

(8)

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Marks

(d) Will the initial solution for a minimization transportation problem obtained by Vogel's Approximation Method and the Least Cost Method be the same? Why? 4

(e) Name any four stages in the process of bench marking. 4

5. (a) A company has two manufacturing divisions X and Y. X has a capacity of 96000 hours per annum. It manufactures two products, 'Gears' and 'Engines' as per the following details :

	Gears	Engines
	₹/unit	₹/unit
Direct Materials	240	34
Variable costs at ₹ 64/hour	256	64
Selling price in the outside market	640	128

Division 'Y' produces product 'Wheels', as per the following details :

	₹/unit
Imported components	640
Direct Materials	96
Variable cost at ₹ 40 per hour	320
Selling price in the outside market	1,160

The fixed overheads for X and Y are ₹ 24 lakhs and ₹ 4 lakhs respectively. With a view to minimizing dependence on the imported component, the company has explored a possibility of Division Y using product 'Gears' instead of the imported component. This is possible provided Division Y spends 2 machine hours entailing an additional expenditure of ₹ 64 per component on modification of product 'Gears' to fit into 'Wheels'. Production and sales of 'Wheels' in Division Y is limited to 5000 units per annum.

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