**Revision Guide**

Elements of a computer system

software

Syntax and semantics

Classifications of software

Compiler and an interpreter

Java Virtual Machine

program development life cycle

Tools that can be used in planning the logic of a computer program

debugging

symbols used in flowchart

Rules of developing a variable name

difference between = and ==

types of java programs

Machine,assembly and high level programming languages

What is an algorithm

steps of working with an algorithm

programming methodologies

types of errors in programming

three OOP concepts

code identation

IDE

run-time errors

types of comments used in Java

package

show a simple java program

reserved keywords in java

identifier

rules of coming up with an identifier in java

data type

primitive type

declaration and initialization

primitive data types known to you

order of precedence in java

casting and show how it is implemented in Java

string concatenation in Java

constants in java

variable

variable naming conventions

java methods used in reading data in java

show how escape sequences are used.

features of a good program design

benefits of modularization

structures of a computer program

nesting in computer programming

use of string methods in java

show how strings are compared

ways of creating a string object

What does the method toString() do

When can one consider to use stringBuffer class instead of the string class.

How are strings converted into Floats

dialog boxes are implemented in java

show how files are read in java

operations that can be performed on a file.

relational operators known to you

Show how if selection is used

Show how if and else selection is used

Explain nesting using if else

Using an example,show how the ternary(conditional) operator is used

Show how the switch is used

Using an example, show how relational operators are used

Outline the benefits of structured programming

When can the case structure be used in developing a computer program.

loop

Types of loops

Using sample code show definite and indefinite while loop

What is the difference between = and +=

Using an example, show how the while loop is used

Show how a flag controlled while loop is implemented

Show how a for loop is implemented

Show how a do while is implemented

Outline three steps that happen in every properly functioning loop

What is the difference between a pretest and posttest loop

State any two scenarios where a loop would be applicable

How are existing java methods used in a program using example

What is a method

outline how a method is executed in a java program

State and explain any three java predefined classes

State and explain the parts that make up a method

Using examples, show two types of methods used in Java.

What is a modifier

void method

What is a parameter

State three access specifiers in java

What is a null method

Differentiate between static and instance variables

local and global scopes

What is method overloading and how is it implemented in java

What is the advantage of method overloading

Difference between “pass by value” and “pass by reference”

class modifiers

constructor

constructor vs class

What is an array

characteristics of an array

What is the difference between “in bounds” and “out of bounds” in arrays

Using an example, show how an array is declared.

show how an array with elements is implemented

State and explain two types of arrays

Hos is a foreach implemented.

method that uses an array as one of its parameters

What is an exception

Causes of exceptions in a computer program.

What is the difference between the try and catch block

What is a finally block in exception handling

How is an exception is handled in Java

Various types of exception in java

What is the importance of exception handling in a computer program

Discuss the call stack in exception handling

What is an assertion in programming

Exception handling techniques used in java