



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

INFORMATION TECHNOLOGY

Tutorial Question Bank

Course Name	:	JAVA PROGRAMMING
Course Code	:	A40503
Class	:	II B. Tech II Semester
Branch	:	Information Technology
Year	:	2016 – 2017
Course Faculty	:	Mr. G Chandra Sekhar, Assistant Professor

OBJECTIVES

To meet the challenge of ensuring excellence in engineering education, the issue of quality needs to be addressed, debated and taken forward in a systematic manner. Accreditation is the principal means of quality assurance in higher education. The major emphasis of accreditation process is to measure the outcomes of the program that is being accredited.

In line with this, Faculty of Institute of Aeronautical Engineering, Hyderabad has taken a lead in incorporating philosophy of outcome based education in the process of problem solving and career development. So, all students of the institute should understand the depth and approach of course to be taught through this question bank, which will enhance learner's learning process.

S. No	Question	Blooms Taxonomy Level	Course Outcome
UNIT - I			
PART – A (Short Answer Questions)			
1	Define OOP?	Remembering	1,2,3
2	Distinguish between procedural language and OOPs?	Analyzing	1,2,3
3	Define Encapsulation?	Remembering	1,2,3
4	Define Inheritance?	Remembering	1,2,3
5	Define Polymorphism?	Remembering	1,2,3
6	List advantages of OOP?	Remembering	1,2,3
7	List disadvantages of OOP?	Remembering	1,2,3
8	Explain briefly out history of java?	Understanding	1,2,3
9	Explain briefly about different types of data types in java?	Understanding	1,2,3
10	What is constant? Explain different types of constants?	Remembering	1,2,3
11	What is Variable? Describe scope and life time of variables?	Remembering	1,2,3

S. No	Question	Blooms Taxonomy Level	Course Outcome
12	List and describe different types of operators?	Remembering	1,2,3
13	Define type conversion?	Remembering	1,2,3
14	Define type casting?	Remembering	1,2,3
15	Define enumerated types?	Remembering	1,2,3
16	Define an array?	Remembering	1,2,3
17	Define this reference?	Remembering	1,2,3
18	Define constructor?	Remembering	1,2,3
19	Define recursion?	Remembering	1,2,3
20	Define garbage collection?	Remembering	1,2,3
PART – B (Long Answer Questions)			
1	Discuss the various characteristics of object oriented programming concepts?	Creating	1,2,3
2	Explain briefly about the features (buzzwords) of Java.	Understanding	1,2,3
3	Compare various differences between Java and C++.	Understanding	1,2,3
4	Why Java is a pure object oriented programming language	Remembering	1,2,3
5	Distinguish between procedure oriented and object oriented programming.	Analyzing	1,2,3
6	Explain the importance of this keyword in java with an example program	Understanding	1,2,3
7	What is method overloading? Explain with an example program	Remembering	1,2,3
8	Discuss about the method overloading and constructor overloading with an example.	Creating	1,2,3
9	What is Array? Explain different types of array and also discuss its advantages.	Remembering	1,2,3
10	Explain briefly about String class and discuss various methods in String class with an example.	Understanding	1,2,3
11	Explain about the console input and output with an example.	Understanding	1,2,3
12	What is a conditional statements? Discuss various types with examples.	Remembering	1,2,3
13	Explain the different types of constructors in java.	Understanding	1,2,3
14	What is the use of break and continue statements in java? Explain with an example.	Remembering	1,2,3
15	What is comment? Explain the different types of comments that are used in java.	Remembering	1,2,3
16	What is the use of the operators in java? Explain with an example.	Remembering	1,2,3
17	Define static field and method? Explain with an example.	Remembering	1,2,3
18	What are the different types of operators present in java? Explain	Remembering	1,2,3
19	What is type conversion and casting? Explain with an example.	Remembering	1,2,3
20	Explain each of the primitive datatypes present in java? Discuss in detail.	Understanding	1,2,3
21	Discuss about various techniques of parameter passing with an example program.	Remembering	4

