Greedy Problems

(Sec-E & F)

Q1: Select the total items in such a way that the total weight does not exceed 15Kgs and the profit is maximized.

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| Item | Weight | Profit |
| I1 | 2 | 10 |
| I2 | 3 | 5 |
| I3 | 5 | 15 |
| I4 | 7 | 7 |
| I% | 1 | 6 |
| I6 | 4 | 18 |
| I7 | 1 | 3 |

Q2: Detail out the method that is the most efficient for transferring the given message

BACADAEAFABBAAAGAHAGF.

Also estimate the coding system followed, coded message, total no of bits required. Also, show the steps to decode the message.

Q3: Given a set of files namely, A (with 10 records), B (with 20 records), C (with 15 records), D ( with 5 recods) and E (with 25 records). Find the minimum number of record movements required to merge these files.

Q4: –Suppose on a single machine four jobs with profit values (100, 10, 15 and 27) and their respective deadline unit values (2, 1, 2, 1) are given. Calculate the feasible solutions to complete the jobs yielding maximum profit

Q6: We are given a set of coins of various denominations. Consider the below array as the set of coins where each element is basically a denomination {1, 2,5,10,20,50,100,500}. Calculate the minimum number coins required to compute a sum of Rs 93

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