# D.K.M.COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE-1.

#### SEMESTER V

# PROGRAMMING IN JAVA

## UNIT - I

PORTIONS: - Object Oriented Concepts - Introduction to Java - Data Types - Variables - Arrays - Operators - Control Structure - Console I/O - Scanner Classes and Methods - Print() - Println() and Printf().

#### SECTION-A 2 MARKS

- 1. What is Java Applet?
- 2. Define "Java Virtual Machine"?
- 3. Define "Byte Code".
- 4. Define Java Language.
- 5. What is Variable?
- 6. What is Literal?
- 7. Why java is important to Internet.
- 8. What is Encapsulation?
- 9. What is an Array in Java?
- 10. Write about Switch statement.
- 11. Specify the general format of Ternary (?:) Operator.
- 12. Explain any two Data Types in Java.
- 13. List any four Features of Java.
- 14. What is use of Print () Method with example.

#### SECTION-B 5 MARKS

- 1. What are Object Oriented Concepts in Java?
- 2. Explain the Features of java.
- 3. What are the Lexical Issues in Java?
- 4. Discuss briefly about the usage of Arrays and Variable in Java with example.
- 5. Explain in detail about Passing Array to Methods.
- 6. Describe in detail about Break and Continue.

- 7. Describe the Operators available for Bite wise Operations.
- 8. List out different kinds of Operator used in Java and Explain.
- 9. Discuss about any five important features of Java.
- 10. Explain various I/O Statement?
- 11. Explain "Switch" Statement?
- 12. Explain various Control Statement available in Java.
- 13. Explain while and do while statements with syntax.
- 14. Discuss various Data Types in Java.
- 15.List out various Decision Making Branching Statements in Java. Explain with example.

- 1. Explain the Features of Java in detail.
- 2. Explain the Basic Concepts of Object Oriented Programming in detail.
- 3. Explain the General Structure of Java Program.
- 4. Explain Data Type and Arrays with example.
- 5. Writ about operators in java.
- 6. Explain about new operator with example.
- 7. Explain various Control Statement available in Java

# UNIT - II

PORTIONS: - Classes - Objects - Constructor - Overloading Methods - Access Control - Static Data Members and Methods - fixed Methods - String Class - Inheritance - Overriding Methods - Using Super - Abstract Class - Introduction to Java API Packages.

# SECTION-A 2 MARKS

- 1. How to create a Object to a Class?
- 2. What is the use of finalize () Method?
- 3. Define Super class.
- 4. Mention the use of "Super" Keyword.
- 5. What is a Constructor?
- 6. What is Overloaded Constructor?

- 7. Define Access Specifier.
- 8. Distinguish between "private and public" Access modifier in java.
- 9. What do you mean by Inheritance?
- 10. Define Class.
- 11. Define Object.
- 12. What is Recursion?
- 13. Define Method Overloading.
- 14. Specify the use of Capacity () Method.
- 15. Write short note on Abstract Class? Give example.
- 16. Give the purpose of "final" modifier in a class declaration.

#### SECTION-B 5 MARKS

- 1. Explain the concepts of Constructor with an example.
- 2. How to Declare a Method?
- 3. Discuss about the working of Method Overloading concepts.
- 4. Write short note on Access protection.
- 5. Describe inner Class with example.
- 6. Discuss about the features of String Buffer Class with example.
- 7. Describe the general format of a Class and its parts.
- 8. Explain the importance of Abstract class with an example.
- 9. Explain the purpose of any five String Methods with example.
- 10. Explain any five String Buffer Methods with example.
- 11. What is a Constructor? What are its special properties? Explain.
- 12. Explain Overriding Methods with an example in detail.
- 13. Describe the Fundamental of java util.
- 14. Describe Briefly about the Importance of Java Utilities.
- 15. Explain in details about controlling access to members in a class.
- 16. Explain about Super class and Sub class.
- 17. Write a program in Java to count number Vowels in String.
- 18. Explain Static Methods.
- 19. Discuss on any five methods defined by List Interface.

- 1. Describe the Concepts of Inheritance mechanism with an example in detail.
- 2. Describe the Concepts of Method Overriding with an example in detail.
- 3. Describe the Concepts of Method Overloading with an example in detail.
- 4. Describe the Access Protection Methods with example.
- 5. Describe the String Buffer Constructors length (), capacity (), ensurecapacity (),setLength (), charAt ().
- 6. Discuss about the Importance of Java Utilities.

#### UNIT - III

PORTIONS: - Packages - Access Protection - Importing Packages - Interfaces - Exception Handling - Throw and Throws - Multithreading Thread - Synchronization - Messaging - Runnable Interface - Inter Thread Communication.

#### SECTION-A 2 MARKS

- 1. What is meant by Packages in Java
- 2. How to import a Package.
- 3. How to Create a Package?
- 4. Mention any two Built in java Package names.
- 5. Write the general form of defining an Interface.
- 6. What is Thread?
- 7. Explain java Thread Mode.
- 8. Define the term "Multi Threading"
- 9. What is an Exception?
- 10. Define Exceptional Handing?
- 11. What is the purpose of throws statement?
- 12. Define the term Dead Lock".
- 13. Define Runnable Interface.

#### SECTION-B 5 MARKS

1. Describe the features of Interfaces with example.

- 2. Explain the Method of Creating and Using Thread
- 3. Discuss about the Syntax of "try catch" bock with an example.
- 4. Describe the features of Multi threading with an example.
- 5. Write short notes on "Multi Threading" (OR) Describe Multi Threading with example.
- 6. Discuss on Synchronization and Messaging.
- 7. How do you add a Class or an Interface to a Package? Give an example.
- 8. Create a program for Exceptional Handling with example for Divide By Zero.
- 9. Explain in detail about Life Cycle of Thread.

