18CS42 - Mod 3

Super Imp

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0° - afun

Q1. Solve the following instance of greedy knapsack problem where $n=4$, $m=10$, $p=(40, 42, 25, 12)$ and $w=(4, 7, 5, 3)$.

- Model QP

Video Soln:

Topic: Knapsack

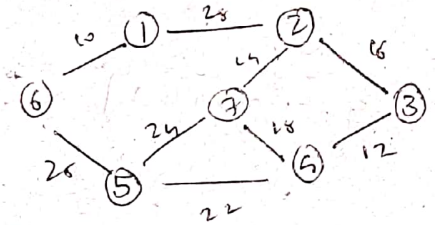
Q2. Write the problem statement for job sequencing with deadline? Let $n=5$, profits $(10, 3, 33, 11, 40)$ and deadlines $(3, 1, 1, 2, 2)$ find the optimal sequence of execution of job solution using greedy algorithm.

- Model QP

Video Soln:

Topic: Job Sequencing with deadlines

Q3. Apply Prim's Algorithm to obtain minimum cost spanning tree for the given weighted graph.



- Model QP

Video Soln:

Prim's Algo + Numerical.

OR

Vidio Soln: Dijkstra's Algo + Numerical

~~Algo~~ shortest source path

Q4. Obtain Huffman tree and the code for the following data.

Characters	Frequencies
a	10
e	15
i	12
o	3
u	4
s	13
t	1

Model QP

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- Video soln:

Huffman codes:

Q5. Sort the given list of numbers using Heap sort

- 2, 4, 7, 6, 5, 8

Model QP

- Video soln:

Heap sort