SRM VALLIAMMAI ENGINEERING COLLEGE

(An Autonomous Institution)

SRM Nagar, Kattankulathur – 603 203

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

QUESTION BANK

VII SEMESTER

1904010 –OBJECT ORIENTED PROGRAMMING

(Common to ECE/EEE/MECHANICAL)

Regulation – 2019

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ODD SEMESTER

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SUBJECT :1904010- OBJECT ORIENTED PROGRAMMING

SEM/YEAR : VII / IV

UNIT I –INRODUCTION TO OOPS AND JAVA FUNDAMENTALS			
Object Oriented Programming - Abstraction – objects and classes - Encapsulation- Inheritance - Polymorphism- OOP in Java – Characteristics of Java – The Java Environment - Java Source File -Structure – Compilation. Fundamental Programming Structures in Java – Defining classes in Java – constructors, methods -access specifiers - static members -Comments, Data Types, Variables, Operators, Control Flow, Arrays , Packages - JavaDoc comments.			
	PART-A		
Q.No	**Questions**	**BT Level**	**Competence**
1	**Express** what is meant by Object Oriented Programming.	BTL 2	Understand
2	**Compare** class and object.	BTL 2	Understand
3	**List** the core OOP's concepts.	BTL 1	Remember
4	**Tabulate** the difference between C++ and Java.	BTL 1	Remember
5	What is meant by abstraction.	BTL 1	Understand
6	**Give** the importance of abstraction and polymorphism.	BTL 2	Understand
7	**Point out** the justification of the statement "Java is platform independent".	BTL 2	Understand
8	**Express** a Java programming structure to display "Hello World".	BTL 2	Understand
9	**List** the various access specifiers supported by OOPS.	BTL 1	Remember
10	**Show the** constructors available in Java.	BTL 2	Understand
11	**Write** a simple Java Program to find the given number is Prime or not.	BTL 2	Understand
12	**List out the** characteristics of objects.	BTL 1	Remember
13	With example say what is meant by parameter passing constructor.	BTL 2	Understand
14	**Quote** the purpose of finalize methods.	BTL 1	Remember
15	**List** out the type of Arrays.	BTL 1	Remember
16	**Give** the working of Java Virtual Machine (JVM).	BTL 2	Understand
17	**Define** static variable and static method.	BTL 1	Remember
18	**What is the use of** Java package?	BTL 1	Remember
19	How to import a single package.	BTL 1	Remember
20	**Summarize** any four Java doc comments	BTL 2	Understand
21	**Give** integer data types in java.	BTL 2	Understand
22	**What is**Byte code? What is JVM and JIT?	BTL 1	Remember
23	**Write** a java program using control flow statements.	BTL 2	Understand
24	**Differentiate** break and continue statements.	BTL 2	Understand

