



- ix) The concept of multiple inheritance is implemented in java by
- extending two or more classes
 - extending one class and implementing one or more interfaces
 - implementing two or more interfaces
 - all of these.

- x) In which class is the wait () method defined ?

- Applet
- Runnable
- Thread
- Object.

- xi) When we implement the Runnable interface, we must define the method

- start ()
- init ()
- run ()
- runnable ().

- xii) Which of the following keywords are used to control access to a class member ?

- Default
- Abstract
- Public
- Interface.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following.

3 × 5 = 15

- What do you mean by object oriented programming ? How is it different from conventional programming ? 2 + 3
- Explain "public static void main (String args [])" in brief. 3
 - What is a wrapper class ? 2
- What is JVM ? What do you mean by Java is a platform dependent language ? 2 + 3
- Distinguish between 'Data Abstraction' and 'Encapsulation'. 5
- Differentiate between composition and aggregation with suitable example. 5

**GROUP - C****(Long Answer Type Questions)**Answer any *three* questions.

3 × 15 = 45

7. a) Why is UML called a modelling language ? What are the primary goals of UML ? 5
- b) What is the difference between state chart diagram and activity diagram ? Model an activity diagram for the usecase of a driver starting a car. 5
- c) Explain the sequence diagram and collaboration diagram with an example used in UML. 5
8. a) Write a program to implement a dynamic stack. Each stack is constructed with an initial length. If this length is exceeded, i.e., if more room is needed then the size of the stack is doubled. 8
- b) Discuss Applet life-cycle indicating the functions, which are used. 7
9. What is the difference between sequence diagram and collaboration diagram ? Draw the sequence diagram for railway reservation system. 3 + 12
10. a) What is an Interface ? What is the difference between interface & abstract class ? Implement Interface in java with a simple code. 1 + 2 + 4
- b) What is inheritance ? How many types of inheritance java supports are there ? Discuss it. Given a method that does not declare any exception, can I override that method in a subclass to throw an exception ? 2 + 4 + 2
11. a) Write down a Java code to generate a linear singly linked list having at least 4 nodes. 5
- b) Write down the output of following code and explain why : 5
- ```
class A {
 public static void main (String [] arg) {
 String s = new String ("abc");
 System.out.print ("s =" + s);
 System.gc ();
 s = null;
 System.out.print ("s = " + s);
 }
}
```
- c) What are the different argument passing mechanisms in Java ? How is static block executed in Java ? 5

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