PART – C (Problem Solving and Critical Thinking Questions)			
1	<p>Student john12 = new Student(1001, "John", 12); Student john13 = new Student(1002, "John", 13);</p> <p>System.out.println("comparing John, 12 and John, 13 with compareTo :" + john12.compareTo(john13));</p> <p>then predict the output of the code?</p>	Understand	1,2,3
2	<p>What is the output of the program? class Lifetime</p> <pre> { public static void main(String args[]) { int x; for (x=0; x<3; x++) { int y=-1; System.out.println(" y is :"+ y); y=100; System.out.println(" y is now : "+ y); }} </pre>	Understand	1,2,3
3	<p>What will be the output of the program?</p> <pre> public class If2 { static boolean b1, b2; public static void main(String [] args) { int x = 0; if (!b1) { if (!b2) { b1 = true; x++; if (5 > 6) { x++; } if (!b1) x = x + 10; else if (b2 = true) x = x + 100; else if (b1 b2) x = x + 1000; } } System.out.println(x); </pre>	Understand	1,2,3

4	<p>Explain the following code legal in Java? is it example of method overloading or overriding?</p> <pre>public String getDescription(Object obj){ return obj.toString; } public String getDescription(String obj){ return obj; } and public void getDescription(String obj) { return obj; }</pre>	Understand	1,2,3
5	<p>Analyze the following program and find the output of the program?</p> <pre>public class CounterAtomic { private AtomicLong counter = new AtomicLong(); public void increment() { counter.incrementAndGet(); } public long get() { return counter.get(); } }</pre>	Analyze	1,2,3
6	<p>What will be the output of the program?</p> <pre>public class Test { public int aMethod() { static int i = 0; i++; return i; } public static void main(String args[]) { Test test = new Test(); test.aMethod(); int j = test.aMethod(); System.out.println(j); } }</pre>	Remembering	1,2,3

7	<p>What will be the output of the program?</p> <pre> public class Test { public static void main(String args[]) { int i = 1, j = 0; switch(i) { case 2: j += 6; case 4: j += 1; default: j += 2; case 0: j += 4; } System.out.println("j = " + j); } } </pre>	Remembering	1,2,3
8	<p>Analyze the following program and find the output of the program?</p> <pre> Class Test { public static void main(String args[]) { int x, y; y=20; for(x=0; x<10: x++) { System.out.println("this is x:" +x); System.out.println("this is y:" +y); y= y-2; } } } </pre>	Analyze	1,2,3
9	<p>What will be the output of the program?</p> <pre> class BitShift { public static void main(String [] args) { int x = 0x80000000; System.out.print(x + " and "); x = x >>> 31; System.out.println(x); } } </pre>	Remembering	1,2,3

10	Analyze and find out What will be the problem in the program? <pre> class Equals { public static void main(String [] args) { int x = 100; double y = 100.1; boolean b = (x = y); System.out.println(b); } } </pre>	Analyze	1,2,3
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UNIT - II

PART – A (Short Answer Questions)

1	Define Inheritance?	Understand	4
2	List types of inheritances in java?	Remembering	4
3	What are Member access rules in java?	Remembering	4
4	Explain the Uses of “Super” keyword	Understanding	4
5	Explain the Uses „final” keyword with inheritance	Understanding	4
6	What is Object class?	Understand	4
7	What is abstract class?	Remembering	4
8	Define polymorphism?	Remembering	4
9	Define dynamic binding?	Remembering	4
10	Define method overriding?	Remembering	4
11	Compare and Contrast differences between interfaces vs Abstract classes.	Understanding	4
12	Define interface?	Remembering	4
13	What is an inner class?	Understanding	4
14	Define static inner classes.	Remembering	4
15	What is package?	Remembering	4
16	Define various steps for creating and importing packages.	Understanding	4
17	What are abstract methods?	Remembering	4
18	What is CLASSPATH?	Remembering	4
19	List advantages of inheritance?	Remembering	4
20	How we implement an interface. Explain.	Remembering	4

PART – B (Long Answer Questions)

