(A Product) A product can be produced on four different machines. Each machine has a fixed setup cost, variable production cost per unit processed, and a production capacity, given in the file P06\_53.xlsx. A total of 2000 units of the product must be produced. Determine how to minimize the total cost.





**Discussion: -**

It is like the manufacturer problem 40[RA] where the manufacturer should take a decision on production of different items. In this problem, we need to take a decision on the type of machines which we are using to produce the product. Our objective is to minimize the cost. To calculate the cost, we need to decide on the units produced from each type of machine.

**Mathematical Model: -**

*Parameters (Inputs):*

*Decision Variables:*

*Objective:*

*Constraints:*

*Excel Implementation:* Please find the attached spreadsheet for solution.



