



ABES Engineering College, Ghaziabad  
B. Tech Even Semester Sessional Test-1

Printed Pages: 2  
Session: 2023-24

Semester: 4th  
Course Code: BCS403  
Course Name: Object Oriented Programming with Java  
Maximum Marks: 30

Roll No.:  
Time:1.15Hrs.

Instructions:

1. Attempt All sections.
2. If require any missing data, then choose suitably.

Q. No.	Question	Marks	CO	KL	PI
Section-A		Total Marks: 20			
1	Attempt ANY ONE part from the following	Same K Levels Questions			
a)	Explain why Java is platform Independent. Explain the difference between JDK, JRE and JVM with a suitable diagram. [Company Specific]	2+3	CO1	K2	1.4.1
b)	Explain with the help of an example why String is immutable in Java. Difference between equals() method and equality operator (==) in Java? [Company Specific]	2+3	CO1	K2	1.4.1
2	Attempt ANY ONE part from the following	Same K Levels Questions			
a)	Explain Jagged Array with a suitable program. What is the output of the following program? class simple { public static void main(String[ ] args) { simple obj = new simple(); obj.start(); } void start() { long [] P = {3, 4, 5}; long [] Q = method (P); System.out.print (P[0] + P[1] +P[2]+":"); System.out.print (Q[0] + Q[1] + Q[2]); } long [ ] method (long [ ] R) { R[1] = 7; return R; } }	3+2	CO1	K3	1.4.1
[UGC NET 2018].					

b)	<p>Explain the different uses of static and final keyword in java with example.</p> <p>What is the output of the following program?</p> <pre> class Test1 { public     static void main(String[] args)     {         int x = 20;         System.out.println(x);     }     static     {         int x = 10;         System.out.print(x + " ");     } } </pre>	3+2	CO1	K3	1.4.1
3	<b>Attempt ANY ONE part from the following</b>	<i>Same K Levels Questions</i>			
a)	Explain about different types of constructors in Java. Write a Java program to create a class called "Employee" with a name and Id attribute. Create two instances of the "Employee" class, set their attributes using the constructor, and print their name and Id using instance method.	5+5	CO1	K3	2.1.2
b)	Write a Java program to create a super class called Figure that stores the dimension of a two-dimensional object. It also defines method called area() that computes the area of an object. The program derives two sub classes from Figure called Triangle and Rectangle. Each of these sub classes overrides area(), so that it returns the area of rectangle and triangle respectively.	10	CO1	K3	2.1.2
<b>Section-B</b> <span style="float: right;"><b>Total Marks : 10</b></span>					
4	<b>Attempt ANY ONE part from the following</b>	<i>Same K Levels Questions</i>			
a)	How Exception is handled in Java? Which keywords are used for Exception handling?	2.5+ 2.5	CO2	K2	1.4.1
b)	Explain the difference between checked and unchecked exception. What are the major reasons why exception occurs in a program.	2.5+ 2.5	CO2	K2	1.4.1
5	<b>Attempt ANY ONE part from the following</b>	<i>Same K Levels Questions</i>			
a)	Explain division by zero Exception with a suitable program.	5	CO2	K2	1.4.1
b)	Explain the statement “finally block is always executed” with a suitable program.	5	CO2	K2	1.4.1

CO Course Outcomes mapped with respective question

KL Bloom's knowledge Level (K1, K2, K3, K4, K5, K6)

K1-Remember, K2-Understand, K3-Apply, K4-Analyze, K5: Evaluate, K6-Create