Unit 1

* Write a java program to read three numbers through the keyboard and find their sum and average.
* What is a variable? Explain their importance in java language. What rules to be followed to define them?
* What is Java? Describe the Basic rules to define java identifiers.
* Explain the type and behavior of Java variables.
* What do you understand by type casting & automatic promotion? Explain with suitable examples.
* Explain the concepts JDK, JRE and JVM.
* Explain main( ) method in java. What is java’s magic byte code? Explain in detail.
* What are java buzz words? Give brief description.

Off paper

* With the help of example program explain the various arithmetic operators supported by java language.
* List the various control statement. Explain any one control statement with the help of flowchart and example program.
* Explain various types of iterative statements with suitable example.
* Explain various types of Operators with example.
* Illustrate the difference between java & C++. Why is Java language important in relevance to the Internet?
* Is java pure Object Oriented Language? Explain in detail. Mention the advantages & disadvantages of java.
* Answer the following:

1. With the base of Unicode, Java platform has become better. Explain how?
2. ii. Describe all the primitive data types supported by Java with appropriate examples and also specify their storage capacity/range

* Develop a program to compute factorial of a given number.

Unit 2

* In what way method overloading differs from overriding? Explain.
* Why we need the methods to solve the problems? Explain recursive methods.
* Why we are using final classes and methods. Explain.
* Give brief description about the various access control mechanisms used in java.
* Write a Java program to swap two numbers using call by reference.
* What are various Member access rules explain with an example?
* Write a program to input any three numbers from the console & find out the maximum number.
* Demonstrate Nested class concept with an example.
* Discuss the various levels of Access protection available for packages and their implications.
* Explain about the console input and output with an example.
* What are constructors? Explain different types of constructors with examples.
* What is method overloading? Explain with an example program
* Explain the uses of inner classes and local inner classes. With an example?
* What is final keyword? Explain its importance in java with an example program.
* Discuss in detail the concept of default constructor and constructor with default arguments.

Unit 3

* Define an array. How can we initialize arrays? Explain.
* Write java program to demonstrate the single inheritance.
* Write a program to multiple two matrices.
* Enumerate the concept of Super Keyword with a suitable example.
* What is interface in java? What is the use of interface in java?
* What is super keyword? Write a program to illustrate multilevel Inheritance?
* What do you mean by abstract classes and interfaces? Explain the need of interface mechanism in programming.
* How do you find all pairs of an integer array whose sum is equal to a given number?(imp)
* How many ways to find the duplicate elements in an array? Give an example?
* What is dynamic binding? Explain with an example?
* Explain the concept of arrays of varying lengths and arrays as vectors.
* Write short notes on the following i) Functional interfaces ii) Static methods in interface iii) Annotations.
* Describe in detail dynamic method dispatch concept and also mention the difference between Abstract class & interface.
* What is the purpose of the wait(), notify(), and notifyAll() methods? Explain in detail.

Unit 4

* Give brief description about the role of wrapper classes in java.
* Write and explain the role of exception handling mechanism in java.
* Elaborate on Java.lang package and its classes.
* Write a program to demonstrate the working of user defined exceptions.
* What is exception handling? Explain the advantages of exception handling
* Briefly explain check exceptions and unchecked exceptions.(imp)
* What is the difference between Instant and Local Data Time?
* Write various possible combinations of try catch finally.
* Explain about wrapper classes, Auto-boxing and Auto-unboxing.
* Elaborate on Time package, class instant and class object in detail.
* Explain formatter class and random class in java until classes.
* Illustrate on how packages can be created, defined and accessed.
* What are the JVM exceptions and programmatic exceptions?
* What do you mean by Auto-boxing and Auto-Unboxing? Explain with a suitable example.
* Explain the control flow in nested try catch finally.

Unit 5

* Write a java program to find any given string is palindrome or not without using built-in functions.
* In how many ways a thread can be created in java. Explain any one method.
* Write and explain the string buffer class.
* Write a java program to implement thread priorities.
* What are the states in the lifecycle of a thread? Explain with a neat diagram
* What is the difference between String Buffer and String Builder class?
* How to print total numbers of tables and views of a database using JDBC?
* What is the purpose of the Synchronized block?
* What is multithreading? Mention the difference between process and thread.
* Why are string objects immutable? How to create an immutable class?
* What is the string method in java? Explain.
* Discuss in detail JDBC Architecture with a neat diagram.
* How to detect a deadlock condition? How can it be avoided?
* Differentiate between the Thread class and Runnable interface for creating a Thread.
* How to connect Java application with Oracle and MYSQL database using JDBC?
* What is batch processing? What are the required methods in batch processing?