



**DHANALAKSHMI SRINIVASAN  
COLLEGE OF ENGINEERING AND TECHNOLOGY  
ACADEMIC YEAR 2018-19 (ODD SEM)**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**SUB: OBJECT ORIENTED PROGRAMMING**

**SEM/YEAR: III SEM/ II YEAR**

**SUB CODE:CS8392**

**UNIT I                    INTRODUCTION TO OOP AND JAVA FUNDAMENTALS**

**PART – A**

1. Define Objects and classes in java
2. Name the types of Array Name the types of Array
3. List any four java Doc comments
4. Define access specifier? give example
5. Define objects and object variable
6. What is the need of overloaded constructors
7. What is the need of overloaded constructors
8. Express what is meant by java package
9. Enumerate two situations in which static methods are used
10. Express what is the default access to a member in a class
11. Illustrate with example how to import a single package?
12. Show how could Java Classes direct program message to the system console, but error message, say to a file.
13. Demonstrate private access specifier
14. Differentiate procedural Vs Object - oriented Programming
15. Explain the features of Java

**PART – B**

1. Explain the types of package with its importance
2. i) What is method? How method is defined? give example  
ii) State the purpose of finalize() method in java? With an example explain how finalize() method can be used in java program
- 3 .i) What is a class? How to you define a class in java.  
ii) Define Package? How does compiler locate Packages? Explain arrays in java.
4. Difference between OOPS and procedural programming language
5. Assess the different methods in java. Util. Arrays class with example

### **PART – C**

1. Write the program to perform the following functions using classes, objects, constructors and destructors where essential
  - i) Get as input the marks Of 5 students in 5 subjects
  - ii) Calculate the total and average
  - iii) Print the formatted result on the screen
2. Create a java program to find a smallest number in the given array by creating one dimensional array using new operator.

## **UNIT 3**

## **INHERITANCE AND INTERFACES**

### **PART A**

1. Define inheritance hierarchy. Give an example
2. How will you define an interface in java program
3. What is meant by abstract classes
4. What is object cloning
5. Define static inner classes
6. What is class hierarchy? Give example
7. In java describe the use of Interfaces?
8. Describe the purpose of the keyword “final”
9. Summarize static binding (early binding) and dynamic binding (late binding)
10. Describe wrapper classes? Why the wrapper classes are defined as final
11. Show how to prevent inheritance
12. Demonstrate the conditions to be satisfied while declaring abstract classes
13. Illustrate the usage of super keyword?
14. Differentiate shallow and deep copy in object cloning
15. Distinguish between copying and cloning

### **PART – B**

1. Define Inheritance? With diagrammatic illustration and java program illustrate the different types of inheritance.
2. What is interface? Write a java program to illustrate the use of interface.
3. Write briefly on Abstract classes with an example
4. List the type of constructors and the concept of destructor with example
5. Describe the sophisticated layout management in user interface component with example

## **PART – C**

1. Create a static Inner class called Pair which has Min Max method for finding min and max values from the array
2. Create a abstract Reservation class which has Reserve abstract method. Implement the sub-classes like Reserve Train and Reserve Bus classes and implement the same

## **UNIT 4**

## **EXCEPTION HANDLING AND I/O**

### **PART – A**

1. List the different ways to handle exceptions
2. Examine the purpose of the finally clause of a try-catch-finally statement
3. Tell the use of assert keyword
4. Define a file? Why do we require files to store data
5. What is the basic difference between the 2 approaches to exception handling
6. What if there is a break or return statement in try block followed by finally block
7. Summarize output streams and input streams in Java
8. Describe runtime exceptions
9. Interpret Checked and Un Checked Exception
10. Give any two methods available in stack tree element
11. Is it necessary that each try block must be followed by a catch block
12. How are the stream classes classified
13. Show how Java handle integer overflows and underflows
14. State the difference between an exception and error
15. Compare Input stream and Reader classes

### **PART – B**

1. Define exception. Why it is needed? Explain the different types of exceptions and the exception hierarchy with appropriate examples using Java
2. What is mean by filter stream? Explain with examples
3. Explain briefly about user defined exceptions and the concept of throwing and catching exception in java with examples
4. What are input and output streams? Explain them with illustrations
5. Describe the stack trace elements with an example

### **PART – C**

1. Why only read() methods in ByteArrayInputStream does not throw IOException?
2. How does InputStream.read() method work? Can you give me some sample code?

## UNIT IV

## MULTITHREADING AND GENERIC PROGRAMMING

### PART – A

1. Identify the different states in thread
2. What do you mean by threads in Java
3. Define multithreading
4. List out the motivation needed in generic programming
5. Tell the methods of executors
6. What is meant by notify methods in multithreading
7. Describe synchronization in respect to multithreading
8. Summarize generic classes with example
9. Express the need for generic code?
10. Describe life cycle of thread
11. Demonstrate how do we set priorities for threads
12. How to start a thread
13. Show how the inter thread communication is done
14. Who wants to be generic programmer.
15. Assess how will interrupt threads in multiple windows

### PART – B

1. List the two ways of implementing threads with example
2. Label the different states of a thread and explain it
3. Define the concept of Generic Type Information in virtual machine
4. Tell briefly about reflection and generics. Give an example
5. What is a thread? Describe the lifecycle and states of thread with examples.

### PART – C

1. Create a simple real life application program to illustrate the use of multithreads.
2. To avoid deadlock in Java where N threads are accessing N shared resources: Conclude.

## UNIT V

## EVENT DRIVEN PROGRAMMING

### PART – A

1. List the situation in which an action event and item event is generated?
2. Name the Listener methods that must be implemented for the KeyListener interface
3. What are the steps needed to show a Frame
4. Define JPanel object
5. Mention any four event names of a button component
6. What is meant by window adapter classes
7. Write syntax of drawImage() and copyArea() methods

8. Write syntax to handle two mouse events
9. Describe AWT in Java
10. Summarize the function of (a) Set Layout and (b) Flow Layout
11. How are frames created in Java
12. How do you manage the color and font of a graphics in applet
13. Distinguish swing and AWT
14. Explain four swing components with proper syntax
15. Differentiate GridBag Layout from Grid Layout

### **PART – B**

1. Write a program to include the Internal Frame in Swing
2. List the methods available to draw shapes and COLOR
3. State and Explain the basic of AWT Event handling in detail
4. Write a program for a simple calculator using swing
5. Discuss mouse listener and mouse motion listener. Give an example program

### **PART – C**

1. Which method do you use to enable and disable components such as JButtons? What class is it defined in?
2. Code a java program to implement the following: Create four check boxes. The initial state of the first box should be in checked state. The status of each check box should be displayed. when we change the state of a check box, the status should be display is updated