

所別：工業管理研究所碩士班 乙組科目：生產作業與管理

1. (20分) 依據以下名詞定義以及表中所列各項製程的屬性，比較 Job Shop 與 Flow Shop 的差異。
 例如：Job Shop 與 Flow Shop 的 Production Volume 分別為 Low 與 High.

- A **Job Shop** is a functional organization whose departments or work centers are organized around particular types of equipment or operations, such as drilling, forging, spinning, mixing, compressing, blending, etc. Products move through departments by individual work orders.
- A **Flow Shop** is a plant in which machines and operators handle a standard, often uninterrupted, material flow. Facilities in the "process industries" are extreme examples of flow shops, where each product follows essentially the same path through the plant. Many "repetitive" manufacturing operations are also examples of flow shops

Process Type	Production Volume (Low/High)	Specialize Equipment (Few/Many)	Product Variety (Few/Many)	Machine Setup Frequency (Seldom/Often)	Labor Skills (Low/High)	Variable Costs (Low/High)
Job Shop	Low					
Flow Shop	High					

2. (30分) 根據以下15項(A-P)名詞，請以各名詞的代號與各項定義聯結。

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|---------------------------|-----------------------|------------------------|--------------------|
| A. Operations Management | B. TQM | C. Cost of Quality | D. Taguchi Methods |
| E. JIT Production | F. BPR | G. Life Cycle Analysis | H. QFD |
| I. Concurrent Engineering | J. VAT Classification | K. FMS | L. Make to Order |
| M. Make to Stock | N. Value Added | O. Order Cycle | P. QR/CR |

- (1) (例) A is the effective planning, organizing and control of all the resources and activities necessary to provide the market with tangible goods and services.
- (2) _____ is used in both product and process design. They are based on making designs robust by building in tolerances for manufacturing variables known to be avoidable.
- (3) _____ means that the supplier manufactures the goods and sells from finished goods inventory. Delivery lead-time is shortest.
- (4) _____ is the sum of four elements, namely external costs, internal costs, evaluation costs and prevention costs.
- (5) _____ means having research and development personnel and design engineers work closely or in parallel (rather than in sequence) with production people to ensure that a product can be manufactured easily and cost-effectively.
- (6) _____ is referred to as the length of the time between the customer releases the order and when he receives the order from the supplier and has it available for sale from his own inventory.
- (7) _____ is management practice where the exact quantities of a product are produced or delivered just when needed.

參考用

注意：背面有試題

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- (8) _____ is an approach to improving both customer satisfaction and the way organizations do business. It brings together all of the quality and customer related process improvement ideas. It is people oriented.
- (9) _____ means that the manufacturer does not start to make the product until a customer's order is received. The final product is usually made from standard items but may include custom designed components as well. Delivery lead-time is reduced because there is little design time and inventory is held as raw material.
- (10) _____ means a complete re-evaluation and shake up of a firm with the ultimate objective of increasing it's performance to be more flexible, more reactive and closer in touch with the needs of the client.
- (11) _____ is the difference between what the customer pays and the cost of providing the service.
- (12) _____ is grouping items according to the type of end product and to a certain extent according to the manufacturing process employed.
- (13) _____ is an analytical method with an objective to develop a design aimed at satisfying the consumer and then translating the customer requirements into design targets used throughout the development and production stages of the product.
- (14) _____ are clusters of computer-controlled machines which produce a variety of products on assembly type layout.
- (15) _____ is the evaluation of the life of a product from conception through design, production, distribution and use to eventual disposal at the end of it's life. The objective is to minimize environmental damage by paying attention to upstream activities.
- (16) _____ refers to an approach for increasing product velocity across a distribution pipeline.

3. 問答題(20分)

每一系統的存在，皆提供了某些型態的轉換流程(Transformation process)，請對下列三者

- a、百貨公司
- b、汽車工廠
- c、醫院。

分別說明其有關的輸入(input)、產出(output)及使用的資源(resources)。

4. 問答題 (15 分)

請問流程分析(Process Analysis)對管理上有何幫助?

5. 問答題 (15 分)

請問六個 Sigma 與製程能力指標間之關係。

參考用