PVP 20

Code: 20CS6522

III B.Tech - I Semester – Regular Examinations - DECEMBER 2022

ADVANCED JAVA PROGRAMMING

(HONORS in COMPUTER SCIENCE & ENGINEERING)

Duration: 3 hours Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

BL – Blooms Level CO – Course Outcome

			BL	CO	Max. Marks
UNIT-I					
1	a)	Construct a generic method to find the maximum element in the range [begin, end] of a list.	L3	CO2	7 M
	b)	Construct a generic method to count the number of elements in a collection that have a specific property (for example, odd integers, prime numbers and palindromes).	L3	CO2	7 M
OR					
2	a)	Summarize Upper Bounded DataType and Lower Bounded DataType.	L2	CO1	7 M
	b)	How do you invoke the following method to find the first integer in a list that is relatively prime to a list of specified integers? public static <T> int findFirst (List<T> list, int begin, int end, UnaryPredicate<T> p) Note that two integers a and b are relatively prime if gcd(a, b) = 1, where gcd is short for greatest common divisor.	L3	CO2	7 M

UNIT-II					
3	a)	Construct Lambda Expression by using Functional Interface with suitable example.	L3	CO3	7 M
	b)	Explain Lambda Expressions and Exceptions with an example.	L2	CO1	7 M
OR					
4	a)	Can lambda expressions be used to implement interfaces having default and static methods? Illustrate your answer.	L3	CO3	7 M
	b)	Explain Lambda Expressions and Variable Capture with an example.	L2	CO1	7 M
UNIT-III					
5	a)	Discuss various interfaces used in the Collection framework.	L2	CO1	7 M
	b)	Explain the Methods in ArrayDeque Class with a Sample Program.	L2	CO1	7 M
OR					
6	a)	Differentiate Between HashMap and HashSet.	L2	CO1	7 M
	b)	Discuss various methods in Spliterators with suitable examples.	L2	CO1	7 M
UNIT-IV					
7	a)	Explain various methods in Array class.	L2	CO1	7 M
	b)	Explain the Working Methodology of RandomAccess Interface.	L2	CO1	7 M
OR					

8	a)	Illustrate the following Collection Algorithms with suitable examples. i) static <T> int binarySearch (List < ? extends T > list,T value,Comparator < ? super T > C). ii) static < T> void sort (List <T) list, Comparator < ? Super T > comp). iii) static void shuffle (List < T> list).	L3	CO4	7 M
	b)	Given an array of Player objects, write a comparator that sorts them in order of decreasing score; if or more players have the same score, sort those players alphabetically by name. To do this, you must create a Checker class that implements the Comparator interface, then write an int compare (Player a, Player b) method implementing the Comparator. Compare (T o1, T o2) method.	L3	CO4	7 M
		UNIT-V			
9	a)	Construct a Java program by using Calendar class.	L3	CO5	7 M
	b)	Explain Wildcards and Quantifiers with respect to Regular Expressions in Java.	L2	CO1	7 M
		OR			
10	a)	Illustrate Two Pattern-Matching Options with an example.	L3	CO5	7 M
	b)	Develop a Java program to get the months remaining in the year.	L3	CO5	7 M