PVP 20

Code: 20CS6522

III B.Tech - I Semester - Regular Examinations - NOVEMBER 2023

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)	Write a generic method to exchange the positions of two different elements in an array.	L2	CO1 CO2	7 M
	b)	Write a Generic Class using Wildcard Arguments.	L2	CO1 CO2	7 M
OR					
2	a)	Explain the Generic Interfaces with an example.	L2	CO1 CO2	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	L2	CO1 CO2	7 M

		prime if gcd(a, b) = 1, where gcd is short for greatest common divisor.			
		UNIT-II			
3	a)	Write a functional interface and implement it using non-lambda code and lambda expression.	L2	CO1 CO3	7 M
	b)	Explain lambda expressions and exceptions with an example.	L2	CO1 CO3	7 M
		OR			
4	a)	Write a program to implement lambda expression with parameters.	L2	CO1 CO3	7 M
	b)	Explain lambda expressions and variable capture with an example.	L2	CO1 CO3	7 M
		UNIT-III			
5	a)	Explain the hierarchy of the collection framework in Java.	L2	CO1 CO4	7 M
	b)	Explain the methods in ArrayDeque class with a sample program.	L2	CO1 CO4	7 M
		OR			
6	a)	Differentiate between ArrayList and Vector in java.	L2	CO1 CO4	7 M
	b)	Explain the following methods in Spliterator: i. trySplit() ii. getExactSizeIfKnown()	L2	CO1 CO4	7 M

UNIT-IV					
7	a)	Write a java program on Map to perform the following: i. Sorting a Map on the keys ii. Initialize a static/immutable Map	L2	CO1 CO4	7 M
	b)	Explain the working methodology of RandomAccess Interface.	L2	CO1 CO4	7 M
OR					
8	a)	Write a program to store mail addresses using LinkedList.	L2	CO1 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	CO1 CO4	7 M
UNIT-V					
9	a)	Write a java program to get and display information (year, month, day, hour, minute) of a default calendar.	L2	CO1 CO5	7 M
	b)	Explain wildcards and quantifiers with respect to regular expressions in java.	L2	CO1 CO5	7 M
OR					

10	a)	Explain two Pattern-Matching options with an example.	L2	CO1 CO5	7 M
	b)	Differentiate between an ordinary character and a metacharacter with suitable examples.	L2	CO1 CO5	7 M