose from below options

- 1
- 2
- 3
- 4
- 5

Question.3 Section.1

Which of the following is not a benefit of strategy design pattern?

Choose from below options

- Strategies eliminate conditional (if-else) statements.
- Strategies can provide different implementations of the same behavior.
- Strategy classes lets you vary the algorithm independently of its context.
- Strategy encapsulate state of an Object.

Question.4 Section.1

Say we have updated a popularly used library, but we don't want to update all client code using this library. But want to create a new mediator class which connect client code to library code and which will update, if required to call library code, its parameters. What design pattern we want to follow here?

Choose from below options

- Prototype Pattern
- Adapter Pattern
- Strategy Pattern
- Fly Weight Pattern

Question.1 Section.2	Choose from below options
The post order traversal of a binary tree is DEBFCA. Find out the pre order traversal	○ ABFCDE ○ ADBFEC ◉ ABDECF ○ ABDCEF

Question.2 Section.2	Choose from below options
Assume the following method is properly synchronized and called from a thread A on an object B: wait(2000); After calling this method, when will the thread A become a candidate to get another turn at the CPU?	SUCCESS answer submitted ◉ After thread A is notified, or after two seconds. ○ After the lock on B is released, or after two seconds. ○ Two seconds after thread A is notified. ○ Two seconds after lock B is released.

Question.3 Section.2	Choose from below options
Client should check and handle Error Exceptions	○ Yes ◉ No ○ Error exceptions can not be checked. ○ Error exceptions can not be handled.

Question.4 Section.2	Choose from below options
The worst-case time complexity of Bubble Sort is	◉ $O(n^2)$ ○ O(log n) ○ O(n) ○ O(n logn)

Question.1 Section.3	Choose from below options
Which three guarantee that a thread will leave the running state? 1. yield() 2. wait() 3. notify() 4. notifyAll() 5. sleep(1000) 6. aLiveThread.join() 7. Thread.killThread()	○ 1, 2 and 4 ◉ 2, 5 and 6 ○ 3, 4 and 7 ○ 4, 5 and 7

Question.2 Section.3

```
class Test1 {
  public int value;
  public int hashCode() {
    return 42;
  }
}
class Test2 {
  public int value;
  public int hashcode() {
    return (int)(value^5);
  }
}
which statement is true?
```

Choose from below options

- class Test1 will not compile.
- The Test1 hashCode() method is more efficient than the Test2 hashCode() method.
- The Test1 hashCode() method is less efficient than the Test2 hashCode() method.
- class Test2 will not compile.

Question.3 Section.3

Which of the following statements regarding 'break' and 'continue' are true?

Choose from below options

- break without a label, can occur only in a switch, while, do, or for statement.
- continue without a label, can occur only in a switch, while, do, or for statement
- break can never occur without a label.
- continue can never occur WITH a label

Question.4 Section.3

When can Exceptions occur in a Java code?

Choose from below options

- Run Time
- Compilation Time
- Can Occur Any Time
- None of the options

Question.5 Section.3

Assume the following method is properly synchronized and called from a thread A on an object B: wait(2000); After calling this method, when will the thread A become a candidate to get another turn at the CPU?

Choose from below options

- After thread A is notified, or after two seconds.
- After the lock on B is released, or after two seconds.
- Two seconds after thread A is notified.
- Two seconds after lock B is released.

Question.1 Section.4

Whats is the output of the following example

```
public class MapExample {

    public static void main(String[] args) {
        Map map1 = new HashMap<>();

        map1.put("abc", 1);
        map1.computeIfAbsent("abc", k->getAsciiValue(k));
        map1.computeIfAbsent("bcd", k->getAsciiValue(k));

        System.out.println(map1.get("abc"));


    }

    static Integer getAsciiValue(String str) {
        return str.length();
    }


}
```

Choose from below options

- 1
- 3
- Compile Error
- Runtime Error

Question.2 Section.4	Choose from below options
Which of the following is true about ENUM a) Enum can have non static object variable. b) Enum are comparable c) Constructors of Enum are private. d) Enum can't have a constructor.	○ a, b and c ○ b, c and d ○ c, d and a ○ a and b