1	What is Inheritance? Discuss its uses and Hierarchical abstractions?	Remembering	4
2	List different types of inheritances in java? Explain each of them in detail with an example programs.	Remembering	4
3	Discuss about Object class and its methods.	Creating	4
4	Explain the Usage of “Super” keyword, with an example program.	Understanding	4
5	What is package? Explain different types of Packages.	Remembering	4
6	Compare various differences between interfaces and abstract class.	Understanding	4
7	What is dynamic binding? Explain with an example?	Remembering	4
8	Define method overriding? Write with an example?	Remembering	4
9	Explain the usage of abstract classes and methods? With an example programs.	Remembering	4

10	Discuss how interfaces are defined and implemented.	Remembering	4
11	Explain the uses of inner classes and local inner classes. With an example?	Understanding	4
12	Discuss in detail about creating and importing packages with an examples.	Creating	4
13	Discuss in detail how packages can be defined, creating and accessed.	Creating	4
14	How interfaces can be extended? Explain.	Understanding	4
15	What is interface? Write Differences between classes and interfaces?	Remembering	4
16	What is final keyword? Explain its importance in java with an example program.	Understand	4
17	What is inheritance? Explain the benefits of inheritance with an example	Remembering	4
18	What are various Member access rules explain with an example.	Remembering	4
19	Discuss the various levels of Access protection available for packages and their implications.	Creating	4
20	Compare and Contrast overloading and overriding methods.	Remembering	4

PART – C (Problem Solving and Critical Thinking Questions)

1	Analyze the program and give output <pre> public class Foo { Foo() { System.out.print("foo"); } class Bar { Bar() { System.out.print("bar"); } public void go() { System.out.print("hi"); } } /* class Bar ends */ public static void main (String [] args) { Foo f = new Foo(); f.makeBar(); } void makeBar() { (new Bar() {}).go(); } } /* class Foo ends */ </pre>	Analyzing	4
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2	<p>Explain the following code legal in Java?</p> <pre> class OuterClass { private int privInt = 10; public void createInnerClass() { InnerClass inClass = new InnerClass(); inClass.accessOuter(); } class InnerClass { public void accessOuter() { System.out.println("The outer class's privInt is " + privInt); } } } public static void main(String[] args) { OuterClass outClass = new OuterClass(); OuterClass.InnerClass inner = outClass.new InnerClass(); inner.accessOuter(); } </pre>	Understanding	4
3	<p>Analyze the following program and find the output of the program?</p> <pre> class A { //Members and methods declarations. } class B extends A { //Members and methods from A are inherited. //Members and methods declarations of B. } class A { public A() { System.out.println("New A"); } } class B extends A { public B() { super(); System.out.println("New B"); } } </pre>	Analyze	4

4	<p>Illustrate the output of the following program?</p> <pre> interface MyInterface { public void method1(); public void method2(); } class XYZ implements MyInterface { public void method1() { System.out.println("implementation of method1"); } public void method2() { System.out.println("implementation of method2"); } public static void main(String arg[]) { MyInterface obj = new XYZ(); obj.method1(); } } </pre>	Applying	4
5	<p>What is the output of the program?</p> <pre> Class A { final public int GetResult(int a, int b) { return 0; } } class B extends A { public int GetResult(int a, int b) {return 1; } } public class Test { public static void main(String args[]) { B b = new B(); System.out.println("x = " + b.GetResult(0, 1)); } } </pre>	Remembering	4

6	<p>What will be the output of the program?</p> <pre> class Super { public int i = 0; public Super(String text) { i = 1; } } class Sub extends Super { public Sub(String text) { i = 2; } public static void main(String args[]) { Sub sub = new Sub("Hello"); System.out.println(sub.i); } } </pre>	Remembering	4
7	<p>What will be the output of the program?</p> <pre> interface Count { short counter = 0; void countUp(); } public class TestCount implements Count { public static void main(String [] args) { TestCount t = new TestCount(); t.countUp(); } public void countUp() { for (int x = 6; x>counter; x--, ++counter) { System.out.print(" " + counter); } } } </pre>	Remembering	4