	PART B			
1	**Explain** in detail about the different features of Object Oriented Programming.	(13)	BTL 5	Evaluate
2	(i)**What** is class? How do you define a class in Java? (ii)**Examine** the use of inheritance in OOPs with an example.	(7) (6)	BTL 4	Analyze
3	**Describe the following in detail** (i)Data Abstraction and encapsulation. (ii)Polymorphism and dynamic binding.	 (7) (6)	BTL 5	Evaluate
4.	**Illustrate** in detail about the control flow statements in Java with suitable examples.	(13)	BTL 3	Apply
5	What is meant by constructor? **Discuss** the types of constructor with an example.	(13)	BTL 4	Analyze
6	(i)**Analyze** and Develop a simple Java program to sort the given numbers in increasing order. (ii)**Write** a Java program to reverse the given number.	(7) (6)	BTL 4	Analyze
7	(i) **Illustrate** the characteristics of Java in detail. (ii) **Show** with an example the structure of Java Program	(8) (5)	BTL 3	Apply
8	(i)**Summarize** about access specifier in Java. (ii)**Describe** the term static fields and methods and explain its types with example.	(7) (6)	BTL 5	Evaluate
9	(i) **Define** Arrays. Explain it with an example program. (ii)Describe variables and operators in Java.	(8) (5)	BTL 4	Analyze
10	**Illustrate** what is meant by package? How its types are created and implemented in Java.	(13)	BTL 3	Apply
11	Write the techniques to **design** classes in Java using JavaDoc.	(13)	BTL 6	Create
12	**Explain** packages in Java with an example.	(13)	BTL 4	Analyze
13	**Discuss** about the two-dimensional array with example program.	(13)	BTL 5	Evaluate
14	**Illustrate** the Program structure of Java in detail with an example program.	(13)	BTL 3	Apply
15	**Discuss** the following: (i) Control flow statements in Java. (ii) Data types in Java.	 (7) (6)	BTL 2	Understand
16	**Explain** with the help of a program how object oriented programming overcomes the shortcomings of procedure oriented programming.	(13)	BTL 4	Analyze
17	Write a simple Java program to **implement** basic Calculator operations.	(13)	BTL 4	Analyze
	PART C			
1	**Develop** a Java application to generate Electricity bill. Create a class with the following members: Consumer no., consumer name, previous month reading, current month reading, type of EB connection (i.e domestic or commercial). Compute the bill amount using the following tariff. If the type of the EB connection is domestic, calculate the amount to be paid as follows: i. First 100 units - Rs. 1 per unit ii. 101-200 units - Rs. 2.50 per unit iii. 201 -500 units - Rs. 4 per unit	(15)	BTL 6	Create

	iv. > 501 units - Rs. 6 per unit		
2	**Evaluate** a Java program to find a smallest number in the given array by creating one dimensional array and two dimensional array using new operator. (15)	BTL 5	Evaluate
3	**Explain** and write Java Program to find the largest of three numbers using Ternary Operator and smallest of three numbers using Ternary Operator. (15)	BTL 5	Evaluate
4	**Develop** a Java application with Employee class with Emp_name, Emp_id, Address, Mail_id, Mobile_no as members. Inherit the classes, Programmer, Assistant Professor, Associate Professor and Professor from employee class. Add Basic Pay (BP) as the member of all the inherited classes with 97% of BP as DA, 10 % of BP as HRA, 12% of BP as PF, 0.1% of BP for staff club fund. Generate pay slips for the employees with their gross and net salary. (15)	BTL 6	Create
5	**Create** a java program using local, static and instance variable with proper justification**.** (15)	BTL 6	Create

UNIT II –INHERITANCE AND INTERFACES

Inheritance – Super classes- sub classes –Protected members – constructors in sub classes- the Object class – abstract classes and methods- final methods and classes – Interfaces – defining an interface, implementing interface, differences between classes and interfaces and extending interfaces- Strings

PART-A

Q.No	Questions	BT Level	Competence
1	**Give** the importance of inheritance.	BTL 2	Understand
2	**List** the characteristics of constructor function.	BTL 1	Remember
3	**What is** the use of default constructor.	BTL 1	Remember
4	**Identify** what are the two ways of using super keyword.	BTL 1	Remember
5	Can we instantiate an abstract class?Give reasons for that	BTL 1	Remember
6	**Give** how protected members in a subclass can be accessed in Java.	BTL 2	Understand
7	What methods are provided by the object class?	BTL 1	Remember
8	**Point out** the conditions to be satisfied while declaring abstract classes.	BTL 2	Understand
9	**Give** the use of final keyword.	BTL 2	Understand
10	What is protected visibility?	BTL 1	Remember
11	**Define** interface and write the syntax of the interface	BTL 1	Remember
12	Give the use of Dynamic Binding.	BTL 2	Understand
13	What is a cloneable interface and how many methods does it contain.?	BTL 1	Remember
14	**Describe** whether you can have an inner class inside a method and what variables can you access.	BTL 1	Remember
15	**Differentiate** between abstract class and interface.	BTL 2	Understand
16	**What** is meant by object cloning?	BTL 1	Remember
17	**Give** the role of clone() method in Java.	BTL 2	Understand
18	**Point out** what are inner class and anonymous class.	BTL 2	Understand

