

本試題是否可以使用計算機： 可使用， 不可使用（請命題老師勾選）

考試日期：0302，節次：2

1. 請詳述自十八世紀工業革命至今，生產管理的觀念、策略、與工作重點之演變，並說明演變原因 (20 分)。
2. 從競爭力的角度來看，因應現代經濟環境，生產管理旨在提升那些能力？有那些方法？(20 分)？
3. 供應鏈管理談些甚麼？資料探勘談些甚麼？(10 分)

(背面仍有題目,請繼續作答)

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4. A word commonly heard in discussion of manufacturing is customization. The true customization requires customer-specific input at some point in the supply chain. For instance, manufacturers of specialized industrial equipment often start with an individual customer's specifications, which drive subsequent design, purchasing, and manufacturing efforts. And hardware stores mix ready-made paints to match a customer's particular color sample. In both cases, the product is customized. However, the degree and point of customization differ radically. Please specify the levels of product customization from least to greatest customization. In addition, utilize a figure to illustrate the point of customization, accordingly. (30%)

5. Montoya-Weiss Engineering (MWE) is a Dallas engineering firm that produces customized instrumentation for aerospace industry. MWE is thinking about outsourcing the production of a particular component to a Fort Worth manufacturer. The Fort Worth manufacturer has offered to make the components for a price of \$25 each, based on an annual volume of 32,000. However, there are additional costs associated with maintaining this supplier relationship. MWE management has developed the following cost figures to compare.

Current Manufacturing Operations	Fort Worth manufacturer
Fixed Costs	Price per component \$25.00
Plant and overhead, \$800,000 per year	
	Other costs
Variable Costs	Administrative, \$50,000 per year
Labor, \$8.50 per unit	Inspection, \$65,000 per year
Materials, \$5.00 per unit	Shipping, \$1.50 per unit

In addition to cost, MWE management has identified two other dimensions to consider: quality (specifically, the percent of defect-free items) and on-time delivery. MWE management has established importance weights of 0.2, 0.5, and 0.3 for cost, quality, and on-time delivery, respectively. Finally, purchasing experts at MWE have rated the performance of the current assembly operation and the Fort Worth manufacturer with regard to these three dimensions. Their ratings (1=poor to 5=excellent) are as follows

Performance Rating		
Performance Dimension	Current Manufacturing Operations	Fort Worth Contract Manufacturer
Cost	3	5
Quality	5	4
On-time delivery	3	3

Calculate the total cost of each option, as well as the overall preference score with managerial implications. (20%)