8	<p>Analyze and find out the output of the program?</p> <pre> public class Test { public int aMethod() { static int i = 0; i++; return i; } public static void main(String args[]) { Test test = new Test(); test.aMethod(); int j = test.aMethod(); System.out.println(j); } } </pre>	Analyze	4
9	<p>Develop a Java Program to create an abstract class named Shape that contains two integers and an empty method named printArea(). 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.</p>	Applying	4
10	<p>Analyze and find out the output of the program?</p> <pre> package mypack; class Book { String bookname; String author; Book(String b, String c) { this.bookname = b; this.author = c; } public void show() { System.out.println(bookname+" "+ author); } } class test { public static void main(String[] args) { Book bk = new Book("java","Herbert"); bk.show(); } } </pre>	Analyze	4

UNIT - III

PART – A (Short Answer Questions)

1	Define Exception?	Remembering	5,6
2	Distinguish between exception and error?	Analyzing	5,6
3	What are the benefits of exception handling	Remembering	5,6
4	Explain the classification of exceptions.	Understanding	5,6
5	Define checked exceptions?	Remembering	5,6
6	Define unchecked exceptions?	Remembering	5,6
7	Define built in exceptions?	Remembering	5,6
8	Explain the usage of try and catch	Understanding	5,6
9	Explain the usage of throw, throws and finally.	Understanding	5,6
10	Distinguish between throw and throws?	Analyzing	5,6
11	Distinguish between process and thread?	Analyzing	5,6
12	What are thread states? Explain.	Remembering	5,6
13	What are the different ways to create a thread?	Remembering	5,6
14	Define producer consumer problem?	Remembering	5,6
15	Define inter-thread communication?	Remembering	5,6
16	How threads are synchronized?	Remembering	5,6
17	What are different thread priorities	Remembering	5,6
18	How many ways can thread be Created?	Understanding	5,6
19	Explain about the alive() and join() method	Understanding	5,6
20	Explain about “thread class implements Runnable interface”.	Understanding	5,6

PART – B (Long Answer Questions)

1	What is an exception? Explain how an exception can be handled in Java? And also list the benefits of Exception Handling.	Understanding	5,6
2	What are try, catch, and finally keywords in with an example	Remembering	5,6
3	Explain the usage of throw keyword? Write with an example	Understanding	5,6
4	Define the usage of throws keyword in exception handling? Explain with an example program.	Remembering	5,6
5	Define a exception called “NotEqualException” that is thrown when a float value is not equal to 3.14. Write a java program that uses the above user defined exception.	Remembering	5,6
6	Differentiate between Checked and Unchecked exceptions?	Remembering	5,6
7	Explain the process of creating an own exception subclass with an example.	Understanding	5,6
8	Develop a java program to implement built in exceptions?	Apply, Create	5,6
9	Explain the various ways of creation of thread with an examples.	Understanding	5,6
10	What is multithreading? Explain.	Remembering	5,6
11	What is a thread? Explain the states of a thread with an example.	Remembering	5,6
13	Distinguish between multi-tasking and multi-threading	Analyzing	5,6
15	Explain in detail the process of creating thread with an example	Understanding	5,6
16	How do we set priorities for threads? Explain.	Understanding	5,6

17	What is synchronization? Explain with an example program.	Remembering	5,6
18	Discuss about producer consumer pattern with an example.	Creating	5,6
19	How is interthread communication achieved? Give an example.	Remembering	5,6
20	Explain the advantages of multithreading.	Understanding	5,6
PART – C (Problem Solving and Critical Thinking Questions)			
1	<p>What will be the output of the program?</p> <pre> public class X { public static void main(String [] args) { try { badMethod(); System.out.print("A") ; } catch (Exception ex) { System.out.print("B"); } finally { System.out.print("C"); } System.out.print("D"); } public static void badMethod() { throw new Error(); } } </pre>	Remembering	5,6

2	<p>Analyze the program and find the output ?</p> <pre> public class Test { public static void aMethod() throws Exception { try { throw new Exception(); } finally { System.out.print("finally "); } } public static void main(String args[]) { try { aMethod(); } catch (Exception e) { System.out.print("exception "); } System.out.print("finished"); } } </pre>	Analyzing	5,6
3	<p>What will be the output of the program?</p> <pre> class s1 implements Runnable { int x = 0, y = 0; int addX() { x++; return x;} int addY() {y++; return y;} public void run() { for(int i = 0; i < 10; i++) System.out.println(addX() + " " + addY()); } public static void main(String args[]) { s1 run2 = new s1(); Thread t1 = new Thread(run1); Thread t2 = new Thread(run2); t1.start(); t2.start(); } } </pre>	Remembering	5,6