19	**List** out the rules in defining abstract classes.	BTL 1	Remember
20	**Give** any two string handling methods in Java.	BTL 2	Understand
21	**Define** nested interface with an example	BTL 2	Understand
22	How will you find out the length of a string in java? Give an example?	BTL 1	Remember
23	Write a java program to compare two strings.	BTL 2	Understand
24	**Give** the structure of hierarchical inheritance in java.	BTL 2	Understand
	PART-B		
1	(i)**Describe** in detail **about** inheritance. (7) (ii)Write a program for inheriting a class. (6)	BTL 4	Analyze
2	(i)**Illustrate** what is super and subclass in Java. (7) (ii)With an example, illustrate how the objects from sub class are inherited by the super class. (6)	BTL 3	Apply
3	**Examine** how to control top level and member level access for the members of the class with an example. (13)	BTL 4	Analyze
4	**Design** with an example how passing objects as parameters to methods and returning objects from methods in Java. (13)	BTL 4	Analyze
5	**Describe** in brief about object class and its methods in Java with suitable example. (13)	BTL 5	Evaluate
6	(i)**Discuss** the concept of abstract class. (7) (ii)**Give** a program for abstract class with example. (6)	BTL 5	Evaluate
7	(i) **Explain** briefly on final keyword. (7) (ii)**Explain** the concept of final class with an example. (6)	BTL 4	Analyze
8	(i)**Describe** in detail about interface. (7) (ii)How is interface declared and implemented in Java? Give example. (6)	BTL 4	Analyze
9	(i) **Differentiate** classes with interface with suitable examples. (8) (ii) Express in detail about object cloning. (6)	BTL 4	Analyze
10	**Discuss** the implementation of method overloading and overriding with an example program. (13)	BTL 5	Evaluate
11	**Explain** the multilevel inheritance in java with suitable example program. (13)	BTL 5	Evaluate
12	Define multiple inheritance and implement the multiple inheritance in Java. (13)	BTL 4	Analyze
13	**Illustrate** with an example, how string objects are created. How it can be modified? (13)	BTL 3	Apply
14	**Illustrate** String handling class in Java with example. (13)	BTL 3	Apply
15	**Explain** briefly about final methods and classes. (13)	BTL 5	Evaluate
16	**Point out** the difference between single, Multilevel and Hierarchical inheritance. (13)	BTL 4	Analyze
17	(i) **Discuss** about protected members in Java with example. (7) (ii) Explain in detail about method overriding in java with an example. (6)	BTL 5	Evaluate
	PART C		

1	**Develop** a Library interface which has drawbook(),returnbook((with fine),checkstatus() and reservebook() methods. All th methods are tagged with public in the following ways: a. Using draw book() - get the required book based on title b. Using checkstatus – user book returned date details c. Using with fine() – whether failed to return the book within a time period charge -Rs.5/day d. Using reserve book() – block or reserve particular book for their account.	(15)	BTL 6	Create
2.	**Assess** and write an inheritance hierarchy for classes Quadrilateral, Trapezoid, Parallelogram, Rectangle and Square. Use Quadrilateral as the superclass of the hierarchy. Specify the instance variable and methods for each class. The private instance variables of Quadrilateral should be the x-y coordinate pairs for the four end points of the quadrilateral. Write a program that instances objects of your classes and outputs each objects area(except Quadrilateral)	(15)	BTL 5	Evaluate
3	**Consider** a class student .Inherit this class in UG Student and PG Student. Also inherit students into local and non-local students. Define five Local UG Students with a constructor assuming all classes have a constructor.	(15)	BTL 5	Evaluate
4	**Develop** a Java Program to create an abstract class named Shape that contains two integers and an empty method named print Area(). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extends the class Shape. Each one of the classes contains only the method print Area () that prints the area of the given shape.	(15)	BTL 6	Create
5	Develop a java program to perform the following operations. a. Find the string index. b. Compare two strings. c. Retrieve the single character from sting. d. Find the substring of the given string. e. Split the string.	(15)	BTL 6	Create