Question.3 Section.4	Choose from below options
All collection classes are available in _____ package.	○ java.io ○ java.lang ○ java.awt ◉ java.util

Question.4 Section.4	Choose from below options
Is ArrayList fail-fast?	◉ true ○ false

Question.5 Section.4	Choose from below options
Which of the following statements are true for HashMap? 1.Keys can be duplicated but not Values 2.Values can be duplicated but not the keys. 3.HashMap is a hashing based implementation of Map interface, used to store key-value pairs where key and value both can be custom java class. 4.HashMap keeps elements in ordered manner.	◉ 2 & 3 ○ 1 & 4 ○ 3 & 4 ○ 1 & 3

Question.1 Section.5	Choose from below options
"synchronized" key word can be used with	○ Non static methods only. ○ Static methods only. ◉ All methods, and synchronized blocks ○ Interfaces, classes and methods

Question.2 Section.5	Choose from below options
which one of below is true.	○ A thread-local variable effectively provides a separate copy of its value for each thread that uses it. ○ ThreadLocal instances are typically private static fields in classes that wish to associate state with a thread ○ after a thread goes away, all of its copies of thread-local instances are subject to garbage collection ◉ All

Question.3 Section.5

Which statements are true about the following program? public class Test { private static Thread t1 = new Thread("T1") { public void run() { try { wait(1000); } catch (InterruptedException ie) { } } }; private static Thread t2 = new Thread("T2") { public void run() { notify(); } }; private static Thread t3 = new Thread("T3") { public void run() { yield(); } }; private static Thread t4 = new Thread("T4") { public void run() { try { sleep(100); } catch (InterruptedException ie) { } } }; public static void main(String[] args) { t1.start(); t2.start(); t3.start(); t4.start(); try { t4.join(); } catch (InterruptedException ie) {

Choose from below options

- The program will compile and will run and terminate normally.
- The program will compile but thread t1 will throw an exception.
- The program will compile but thread t2 will throw an exception.
- The program will compile but thread t3 will throw an exception.

Question.1 Section.6

Below garbage collection strategy works on a concept of dividing the heap space into multiple equal-sized heap regions and when garbage collection is invoked, it first collects the region with lesser live data.

Choose from below options

- Serial GC
- Concurrent Mark Sweep Collector
- Parallel Old GC
- None of the above

Question.2 Section.6

Which of the below statements are true about Perm Gen?

Choose from below options

- [x] Contains the application metadata required by the JVM to describe classes and methods used in the application.
- [x] Perm Gen is populated by JRE based on current classes being used by application.
- [ ] Perm Gen does not contain Java SE library classes.
- [ ] Perm gen is not part of java heap memory and method area is part of space in perm gen.
- [ ] All the options
- [ ] None of the options

Question.3 Section.6

How can we request the garbage collector to run?

A) Runtime.clearMemory()
B) Runtime.gc()
C) System.gc()
D) System.finalize()

Choose from below options

- A & C
- B & D
- B & C
- C & D

Question.1 Section.7

Which statement is true for Default and Static methods in an Interface.

Choose from below options

- Implementation of both Default and Static methods needs to be provided in an Interface, Both method types can be Overriden.
- Implementation of both Default and Static methods needs to be provided in an Interface, only default method types can be Overriden.
- Implementation of only Default methods needs to be provided in an interface, static method types can be Overriden.
- Implementation of only Static methods needs to be provided in an interface, default method types can be Overriden.

Question.2 Section.7

Which of the following is a benefit from using @Override annotation ?

Choose from below options

- Override annotation says that the method marked must be overriden by subclass
- It helps in runtime to dynamic binding the method to appropriate object
- Compiler can warn you if the method designated with override is not a correct override
- None of the above

Question.3 Section.7

What is a benefit of using Generics in your code?