4	<p>Explain the output of the following program?</p> <pre> class Exceptions { public static void main(String[] args) { String languages[] = { "C", "C++", "Java", "Perl", "Python" }; try { for (int c = 1; c <= 5; c++) { System.out.println(languages[c]); } } catch (Exception e) { System.out.println(e); } } } </pre>	Evaluated	5,6
5	<p>What is the output of the below program?</p> <pre> class Allocate { public static void main(String[] args) { try { long data[] = new long[1000000000]; } catch (Exception e) { System.out.println(e); } finally { System.out.println("finally block will execute always."); } } } </pre> <p>then predict the output?</p>	Remembering	5,6
6	<p>What will be the output of the program?</p> <pre> class MyThread extends Thread { public static void main(String [] args) { MyThread t = new MyThread(); Thread x = new Thread(t); x.start(); } public void run() { for(int i = 0; i < 3; ++i) { System.out.print(i + ".."); } } } </pre>	Analyzing	5,6

7	<p>What will be the output of the program?</p> <pre> public class RTEExcept { public static void throwit () { System.out.print("throwit "); throw new RuntimeException(); } public static void main(String [] args) { try { System.out.print("hello "); throwit(); } catch (Exception re) { System.out.print("caught "); } finally { System.out.print("finally "); } System.out.println("after "); } } </pre>	Remembering	5,6
8	<p>Analyze the program and find the output</p> <pre> public class NFE { public static void main(String [] args) { String s = "42"; try { s = s.concat(".5"); double d = Double.parseDouble(s); s = Double.toString(d); int x = (int) Math.ceil(Double.valueOf(s).doubleValue()); System.out.println(x); } catch (NumberFormatException e) { System.out.println("bad number"); } } } </pre>	Analyzing	5,6

9	<p>What will be the output of the program?</p> <pre>class MyThread extends Thread { MyThread() { System.out.print(" MyThread"); } public void run() { System.out.print(" bar"); } public void run(String s) { System.out.println(" baz"); } } public class TestThreads { public static void main (String [] args) { Thread t = new MyThread() { public void run() { System.out.println(" foo"); } } t.start(); } }</pre>	Remembering	5,6
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10	<p>What will be the output of the program?</p> <pre> class implements Runnable { int x, y; public void run() { for(int i = 0; i < 1000; i++) synchronized(this) { x = 12; y = 12; } System.out.print(x + " " + y + " "); } } public static void main(String args[]) { s run = new s(); Thread t1 = new Thread(run); Thread t2 = new Thread(run); t1.start(); t2.start(); } } </pre>	Remembering	5,6
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UNIT - IV

PART – A (Short Answer Questions)

1	Define collections?	Remembering	7,8
2	Define Java collection Frame work.	Remembering	7,8
3	Define Array List with syntax	Remembering	7,8
4	Define Vector with syntax.	Remembering	7,8
5	Define hash table with syntax.	Remembering	7,8
6	Define stack with syntax.	Remembering	7,8
7	Define enumeration with syntax.	Remembering	7,8
8	What is Iterator?	Remembering	7,8
9	Explain the function of StringTokenizer.	Understandin	7,8
10	Define random class.	Remembering	7,8
11	Define Scanner class.	Remembering	7,8
12	Define Calendar class.	Remembering	7,8
13	Define Properties class	Remembering	7,8
14	Define Stream?	Remembering	7,8
15	Define byte stream?	Remembering	7,8
16	Define character stream?	Remembering	7,8
17	Define text input/output file?	Remembering	7,8
18	Define JDBC?	Remembering	7,8
19	List types of JDBC drivers.	Understand	7,8
20	Define random access file?	Understand	7,8

PART – B (Long Answer Questions)