UNIT III-EXCEPTION HANDLING AND I/O

.**Exceptions - exception hierarchy - throwing and catching exceptions – built-in exceptions, creating own exceptions, Stack Trace Elements. Input / Output Basics – Streams – Byte streams and Character streams – Reading and Writing Console – Reading and Writing Files**

PART-A

Q.No	Questions	BT Level	Competence
1	**Interpret** what is an Exception. What is its use?	BTL 2	Understand
2	**Predict** what function does terminate and unexpected handlers call.	BTL 2	Understand
3	**What** is re-throwing an expression?	BTL 1	Remember
4	**Define** uncaught exception.	BTL 1	Remember
5	**Summarize** the task performed by exception handling.	BTL 2	Understand
6	**Differentiate** exception and error	BTL 2	Understand
7	**Classify** the exception types with example	BTL 2	Understand
8	**Draw** the exception hierarchy.	BTL 2	Understand

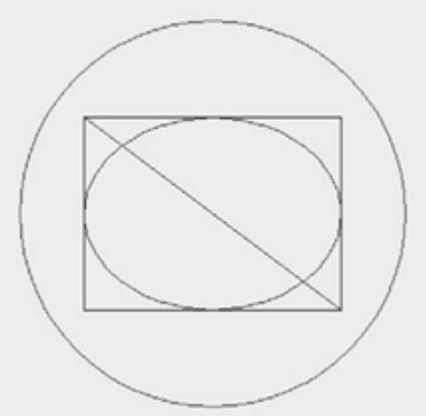
9	**What** are the two methods available in stack trace elements?	BTL 1	Remember
10	**Give** the advantages of using exception handling.	BTL 2	Understand
11	**What** are three types of I/O streams?	BTL 1	Remember
12	What is the purpose of the finally clause of a try-catch-finally statement?	BTL 2	Understand
13	How to create custom exception?	BTL 2	Understand
14	**List** the any five-byte stream class.	BTL 1	Remember
15	**List** any four character stream class.	BTL 1	Remember
16	**Point out** the syntax of buffered reader to connect to the keyboard	BTL 1	Remember
17	**What** are streams? What are their advantages?	BTL 1	Remember
18	Write a Java program to **demonstrate** the use of readline method.	BTL 2	Understand
19	**Write** a Java application using a printwriter class to handle console output.	BTL 2	Understand
20	**Write** a Java program to create a tiny editor.	BTL 2	Understand
21	**Point out** the use of write() method in Printstream Class.	BTL 1	Remember
22	How to create a BufferReader object?	BTL 2	Understand
23	**Give** the methods defined in the file class.	BTL 2	Understand
24	How java handle integer overflow and underflow?	BTL 1	Remember
	PART-B		
1	**Discuss** in detail about exception handling constructs and write a program to illustrate Divide by zero exception. (13)	BTL 4	Analyze
2	**Describe** the following concepts with example (i) Try-catch-throw paradigm. (7) (ii)Exception specification. (6)	BTL 3	Apply
3	**Illustrate** about the syntax of catch and re-throw an exception with an example (13)	BTL 3	Apply
4	**Explain** on stack trace elements give example. (13)	BTL 4	Analyze
5	**Illustrate** any five classes to support exception handling in Java with an example for each. (13)	BTL 3	Apply
6	**Summarize** what is finally class. How to catch exception? Write an example. (13)	BTL 5	Evaluate
7	**Analyze** the following in detail with example program (i)Checked Exception. (7) (ii) Unchecked exception. (6)	BTL 4	Analyze
8	(i)**Classify** the errors and exception in Java. (7) (ii)**Illustrate** about multiple catching exceptions with example. (6)	BTL 3	Apply
9	**Summarize** the following with example program (i)Arithmetic exception. (5) (ii)Array out of bound exception. (4) (iii)String index out of bound exception. (4)	BTL 5	Evaluate
10	(i)**Develop** a program to read and count the characters from files. (ii)**Develop** a Java program to transfer the content of one file to another file. (7) (6)	BTL 6	Create
11	**Discuss** briefly about the features (i) Byte streams input/output. (7) (ii)Character streams input/output. (6)	BTL 5	Evaluate

