



# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad -500 043

## COMPUTER SCIENCE AND ENGINEERING

### ASSIGNMENT

<b>Course Title</b>	<b>JAVA PROGRAMMING</b>			
<b>Course Code</b>	<b>A40503</b>			
<b>Regulation</b>	<b>R15-JNTUH</b>			
<b>Course Structure</b>	Lectures	Tutorials	Practicals	Credits
	4	-	-	4
<b>Course Coordinator</b>	Mr. P Ravinder Assistant Professor			
<b>Team of Instructors</b>	Mr. N.V Krishna Rao Associate Professor , Ms. K. Radhika 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	Programme Outcome
<b>UNIT – I</b>			
1	Describe about the Object Oriented Programming concepts.	Understand	1
2	What is the Difference between procedure oriented and object oriented programming paradigm?	Remembering	1
3	Explain briefly about History of JAVA.	Understanding	1
4	Explain briefly about different constants available in java.	Understanding	1
5	What is variable? Write briefly about different types of variables in Java	Remembering	1
6	Explain briefly about different parameter passing techniques in java	Understanding	1
7	What is garbage collection? Explain its usage	Remembering	1
8	Explain about static fields, constructors, methods with example programs	Understanding	1
9	Explain about type conversion and casting with example programs	Understanding	1
10	Describe about different operators and data types in java	Understand	1
<b>UNIT – II</b>			
1	<b>Describe</b> Inheritance? Discuss its uses, Hierarchical abstractions With an example.	Understand	2
2	<b>Describe</b> the types of inheritances in java? <b>Explain</b> each of them in detail.	Understand	2
3	<b>Explain</b> about Object class in detail.	Remember	2
4	<b>Explain</b> Uses of „Super“ keyword, discuss accessing the member of a super class	Remember	2
5	<b>Describe</b> a package? Discuss its advantages? <b>Explain</b> with example.	Remember	2

S. No.	Question	Blooms Taxonomy Level	Programme Outcome
6	<b>Explain</b> different Types of Packages. <b>Explain</b> in detail about Creating, importing packages.	Remember	2
7	<b>Describe</b> method overriding? <b>Explain</b> with an example?	Understand	2
8	<b>Describe</b> Abstract classes? <b>Explain</b> with an example? <b>Explain</b> final classes , methods and interfaces with an example	Understand	2
9	<b>Describe</b> interface? <b>Explain</b> with an example? <b>Explain</b> working procedure of CLASSPATH	Understand	4
10	<b>Describe</b> inner classes? <b>Explain</b> with an example? <b>Explain</b> Member access rules with an example.	Understand	2
<b>UNIT – III</b>			
1	<b>Explain</b> creation of thread using runnable interface with an example	Understand	6
2	<b>Write</b> a java program that implements a multi-thread application that has three threads. First thread generates random integer every 1 second and if the value is even, second thread computes the square of the number and prints. If the value is odd, the third thread will print the value of cube of the number.	Understand	6
3	<b>Write</b> a Java program that creates three threads. First thread displays “Good Morning” every one second, the second thread displays “Hello” every two seconds and the third thread displays “Welcome” every three seconds.	Understand	6
4	<b>Explain</b> about thread interrupts with an example.	Understand	6
5	<b>Explain</b> about inter –thread Communication with an example.	Understand	6
6	<b>Explain</b> creation of thread using extending thread class with an example	Understand	
7	<b>Explain</b> with an example how java performs thread synchronization?	Understand	6
8	<b>Explain</b> producer consumer problem with an example	Knowledge	6
9	<b>Explain</b> about thread interrupts with an example.	Knowledge	6
10	<b>Explain</b> the life cycle of a thread and multithreading.	Knowledge	6
<b>UNIT – I V</b>			
1	<b>Explain</b> the Java Collection frame work with an hierarchy	Understand	7
2	<b>Explain</b> ArrayList and Vector with examples.	Understand	7
3	<b>Explain</b> hash table and stack with examples.	Understand	7
4	<b>Explain</b> enumeration and iterator with an example.	Understand	7
5	<b>Explain</b> StringTokenizer with an example.	Understand	7
6	<b>Explain</b> Random and scanner with examples.	Understand	7
7	<b>Explain</b> Calander class and properties with an example.	Analysis	7
8	<b>Write</b> a Java program that reads a file name from the user, then displays information about whether the file exists, whether the file is readable, whether the file is writable, the type of file and the length of the file in bytes	Analysis	7
9	<b>Explain</b> binary input/output file operations and random access file operations and <b>Write</b> a Java program to implement character streams (reader classes).	Analysis	7
10	<b>Explain</b> different types of JDBC drivers with diagrams and <b>Write</b> a Java Program that connects to a database using JDBC and does add, delete, modify and retrieve operations.	Knowledge	7
<b>UNIT – V</b>			
1	<b>Explain</b> in detail about hierarchy for swing and awt?	Knowledge	7
2	<b>Write</b> a program for passing parameters to applet?	Knowledge	7
3	<b>Develop</b> 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 using swing components?	Create	7
4	<b>Develop</b> an applet that receives an integer in one text field and computes its	Create	7

S. No.	Question	Blooms Taxonomy Level	Programme Outcome
	factorial value and returns it in another text field, when the button named "compute" is clicked using awt components?		
5	<b>Define</b> JFrame, JApplet, JDialog and JPanel, JButton, JLabel, JTextField and JTextArea? <b>Write</b> a java program that simulates a traffic light. The program lets the user select one of three lights: red, yellow, or green with radio buttons. On selecting a button an appropriate message with "STOP" or "READY" or "GO" should appear above the buttons in selected color. Initially, there is no message shown	Create	7
6	<b>Describe</b> Layout manager types – border, grid, flow? <b>Write</b> a Java program that works as a simple calculator. Use a grid layout to arrange buttons for the digits and for the +, -, *, % operations. Add a text field to display the result. Handle any possible exception like divided by zero	Create	c
7	<b>Describe</b> Delegation event model? <b>Describe</b> is the relationship between Event sources and Listeners?	Understand	c
8	<b>Describe</b> events for handling a button click and mouse events with an examples	Create	c ,d
9	<b>Explain</b> applet life cycle? Difference between applet and application?	Understand	c
10	<b>Explain</b> applet security issues?	Understand	c