1	Explain the concept of Java collection frame. Write a brief overview on it.	Understanding	7,8
2	Explain the concept of generics and generic collections in java.	Understanding	7,8
3	Explain briefly about Vector class with an example.	Understanding	7,8

4	What is hash table? Explain with an example?	Remembering	7,8
5	Demonstrate about stack class with an example.	Understanding	7,8
6	What is enumeration? Explain about with an example.	Remembering	7,8
7	Explain briefly about iterator with an example.	Understanding	7,8
8	Discuss about StringTokenizer class. Explain with an example.	Remembering	7,8
9	Explain in detail about Random class with an example.	Understanding	7,8
10	What is Scanner class? Explain with an example.	Remembering	7,8
11	Explain in detail Calendar class with an example.	Understanding	7,8
12	What are text input/output file operations? Explain	Remembering	7,8
13	Explain in details about binary input/output file operations with examples.	Understanding	7,8
14	Discuss the concept of Random access file. Also explain its operations.	Remembering	7,8
15	How a file can be managed using file class? Explain.	Understanding	7,8
16	Distinguish between a)InputStream and Reader classes b)OutputStream and Writer Classes	Understanding	7,8
17	Explain in detail about the types of drivers in JDBC.	Understanding	7,8
18	Discuss the process of connecting to database using JDBC.	Creating	7,8
19	Develop a JDBC application for updating data.	Applying	7,8
20	Explain the process of getting/accessing metadata for a resultset.	Understanding	7,8

PART – C (Problem Solving and Critical Thinking Questions)

1	<p>What will be the output of the program?</p> <pre> package foo; import java.util.Vector; private class MyVector extends Vector { int i = 1; public MyVector() { i = 2; } } public class MyNewVector extends MyVector { public MyNewVector () { i = 4; } public static void main (String args []) { MyVector v = new MyNewVector(); } } </pre>	Remembering	7,8
2	<p>Analyze the following program and find the output of the program?</p> <pre> public class Test { public static void main(String[] args) { System.out.println(Math.min(Double.MIN_VALUE, 0.0d)); } } </pre>	Analyzing	7,8

3	<p>Find the output of the program.</p> <pre>import java.util.*; class I { public static void main (String[] args) { Object i = new ArrayList().iterator(); System.out.print((i instanceof List)+","); System.out.print((i instanceof Iterator)+","); System.out.print(i instanceof ListIterator); } }</pre>	Remembering	7,8
4	<p>Compare the output before adding and after adding?</p> <pre>import java.util.*; public class ArrayListExample { public static void main(String args[]) { ArrayList<String> obj = new ArrayList<String>(); obj.add("Ajeet"); obj.add("Harry"); System.out.println("Currently the array list has following elements:"+obj); obj.add(0, "Rahul"); obj.add(1, "Justin"); obj.remove("Chaitanya"); obj.remove("Harry"); System.out.println("Current array list is:"+obj); obj.remove(1); System.out.println("Current array list is:"+obj); } }</pre>	Remember	7,8
5	<p>What is the output of the following program</p> <pre>import java.util.*; public class ArrayListExample { public static void main(String args[]) { ArrayList<String> a1 = new ArrayList<String>(); a1.add(1); a1.add(2); a1.add(3); a1.add(4); System.out.println("Current array list is:"+a1); Integer ia[]= new Integer [a1.size()]; ia= a1.toArray(ia); int sum=0; for (int i : ia) sum += i; System.out.println("Sum is:"+sum) } }</pre>	Remembering	7,8

6	<p>Analyze the program and explain the importance of line 1 and give the output</p> <pre> import java.util.StringTokenizer; class Stdemo { Static String in= "title= java : the complete reference" + "author= schildt" + "publisher= Osborne/mcgraw-hill " + "copyright= 2005"; public static void main(String args[]) { String key= st.nextToken(); ----- 1 String val= st.nextToken(); System.out.println(key + "\t" + val); } } </pre>	Analyzing	7,8
7	<p>What is the output of the below program?</p> <pre> import java.io.*; class BRRead { public static void main(String args[]) throws IOException { char c; { BufferedReader br= new BufferedReader(new InputStreamReader (System.in)); System.out.println("enter characters, ,,q" to quit."); Do { c= (char) br.read(); System.out.println(c); While(c != "q"); } } } } </pre>	Remembering	7,8
8	<p>Analyze the program and give the output and also explain the importance of hasNext() and next() methods.</p> <pre> import java.util.*; class Findlinedemo { public static void main(String args[]) { String s="Name: Tom Age: 28 Id: 77"; Scanner sc= new Scanner(s); sc.findInLine ("Age"); if(sc.hasNext()) Syste.out.println(sc.next()) ; else Syste.out.println("error"); } } </pre>	Analyze	7,8

