

Subject Code: PC602IT					AY:2024-25
 MATRUSRI ENGINEERING COLLEGE (An Autonomous Institution) 16-1-486, Saidabad, Hyderabad-500059 (Approved by AICTE, Affiliated to Osmania University) 					
Department of Information Technology					
B.E. VI-SEM Assignment -3					
Subject: DAA (PC602IT)			Marks: 10 M		
S.No.	Questions	Marks	BL	CO	
1	Solve the following 0/1 Knapsack problem using dynamic programming P= (10, 8, 12), W= (2, 3, 7), C=10, n=3.	2 M	L3	CO3	
2	Let n=4 and (a1,a2,a3,a4) Construct optimal binary search for (a1, a2, a3, a4) = (do, if, int, while), p(1 : 4) = (3,3,1,1) q(0 : 4)= (2,3,1,1,1)	3M	L3	CO3	
3	Consider three stages of a system with r1=0.3, r2=0.5, r3=0.2 and c1=30, c2=20, c3=30 Where the total cost of the system is C=80 and u1=2, u2=3, u3=2 find the reliability design.	2 M	L3	CO3	
4	Consider 4 elements a1 < a2 < a3 < a4 with q0=0.25 , q1=3/16 , q2=q3=q4=1/16. p1=1/4 , p2=1/8 p3=p4=1/16. (i) Construct the optimal binary search tree as a minimal cost tree. (ii) Construct the table of values Wij, Cij, Vij computed by the algorithm to compute the roots of optimal subtrees	3 M	L3	CO3	