



22. What are the key components of RxJava? 2 K1 CO6

**PART - C (6 × 11 = 66 Marks)**

Answer ALL Questions

23. a) Explain the basic concepts of OOP with suitable example programs. 11 K2 CO1

**OR**

b) Outline the uses of various access specifiers in Java with an example. 11 K2 CO1

24. a) Construct a Java program to create a vehicle class hierarchy. The base class should be Vehicle, with subclasses Truck, Car and Motorcycle. Each subclass should have properties such as make, model, year, and fuel type. Implement methods for calculating fuel efficiency, distance traveled, and maximum speed. 11 K3 CO2

**OR**

b) Develop a Java package program to maintain the books details like bookid, accession number, bookname, author, publication in books package and keep the journal details such as journalid, journalname in journal package. In main class use these two packages and display the books and journal information as requested by the user. 11 K3 CO2

25. a) How are inner classes created in Java? Describe its uses with suitable example. 11 K2 CO3

**OR**

b) How Strings are handled in Java? Discuss some methods of String class with appropriate example program. 11 K2 CO3

26. a) Examine stack trace elements and illustrate how the stack trace elements are accessed with thread class and throwable class with an example? 11 K4 CO4

**OR**

b) Analyze about various I/O streams in Java with examples. 11 K4 CO4

27. a) Identify the uses of the life cycle of thread and explain it with neat diagram. 11 K3 CO5

**OR**

b) Apply the concept of using Generic Class and write a Java program to implement Bank Deposit and Withdrawal Application. 11 K3 CO5

28. a) Evaluate how Lambda Expression and Functional Interfaces are related? Illustrate it with suitable examples. 11 K5 CO6

**OR**

b) Interpret about parallel processing. Write a Java program for parallel processing using lambda expressions. 11 K5 CO6