9	<p>What is the output of the below program?</p> <pre>import java.io.*; class HTdemo { public static void main(String args[]) { Hashtable< String, Double> balance= Hashtable< String, Double>(); Enumeration<String> names; String str; double bal; balance.put("abc" 3435.35); balance.put("abc" 1254.35); names= balance.keys(); while(names.hasMoreElements()) { Str= names.nextElement(); System.out.println(str + " : " + balance.get(str); } System.out.println(); }</pre>	Remembering	7,8
10	<p>Analyze the below program and give the output of the following program?</p> <pre>import java.util.Scanner; class Division { public static void main(String[] args) { int a, b, result; Scanner input = new Scanner(System.in); System.out.println("Input two integers"); a = input.nextInt(); b = input.nextInt(); result = a / b; System.out.println("Result = " + result); } }</pre>	Analyze	7,8
UNIT - V			
PART – A (Short Answer Questions)			
1	Define AWT class hierarchy?	Remembering	9,10
2	Distinguish between swings Vs AWT?	Analyzing	9,10
3	Explain the hierarchy for swing?	Understanding	9,10
4	List the components of swing.	Remembering	9,10
5	What is an event?	Remembering	9,10
6	Define Applet.	Remembering	9,10
7	What are the event sources?	Remembering	9,10
8	Define Jbutton, JLabel, JTextField and JTextArea?	Remembering	9,10
9	Define Layout management?	Remembering	9,10
10	List Layout manager types – border and grid flow?	Remembering	9,10
11	Explain about Events, Event sources, Event classes	Understanding	9,10
12	Explain about Event Listeners.	Understanding	9,10

13	Compare and contrast the relationship between Event sources and Listeners?	Understanding	9,10
14	Define Delegation event model?	Remembering	9,10
15	Explain various events for handling a button click?	Understanding	9,10
16	Explain various events for handling mouse events?	Understanding	9,10
17	Define adapter class?	Remembering	9,10
18	Distinguish between applet and application?	Analyzing	9,10
19	List the methods of the applet	Remembering	9,10
20	Describe applet security issues?	Understand	9,10
PART – B (Long Answer Questions)			
1	Explain in detail about the classification of swing components.	Understanding	9,10
2	Explain in detail about AWT class hierarchy.	Understanding	9,10
3	Discuss in detail about types of Layout management?	Creating	9,10
4	Develop a java program for handling a button clicks?	Applying	9,10
5	Develop a java program to illustrate mouse related events?	Applying	9,10
6	Explain in brief about Events, Event sources and Event classes.	Understanding	9,10
7	What is event listener? Explain.	Understanding	9,10
8	Develop a java program for simple applet?	Applying	9,10
9	Develop a java program for passing parameters to applet?	Applying	9,10
10	Develop an applet that receives an integer in one text field and computes its factorial value and returns it in another text field, when the button named “compute” is clicked	Applying	9,10
11	Explain briefly about Adapter classes.	Understanding	9,10
12	What is the importance of Delegation Event Model on Event Handling?	Remembering	9,10
13	Distinguish various differences between Swing and AWT.	Analyzing	9,10
14	Compare and Contrast differences between applets and applications	Understanding	9,10
15	What is Applet? Write in detail about life cycle of an applet.	Remembering	9,10
16	What are various security issues of applet.	Remembering	9,10
PART – C (Problem Solving and Critical Thinking Questions)			
1	Predict the output using below code and what happens if below code is not used in GUI programs? <pre>public void windowClosing(WindowEvent e) { dispose(); System.exit(0); }</pre>	Understand	9,10
2	Explain the below code and mention its important <pre>Public void actionPerformed(ActionEvent e) { it(e.getSource()== b1)---Assume b1 is variable of button { int x= Integer.parseInt(t1.getText()) ---- Assume t1 is variable of textfield int y= Integer.parseInt(t2.getText()) ---- Assume t2 is variable of textfield int sum= X+Y; t3.setText(""+sum); ---- Assume t3 is variable of textfield } }</pre>	Understanding	9,10