12	**Explain** the following with example (i)Reading console input. (7) (ii)Writing console output. (6)	BTL 4	Analyze
13	(i)**Describe** a Java program to read characters from the console. (7) (ii)**write** a Java program to read strings from the console. (6)	BTL 5	Evaluate
14	**Illustrate** in brief about (i)Reading from a file. (7) (ii)Writing in a file. (6)	BTL 3	Apply
15	How to create user defined exception in java. Explain it with an example (13)	BTL 5	Evaluate
16	**Demonstrate** the different ways to read and write to console in java (13)	BTL 3	Apply
17	(i) **Describe** the exception hierarchy in java. (8) (ii)Discuss any five built exception in java. (5)	BTL 4	Analyze
	PART C		
1	**Develop** a Java program to implement user defined exception handling. (15)	BTL 6	Create
2	Write a Java program to handle the Arithmetic Exception and array out of bounds Exception. (15)	BTL 5	Evaluate
3	**Develop** the Java program to concatenate the two files and produce the output in the third file. (15)	BTL 6	Create
4	**Construct** a Java program that reads a file name from the user, displays information about whether the file exists, whether the file is readable, or writable, the type of file and the length of the file in bytes. (15)	BTL 5	Evaluate
5	**Explain** in detail about input and outstream of java in detail with examples. (15)	BTL 5	Evaluate
	UNIT IV		
Differences between multi-threading and multitasking, thread life cycle, creating threads, synchronizing threads, Inter-thread communication, daemon threads, thread groups.			
	PART-A		
Q.No	**Questions**	**BT Level**	**Competence**
1	**Give** the properties of thread.	BTL 2	Understand
2	**Give** the different states in thread.	BTL 2	Understand
3	**Why s**ynchronization is required in thread?	BTL 1	Remember
4	**Write about** any four thread constructor.	BTL 2	Understand
5	**What** is the need for thread?	BTL 1	Remember
6	**List** the importance of thread constructor.	BTL 1	Remember
7	**Give** the idea to achieve thread synchronization in Java.	BTL 2	Understand
8	**Define** multithreading.	BTL 1	Remember
9	**Give** the life cycle of thread.	BTL 2	Understand
10	How do we set priorities for threads?	BTL 2	Understand
11	**List** the methods related to Daemon thread.	BTL 1	Remember
12	What is the use of notify methods in multithreading?	BTL 1	Remember
13	**Give** some real life situations that illustrate the use of multithreading.	BTL 2	Understand
14	Why do we need run() and start() method in Thread handling? Can ,we achieve it with only run method.	BTL 1	Remember