Choose from below options

SUCCESS
answer submitted

- ○ Generics improve the performance of the code.
- ◉ Generics make code more readable.
- ○ Generics add stability to your code by making errors detectable at compile time.
- ○ Generics add stability to your code by making errors detectable at run time.

Question.4 Section.7

Choose the correct implementation of the following code after re-factoring into lambda expression:

```
Runnable r = new Runnable(){
                @Override
                public void run() {
                    System.out.println("My Runnable");
                }};
```

Choose from below options

SUCCESS
answer submitted

- ○
```
Runnable r = new Runnable() -> {
                    System.out.println("My Runnable");
                };
```
- ◉
```
Runnable r = () -> {
                    System.out.println("My Runnable");
                };
```
- ○
```
Runnable r = run() -> {
                    System.out.println("My Runnable");
                };
```
- ○
```
Runnable r = () -> run(){
                    System.out.println("My Runnable");
                };
```

Question.1 Section.8

Which among the following are idempotent operations in Spring REST? You can select multiple options.

Choose from below options

- ☑ OPTIONS
- ☐ POST
- ☑ GET
- ☑ PUT
- ☑ PATCH

Question.2 Section.8

_____ annotation is used to bind Servlet request parameters to handler/controller method parameters.

Choose from below options

- ○ @RequestMapping
- ○ @PathVariable
- ◉ @RequestParam
- ○ None of the above

Question.3 Section.8

How can a third-party REST service be accessed inside a Spring application?

Choose from below options

- ○ View
- ◉ RestTemplate Class
- ○ InternalViewResolver
- ○ ViewResolver

Question.4 Section.8	Choose from below options
What is a benefit of validating an XML document on the sender's side?	◉ It ensures that the recipients are able to validate the document. ○ It ensures that the document conforms to the document's schem ○ It ensures that the recipients are able to map the document's elements to the same Java types. ○ It ensures that all types that are used in the document conform to the primitive types defined in the XML schema specification

Question.1 Section.9	Choose from below options
Imagine that there are two exception classes: MyBaseBusinessException and MySubBusinessException which extends from MyBaseBusinessException. If rollback-for="MyBaseBusinessException" and no-rollback-for="MySubBusinessException" are configured what happens when a MySubBusinessException is thrown from transactional context?	○ no-rollback-for rule' is applied and transaction will not rollback. ○ rollback-for' is applied and transaction will be rollbacked. ◉ Exception is thrown during application context initialization since configuration is ambiguous. ○ None of the above

Question.2 Section.9	Choose from below options
Which Transaction Manager implementation would be most appropriate to use following scenario: Your Spring based application is to be deployed on JEE Application Server.	◉ JpaTransactionManager ○ HibernateTransactionManager ○ JtaTransactionManager ○ DataSourceTransactionManager

Question.3 Section.9	Choose from below options
With local transactions, the application server is involved in transaction management and it can help ensure correctness across multiple resources.	○ FALSE ◉ TRUE

Question.4 Section.9	Choose from below options
When Spring instantiates a map, it prefers JDK 1.4+ collection implementations (LinkedHashMap) to Commons Collections 3.x versions (org.apache.commons.collections.map.LinkedMap), falling back to JDK 1.3 collections (standard HashMap) as worst case.	◉ TRUE ○ FALSE

Question.5 Section.9	Choose from below options
Can you autowire byType when more than one bean with the same type exists?	◉ FALSE ○ TRUE

Question.1 Section.10	Choose from below options
Which method is used to trigger test runner?	○ JunitClient.runClasses ○ JunitClient.run ○ JunitCore.runClasses ◉ JunitCore.run

Question.2 Section.10	Choose from below options
Which of the following method of Assert class checks if two object references point to the same object?	○ void assert(Object expected, Object actual) ○ void assertCheck(Object expected, Object actual) ○ void assertSame(Object expected, Object actual) ◉ void assertEquals(Object expected, Object actual)

Question.3 Section.10	Choose from below options
Which of the following method of TestCase class counts the number of test cases executed by run(TestResult result)?	○ int countTestCases() ◉ int executedTestCases() ○ int getTestCaseCount() ○ int testCases()