Paper Code: HCSCR4082T	Design and Analysis of Algorithms (Theory)	Marks: 60
Serial No.	Group A	No. of Periods
1.	Introduction Basic Design and Analysis techniques, Growth of functions, Summations, Induction, Recurrences.	5
2.	Algorithm Design Techniques Divide and conquer - Strassen's Method; Dynamic programming – Bellman-Ford algorithm; Greedy concepts; Back tracking – 8 Queens problem.	11
3.	Sorting and Order Statistics Heap sort, Merge Sort, Quick sort, sorting in linear time, Median and order statistics.	10
	Total	26
Serial No.	Group B	No. of Periods
4.	Generalized Tree Algorithms Threaded Binary Tree, Binary Search Tree, AVL Tree and B Tree.	10
5.	<b>Graphs</b> Graph Representation, Breadth First Search, Depth First Search, Minimal spanning Tree using Prim's and Kruskal's algorithms	8
6.	<b>String Processing</b> String Matching, Brute Force Technique, KMP Technique	4
7.	<b>Computational Geometry Algorithms</b> Convex Hulls, Closest pair of points	2
8.	Notion of NP-completeness P class, NP-hard class, NPcomplete class, Circuit Satisfiability problem.	2
	Total	26
<ol> <li>T.H. Corm</li> <li>Algorithms, I</li> <li>E. Horowi</li> <li>Galgotia.</li> <li>Sarabasse</li> <li>Analysis, Pea</li> </ol>	en, Charles E. Leiserson, Ronald L. Rivest, Clifford Stein, Introduction to PHI. itz, S. Sahani, R Sanguthevar, Fundamentals of Computer Algorithms, & A.V. Gelder Computer Algorithm – Introduction to Design and irson	

Paper Code:	Design and Analysis of Algorithms	Marks: 40
HCSCR4082P	(Practical)	