Name:
Enrolment No:

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## UNIVERSITY OF PETROLEUM AND ENERGY STUDIES <br> End Semester Examination, May 2019

Course: Consultancy Management
Programme: MBA Business Analytics
Time: 03 hrs.
Semester: IV

Max. Marks: 100

## SET I

## Instructions:

The Question Paper has a CASE STUDY.
Some basic information for the case study is provided. In order to find a solution to the case study you may need to make certain assumptions. Clearly mention the assumptions made.

Show all calculations that you need to make to arrive at a reasonable solution.
Be concise and to the point.

|  |  | Marks | CO |
| :---: | :---: | :---: | :---: |
| Q. 1 | The CEO of an automobile company attended a car show recently. He was surprised to see that all the models of Volkswagens seemed to have the same steering wheel. They seemed similar in all respects shape, size, and materials. His company on the other hand, has many different steering wheels for its many cars. The CEO feels there was merit in reducing the steering wheels on all his company's cars to one model. He wants you to find out how that can be done. <br> Some additional information: <br> Manufacturing process <br> - The steering wheel manufacturing process has three distinct stages-Design, Sourcing/Manufacturing, and Assembling. <br> - There is virtually no difference in material requirement for each type of steering wheel. <br> - The same injection molding manufacturing process is currently used to make the different steering wheels. <br> - There is virtually no difference in the engineering design requirements for each steering wheel. Therefore, from engineering perspective, the same wheel could | $\begin{gathered} 100 \\ \text { Marks) } \end{gathered}$ | $\begin{gathered} \text { CO } \\ 1 / 2 / 3 / 4 \end{gathered}$ |

- There is no difference in assembly process for the different types of steering wheels.


## Customer needs

There is no market requirement (customer driven or company promoted) to have different steering wheels on different cars. Steering wheels do not serve as product differentiators.

## Cost

The company has 10 lines of cars, each with a different type of steering wheel.
The company purchases all of the 10 types of steering wheels from the same supplier. Each year 100,000 steering wheels are bought for each line.
The steering wheels cost Rs. 7000 each.
The supplier gives a 5\% discount for every doubling of an order size.
They also think that by consolidating the steering wheels to one type, they can buy all wheels from one vendor. In that case, the vendor will give us a $20 \%$ discount on the steering wheel.

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Course: Consultancy Management Programme: MBA Business Analytics
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## SET II

Semester: IV

Max. Marks: 100

## Instructions:

## The Question Paper has a CASE STUDY.

Some basic information for the case study is provided. In order to find a solution to the case study you may need to make certain assumptions. Clearly mention the assumptions made.

Show all calculations that you need to make to arrive at a reasonable solution.
Be concise and to the point.

| Q. 1 | Our client is a cardboard manufacturer that has two plants for which we following data: |  |  |
| :---: | :---: | :---: | :---: |
|  |  | Plant A | Plant B |
|  | Sales (INR ‘000) | 45000 | 75000 |
|  | Cost of Paper | 65\% | 63\% |
|  | Other Goods | 6\% | 5\% |
|  | Labor | 18\% | 13\% |
|  | Other Manufacturing | 6\% | 5\% |
|  | Depreciation | 3\% | 3\% |
|  | Profit | 2\% | 11\% |

What does this data tell you? You have been hired in to improve the performance of Plant A to similar levels as Plant B. What do you suggest?

Some additional information:

- The industry is manufacturing of cardboard boxes for packaging.
- Both plants are in NOIDA, owned and operated by a central HQ division. Each plant has completely delegated authority and is its own profit center. Each plant manages its own sales and its own customers.
- Both plants have similar processes: Print-Cut-Fold-Glue. The last step is optional and is only needed for the premium customers.

|  | - Both plants have similar equipment <br> - The average salary in each plant is the same - Rs.45,000/-. Assume that everyone gets paid this amount. <br> - In Plant A: $15 \%$ of the total workforce is in sales; $35 \%$ of the workforce is represented by full time employees (management, maintenance): $50 \%$ of the workforce is represented by operators. Morale in Plant A is very low. <br> - All we know about Plant B is that they have 35 sales people. <br> - Each plant has different customer mix, but it is not important for the case. |  |  |
| :---: | :---: | :---: | :---: |

