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CMRIT
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CMR INSTITUTE OF TECHNOLOGY, BENGALURU.
ACCREDITED WITH A+ GRADE BY NAAC

Internal Assessment Test 1 – September 2019

Sub:	Advanced Java & J2EE				Sub Code:	17CS553/ 15CS553	Branch:	CSE		
Date:	7/9/2019	Duration:	90 min's	Max Marks:	50	Sem / Sec:	5 / A,B,C		OBE	
	Answer any FIVE FULL Questions							MARKS	CO	RBT
1 (a)	What are Enumerations? Explain values() and valueOf() methods for enumerations.							[05]	CO1	L2
(b)	Create an enumeration of type of any 4 restaurant menu items and their price as a variable. Define suitable constructors and method getPrice(). Write driver code to demonstrate the enumeration.							[05]	CO1	L3
2 (a)	Explain the use of ordinal(), compareTo() and equals() for enumerations with code snippets.							[05]	CO1	L2
(b)	Write short notes on Type Wrappers with code snippets							[05]	CO1	L2
3 (a)	What is Auto-Boxing and Un-Boxing? Explain autoboxing in methods with code snippet.							[06]	CO1	L2
(b)	What are Annotations? Explain @Override, @Inherited @Retention with code snippet.							[04]	CO1	L2
4 (a)	Explain autoboxing/unboxing when used in an expression? In what situations are autoboxing recommended and in which situations should it be avoided?							[05]	CO1	L2
(b)	Create an annotation called info with author_name and version. Use it to annotate a method and obtain the values using reflection.							[05]	CO1	L3
5 (a)	Explain the core interfaces in the collection Framework.							[5]	CO2	L1
(b)	List any 6 methods with the method signature and its purpose from the collection interface and any exceptions thrown.							[5]	CO2	L2
6 (a)	Write short notes on ArrayList							[05]	CO2	L1
(b)	Write a program to initialize an ArrayList with 5 Integer objects. Calculate and display the sum and average of the items in the list.							[05]	CO2	L3
7 (a)	Explain the constructors for TreeSet. Write a java program to create TreeSet collection and access via an Iterator.							[05]	CO2	L3
(b)	Explain any 2 legacy classes of Java's collection Framework.							[05]	CO2	L1
8 (a)	Write short notes on all the methods defined by the SortedSet interface.							[06]	CO2	L1
(b)	Write a Java program to demonstrate ArrayDeque by using it to create a stack							[04]	CO2	L3

	Course Outcomes	Modules covered	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CO1	Interpret the need for advanced Java concepts like Enumerations, Wrapper Classes and Annotations	1	2	1	2	0	1	0	0	0	1	1	0	2	2	1	1	1
CO2	Explain Collections Interface and Framework in development of modular applications.	2	2	1	2	0	1	0	0	0	1	1	0	2	2	1	1	1
CO3	Use In-Built String Handling Functions for development of Java Programs.	3	2	1	2	0	2	1	0	0	1	1	0	2	2	1	1	1
CO4	Describe how servlet fit into Java – Based web application architecture	4	2	2	2	1	2	1	0	0	1	1	0	2	3	2	1	2
CO5	Illustrate database access and details for	5	2	1	2	1	2	1	0	0	1	1	0	2	3	2	1	2

	managing information using the JDBC API																

COGNITIVE LEVEL	REVISED BLOOMS TAXONOMY KEYWORDS
L1	List, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.
L2	summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend
L3	Apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover.
L4	Analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer.
L5	Assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize.

PROGRAM OUTCOMES (PO), PROGRAM SPECIFIC OUTCOMES (PSO)				CORRELATION LEVELS	
PO1	Engineering knowledge	PO7	Environment and sustainability	0	No Correlation
PO2	Problem analysis	PO8	Ethics	1	Slight/Low
PO3	Design/development of solutions	PO9	Individual and team work	2	Moderate/ Medium
PO4	Conduct investigations of complex problems	PO10	Communication	3	Substantial/ High
PO5	Modern tool usage	PO11	Project management and finance		
PO6	The Engineer and society	PO12	Life-long learning		
PSO1	Develop applications using different stacks of web and programming technologies				
PSO2	Design and develop secure, parallel, distributed, networked, and digital systems				
PSO3	Apply software engineering methods to design, develop, test and manage software systems.				
PSO4	Develop intelligent applications for business and industry				