15	**What** are the parts of synchronizers that are often needed?		BTL 1	Remember
16	**Give** the methods used for inter thread communication.		BTL 2	Understand
17	**Classify** what are three ways in which a thread can enter the waiting state.		BTL 2	Understand
18	What is daemon thread and which method is used to create the daemon thread?		BTL 1	Remember
19	**Differentiate** between yielding and sleeping.		BTL 2	Understand
20	**W**hat is thread group?		BTL 1	Remember
21	How the interthread communication is done?		BTL 1	Remember
22	**Give** the use of notify and notifyAll() methods in java.		BTL 2	Understand
23	**Give** the constructors of ThreadGroup Class.		BTL 2	Understand
24	**Compare** the Daemon threads and non-Daemon threads.		BTL 2	Understand
	PART-B			
1	**Describe i**n detail about multithread programming with example.	(13)	BTL 5	Evaluate
2	(i)**Differentiate** multithreading and multitasking. (ii)**Describe** the properties of thread in detail.	(7) (6)	BTL 4	Analyze
3	**Summarize** the two types of thread implementation supported by Java. Give example.	(13)	BTL 5	Evaluate
4	(i)**Illustrate** the concept of synchronization in thread. (ii)**Write** a Java code for reader writers problem.	(7) (6)	BTL 3	Apply
5	**Describe** how to implement runnable interface for creating and starting threads with an example program.	(13)	BTL 4	Analyze
6	(i)**Explain** what is inter-thread communication? List out the methods used for it. (ii)**Explain** inter-thread communication using producer consumer problem.	(7) (6)	BTL 4	Analyze
7	**Summarize** the following (i)Thread priorities. (ii)Daemon thread.	 (7) (6)	BTL 5	Evaluate
8	**Explain** the following (i)States of a thread with a neat diagram. (ii)Explain how threads are created in Java.	 (7) (6)	BTL 4	Analyze
9	**Develop** a program to create threads in java by extending thread class.	(13)	BTL 6	Create
10	**Describe the** lifecycle of thread in Java with an example	(13)	BTL 4	Analyze
11	(i)**Analyze** Daemon thread and its properties. (ii)Write a program to implement the Daemon thread.	(7) (6)	BTL 4	Analyze
12	**Describe** the Concept of thread group class and its methods with an example program.	(13	BTL 5	Evaluate
13	**Illustrate** thread synchronization in detail with an example program.	(13)	BTL 3	Apply
14	S**ummarize** thread group. How to implement the thread group. Explain it with example.	(13)	BTL 5	Evaluate
15	Write a java Program to implement the producer consumer problem using synchronization.	(13)	BTL 3	Apply
16	**Discuss** the methods used for interthread communication with an	(13)	BTL 5	Evaluate

	example program.		
17	**Explain** the multithreading and multitasking in java. (7) Discuss the advantages and disadvantages of Multithreading in java. (6)	BTL 5	Evaluate
	PART C		
1	**Generalize** multithreading for an sample sequence of strings with a delay of 1000 millisecond for displaying it using Java threads. (15)	BTL 6	Create
2	**Construct** a Java program to perform the following tasks using three different threads. Each thread will be responsible for its own task only. Among these three threads one will find the average number of the input numbers, one will be responsible for finding the Maximum number from the input array of numbers, and one will be responsible for finding the Minimum number from the input array of numbers. (15)	BTL 5	Evaluate
3	**Develop** a Java Application to create a list of numbers and then sort in ascending order as well as descending order simultaneously. (15)	BTL 6	Create
4	Write a Java program using the thread function yield(), stop() and sleep methods (15)	BTL 5	Evaluate
5	**Explain** the concept of readers writers' problem and implement the concept using the suitable class and methods available in Java (15)	BTL 5	Evaluate
	UNIT V		
	Graphics programming - Frame – Components - working with 2D shapes - Using color, fonts, and images - Basics of event handling - event handlers - adapter classes - actions - mouse events - AWT event hierarchy.		
	PART-A		
Q.No	**Questions**	**BT Level**	**Competence**
1	**List** out some system colors available in Java and their purpose.	BTL 1	Remember
2	**Give** the class hierarchy for Panel and Frame.	BTL 2	Understand
3	**Give** the steps needed to show a Frame.	BTL 2	Understand
4	**Write** the function of i. SetIcon Image ii.SetResizable	BTL 2	Understand
5	**List** the various methods available for drawing polygons and ellipses.	BTL 1	Remember
6	**Name** any four event of a button component.	BTL 1	Remember
7	**List** the various mouse events supported by Java.	BTL 1	Remember
8	**Select a** suitable method can be used for changing case of characters.	BTL 2	Understand
9	**Give** the AWT Event class.	BTL 2	Understand
10	**Why** AWT is platform independent?	BTL 1	Remember
11	What is an event and what are the models available for event handling?	BTL 2	Understand
12	**List** the difference between scrollbar and scroll pane.	BTL 1	Remember
13	**Differentiate** between a Choice and a List.	BTL 2	Understand
14	**Quote** how can you create your own GUI components.	BTL 1	Remember