- 1. Discuss about the features of Exceptional Handling mechanism with example.
- 2. What is Inter Thread Communication? How is it implemented.
- 3. Write short notes on
  - a) Nested try
  - b) Throw
  - c) Throws and
  - d) Finally.
- 4. Describe about Finally clause and Thread Synchronization.
- 5. Discuss about the method Defining and Accessing Packages in Java in detail.

#### UNIT - IV

PORTIONS: - GUI Components - Simple GUI based I/O using JOption Panel - Jlabel Jtext - Overview of Swing Components - JButton - JCheckbox - JRadioButton - JPanel - JComboBox - Jlist - Jmenus with Jframes Introduction to Event Introduction to Event Handling - GUI Event Types - Listener Interfaces - Mouse Event Handling - Key Event Handling - Adapter Classes - Layout Managers - Flow Layout - Border Layout - Grid - Jtext Area - Introduction to Applet.

#### SECTION-A 2 MARKS

- 1. Define AWT.
- 2. Define Controls.

- 3. Explain any two Mouse Events.
- 4. Explain any two types of State Buttons.
- 5. Define GUI Components and list any two GUI Components.
- 6. What is Event Generated?
- 7. What is an Adapter Class?
- 8. What is purpose of Layout Manager?
- 9. What is the JList?
- 10. What do you mean by Dead State of an Applet?

#### SECTION-B 5 MARKS

- 1. Explain briefly about the Methods of Creating Menus.
- 2. Discuss Briefly about Swing Components and its features.
- 3. Describe briefly about the features of Layout Managers.
- 4. Describe the features of AWT controls.
- 5. Describe any five GUI Components with example.
- 6. Create a program to use JCheckBox tool.
- 7. Discuss on JButton.
- 8. What is Layout Manager? Describe the various Layout implemented in Java.
- 9. Explain about Flow Layout. Give an example.
- 10. Explain Key Event Class.
- 11. Explain the Fundamentals of Applet (OR) Describe Applet with example.
- 12.List any five Event Classes and state the situation in which their objects are Created.

# SECTION-C 10 MARKS

- 1. Describe the features of various AWT controls in detail.
- 2. Discuss on Event Handling by AWT Components.
- 3. Explain in detail of the Swing Components.
- 4. Explain about Border Layout. Give an example.
- 5. Explain the method of Creation of execution of Applet in detail.
- 6. Explain in briefly about Mouse Event Handing.
- 7. Write short notes on:
  - a) JLable

- b) JTextFiled
- c) JButton
- d) JCheckBox e) JTextArea.

#### **UNIT V**

PORTIONS: - Graphics and Java 2D - Graphics Contexts and Graphics Objects - Color And Font Control - Graphics Class - Drawing Lines, Rectangles - Using Menus with Frames - File and Stream.

# SECTION-A 2 MARKS

- 1. What is Graphics Contexts?
- 2. What is Font Metrics?
- 3. Define Graphics Context and Graphics Object.
- 4. State the method and description to draw Line and Oval
- 5. Give the Constructor of Frame Class.
- 6. What is a Stream?
- 7. Define File.
- 8. Distinguish between Byte Stream and Character Stream Classes
- 9. Distinguish between Input Stream and Output Stream.
- 10. What is the use of an Input Stream?

#### SECTION-B 5 MARKS

- 1. Write five Color Constants and their RGB values.
- 2. Discuss on Drawing Rectangle.
- 3. Discuss on Menus.
- 4. Write about Menus with Frames.
- 5. Describe about Output Stream Classes.
- 6. Describe about Input Stream Classes
- 7. Explain File Input Stream.
- 8. Describe about String Buffer Input Stream.

- 1. Explain in briefly about Font Controls.
- 2. Write short notes on:
  - a) Drawing Lines.
  - b) Drawing Rectangle.
  - c) Drawing Ovals.
- 3. Explain the Concepts of I/O Stream Classes in Java in detail.
- 4. Discuss Stream Classes available in Java.
- 5. What are File Stream are used in Java.

# **MODEL QUESTION PAPER**

Time: 3Hrs Max.Marks: 75

SECTION - A (10\*2=20)

# ANSWER ALL THE QUESTIONS

- 1. Define "Byte Code".
- 2. What is Encapsulation?
- 3. What is the use of finalize () Method?
- 4. Write short note on Abstract Class? Give example.
- 5. What is Thread?
- 6. What is the purpose of throws statement?
- 7. What is the JList?
- 8. What is Event Generated?
- 9. What is Font Metrics?
- 10. What is the use of an Input Stream?

**SECTION** - B (5\*5=25)

# ANSWER ANY FIVE QUESTIONS

- 11. Explain the Features of Java in detail.
- 12. Explain Data Type and Arrays with example.
- 13. What is a Constructor? What are its special properties? Explain.
- 14. Create a program for Exceptional Handling with example for Divide By Zero.
- 15. Discuss on Synchronization and Messaging.
- 16. Describe briefly about the features of Layout Managers.
- 17. Discuss Briefly about Swing Components and its features.
- 18. Write five Color Constants and their RGB values.

**SECTION - C** (3\*10=30)

# **ANSWER ANY THREE QUESTIONS**

19.a) Explain the Features of Java in detail.

(Or)

b) List out various Decision Making Branching Statements in Java. Explain with example.

20.a) Discuss about the method Defining and Accessing Packages in Java in detail.

(Or)

- b) Describe the Concepts of Inheritance mechanism with an example in detail.
- 21.a) Discuss on Event Handling by AWT Components.

(Or)

b)Explain the Concepts of I/O Stream Classes in Java in detail.

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