3	<p>What is the output the program</p> <pre>import java.awt.*; import java.swing.*; /* < applet code= "Jlabeldemo" width= 200 height =200> </applet> */ public class JLabeldemo extends JApplet { ImageIcon i= new ImageIcon(" india.gif"); JLabel ji=new JLabel(" INDIA" , I , JLabel.CENTER); add(ji); } }</pre>	Remembering	9,10
4	<p>Explain the output of the following program?</p> <pre>import java.applet.*; import java.awt.*; public class Main extends Applet{ public void paint(Graphics g){ g.drawString("Welcome in Java Applet.",40,20); } } <HTML> <HEAD> </HEAD> <BODY> <div > <APPLET CODE="Main.class" WIDTH="800" HEIGHT="500"> </APPLET> </div> </BODY> </HTML></pre>	Evaluated	9,10
5	<p>Explain the usage of the following code?</p> <pre>public void actionPerformed(ActionEvent ae){ try{ num = Integer.parseInt(input.getText()); sum = sum+num; input.setText(""); output.setText(Integer.toString(sum)); lbl.setForeground(Color.blue); lbl.setText("Output of the second Text Box : " + output.getText()); } catch(NumberFormatException e){ lbl.setForeground(Color.red); lbl.setText("Invalid Entry!"); } }</pre>	Understanding	9,10

6	<p>Analyze the program and explain the importance 1 to 4 line and give the output.</p> <pre> import java.awt.*; class Frame1 extends Frame { Frame1() { setTitle("demo"); ----- 1 setSize(200,200); setVisible(true); ----- 2 setLayout(new FlowLayout()); Label l1= new Label("java"); Label l2= new Label("j2ee"); add(l1); ----- 3 add(l2); ----- 4 } } Class Labeldemo { Public static void main(String args()); { Frame1 f= new Frame(); } } </pre>	Analyze	9,10
7	<p>What is the output the program</p> <pre> import java.awt.*; import java.applet.*; /* < applet code= "statusdemo.class" width= 200 height =200> </applet> */ public class satusdemo extends Applet { Public void init() { setBackground(Color.red); } Public void paint(Graphics g) { g.drawString("this is in the applet window" 10,20) showStatus("this is the status window message"); } } </pre>	Remembering	9,10

8	<p>Explain the usage of following line of code line by line.</p> <pre> Public void mouseClicked(MouseEvent me) { Mousex-=0; Mousey=10; Msg= "mouse clicked" Repaint(); } Public void mouseEntered(MouseEvent me) { Mousex-=0; Mousey=10; Msg= "mouse entered" Repaint(); } </pre>	Understanding	9,10
9	<p>What is the output of the program</p> <pre> import java.applet.Applet; import java.awt.*; public class Sms extends Applet { public void init() { } public void paint(Graphics g) { g.setColor(Color.blue); Font font = new Font("verdana", Font.BOLD, 15); g.setFont(font); g.drawString("Welcome To Aeronautical Eng College", 50,50); } } </pre>	Remembering	9,10
10	<p>What is the output the program and explain line 1 and 2.</p> <pre> import java.awt.*; import java.applet.*; /* < applet code= "GridLayoutDemo" width= 300 height =300> </applet> */ public class GridLayoutDemo extends Applet { static final int n=5; public void init() { setLayout(new GridLayout(n , n)); ----- 1 setFont (new Font ("SamsSerof", Font.BOLD, 24));---- 2 for (int j=0l j<n; j++) { int k= I * n + j; if(k>00) Add(new button (" " + k0; }}}} </pre>	Remembering	9,10

Prepared by: Mr. G Chandra Sekhar, Assistant Professor