15	What is the purpose of the enableEvents() method?		BTL 1	Remember
16	**Write** a program to print the names of all fonts on your system.		BTL 2	Understand
17	**Show** the methods of frame class.		BTL 2	Understand
18	**Construct** the structure of AWT Event Hierarchy.		BTL 1	Remember
19	**Give** the useful methods of components class.		BTL 2	Understand
20	What method can be used for changing font of characters?		BTL 1	Remember
21	**Express** the different ways to create a GUI using frames in AWT.		BTL 2	Understand
22	**Give** the advantages of adapter class.		BTL 2	Understand
23	**List** any five events and its eventlistener.		BTL 1	Remember
24	How will you create TextArea object and TextField object?		BTL 1	Remember
	PART-B			
1	**Describe** in detail about working with 2D shapes in Java.	(13)	BTL 5	Evaluate
2	**Describe** in detail about frame class and its methods with an example program	(13)	BTL 4	Analyze
3	**Summarize** in detail about graphics programming.	(13)	BTL 5	Evaluate
4	(i)**Discuss** about the types of component class and its import methods (ii)**Discuss** about button component with an example program.	(8) (5)	BTL 4	Analyze
5	What is meant by event handling? **Analyze** and write a simple calculator using mouse events that restrict only addition, subtraction, multiplication and division.	(13)	BTL 4	Analyze
6	llustrate in detail about 2D Geometric primitives with an example program	(13)	BTL 3	Apply
7	Illustrate in detail about the color and font classes in java with an example program.	(13)	BTL 3	Apply
8	**Evaluate** with an example program and discuss in detail about Mouse listener and Mouse Motion Listener.	(13)	BTL 5	Evaluate
9	(i) **Formulate** the methods available in graphics for Color. (i) **Create** different kind of fonts using font class in java.	(7) (6)	BTL 6	Create
10	**Illustrate** the image class and methods with a suitable example program.	(13)	BTL 3	Apply
11	(i) **Explain** on AWT Event Hierarchy (ii)**Explain** about Semantic and Low-Level Events	(7) (6)	BTL 4	Analyze
12	**Show** the creating Frame Window by initiating and extending frame class	(13)	BTL 3	Apply
13	(i)**Give t**he types of adjustment events in scrollbar. (ii)**Discuss** and write a program to demonstrate the usage of Scroll bar.	(7) (6)	BTL 4	Analyze
14	**Demonstrate** the methods used to create following with an example program (i)Lines and Rectangle (ii)Oval and Polygon	(7) (6)	BTL 3	Apply
15	How event handling works in AWT Control?.Explain it with an example program.	(13)	BTL 4	Analyze
16.	**Summarize** the components class and clearly explain its various methods.	(13)	BTL 5	Evaluate
17	Discuss in detail about adapter class and its methods with an	(13)	BTL 5	Evaluate

	example program.		
	PART C		
1	**Develop** a Java program to implement the following (15) 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 displayed and updated.	BTL 6	Create
2	Develop a Java program to display the following picture as output. (15) 	BTL 6	Create
3	**Construct** a Java program for event handling using actionlistener interface (15) 	BTL 5	Evaluate
4	Write an AWT GUI Application. Each time the "Count" button is clicked, the counter value will be increased by 1. (15)	BTL 5	Evaluate
5	**Develop** a java program to implement a 3 frame in a window .In each frame create rectangle and fill each with color, texture and gradient (15)	BTL 6	Create