

國立臺北科技大學 102 學年度碩士班招生考試

系所組別：4110 工業工程與管理系碩士班甲組

第二節 生產管理 試題

第一頁 共二頁

注意事項：

1. 本試 15 題選擇題(每題 4 分)，2 題計算題(每題 20 分)，配分共 100 分。
2. 請標明大題、子題編號作答，不必抄題。
3. 全部答案均須在答案卷之答案欄內作答，否則不予計分。

一、選擇題(每題 4 分，共 60 分)

※注意：請務必將題號及選答如下表抄至答案卷。

題號	1	2	3	4	5
選答					
題號	6	7	8	9	10
選答					
題號	11	12	13	14	15
選答					

1. A recent effort to expand the scope of production resource planning by involving other functional areas in the planning process has been:
A) material requirements planning
B) capacity requirements planning
C) manufacturing resources planning
D) Just-In-Time planning
E) multifunctional relationships planning
2. Aggregate planners attempt to balance:
A) demand and inventories
B) demand and costs
C) capacity and demand
D) capacity and costs
E) capacity and inventories
3. The management of supply chain inventories focuses on:
A) internal inventories

- B) external inventories
- C) both internal and external inventories
- D) safety stock elimination
- E) optimizing reorder points

4. If average demand for an inventory item is 200 units per day, lead time is three days, and safety stock is 100 units, the reorder point is:
A) 100 units
B) 200 units
C) 300 units
D) 600 units
E) 700 units
5. Examination of the sources of supply for purchased parts or materials in order to improve performance is called:
A) disintegration
B) value analysis
C) negotiated purchasing
D) reverse engineering
E) vendor analysis
6. A quality improvement technique that involves the sharing of thoughts and ideas in a way that encourages unrestrained collective thinking is:
A) brainstorming
B) benchmarking
C) Pareto analysis
D) a control chart
E) a check sheet
7. Facilities, personnel and operations that are located around the world is called:
A) globalization
B) diversified operations
C) non-domestic
D) worldwide presence
E) virtual organization
8. The process of assigning tasks to workstations in such a way that the workstations have approximately equal time requirements is called:
A) fair employment practices

注意：背面尚有試題

- B) idle time analysis
 C) line balancing
 D) cycle time optimization
 E) none of the above
9. When the output is less than the optimal rate of output, the unit cost will be:
 A) lower
 B) the same
 C) higher
 D) could be either higher or lower
 E) could be either higher, lower or the same
10. Utilization is defined as the ratio of:
 A) design capacity to effective capacity
 B) actual output to effective capacity
 C) actual output to design capacity
 D) effective capacity to actual output
 E) design capacity to actual output
11. One of these is not a characteristic of a well-designed service system:
 A) User friendly
 B) Robust
 C) Cost effective
 D) Distributed computer networks
 E) Easy to sustain
12. The process of dismantling and inspecting a competitor's new or revised product for the purpose of gleaning design ideas is called:
 A) design by imitation
 B) product analysis
 C) benchmarking
 D) reverse engineering
 E) disassembly
13. Which technique is useful in computing seasonal relatives?
 A) double smoothing
 B) Delphi
 C) Mean Squared Error (MSE)
 D) centered moving average

E) exponential smoothing

14. Detecting non-randomness in errors can be done using:
 A) MSEs
 B) Control Charts
 C) MAPs
 D) Correlation Coefficients
 E) Strategies
15. Scheduling personnel is an example of an operations management:
 A) mission implementation
 B) operational decision
 C) organizational strategy
 D) functional strategy
 E) tactical decision

二、計算題(每題 20 分，共 40 分，須寫明計算過程，否則不予計分)

1. 已知下列工作時間與到期日的資料，回答下列問題：

工作	處理時間(小時)	到期日(小時)
A	17	15
B	10	25
C	5	20
D	7	32
E	11	38

- a)(10 分) 利用 SPT 和 EDD 決定最佳的處理順序。
 b)(10 分) 針對每種方法，求出平均工作流程時間與平均工作延遲時間，並說明比較結果。

2. (20 分)國立臺北科技大學工業工程與管理系每年需使用 400 盒迴紋針，迴紋針價格為：1~199 盒，每盒 1 美元；200~499 盒，每盒 0.94 美元；500 盒(含)以上，每盒 0.87 美元，年持有成本為每單位購買價格的 17%，每次訂購成本為 22 美元。請問最佳訂購數量及年度總成本為多少？