

國立臺灣科技大學 111 學年度碩士班招生試題

系所組別：工業管理系碩士班乙組

科目：生產管理

(總分為 100 分；所有試題務必於答案卷內頁依序作答，否則不予計分)

1. (15%) Please explain the meaning of the following terms:

1.1(5%) ATO (Assembly to Order)

1.2(5%) BTO (Build to Order)

1.3(5%) CTO (Configuration to Order)

2 (15%) A manager's staff has compiled the information below which pertains to four capacity alternatives.

		1	2	3	4
Alternative	A	50	30	20	40
	B	40	30	30	35
	C	30	30	35	30
	D	20	25	35	30

2.1(5%) Assuming a maximax strategy, which alternative will be chosen?

2.2(5%) Assuming a maximin strategy, which alternative will be chosen?

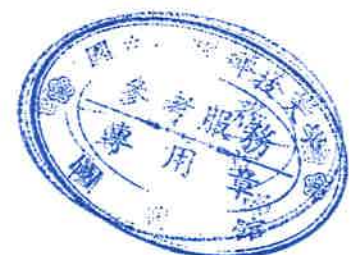
2.3(5%) If state of nature are equally likely and an expected value criterion of maximization is used, which alternative would be chosen?

3 (20%) A company has the following inventory information in its ERP system: 1. Inventory (庫存量): 1000 units, 2. Allocated (保留量): 100 units, 3. Scheduled receipts (計畫收料): 500 units, 4. Back order (逾期交量): 200 units, 5. Safety stock (安全庫存): 400 units, 6. Gross requirement (毛需求): 2000 units

Please calculate:

3.1 (10%) project available balance (預期可用量)

3.2 (10%) purchase requisition (PR) (請購需求)



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4 (15%) 今年需求為 D ，年單位持有成本為 H ，單位整備成本為 S 、耗用率為 u 、生產率 p 。

4.1 (5%) 列出經濟生產量模型之總成本與週期時間。

4.2 (10%) 證明經濟生產量模型(EPQ), $Q_p = \sqrt{\frac{2DS}{H}} \sqrt{\frac{p}{p-u}}$ 。

5 (15%) Develop a house of quality (i.e., quality function deployment) for your ideal electric motorcycle.

5.1 (5%) Use Kano model to feature quality attributes of the motorcycle (10%).

5.2 (10%) Use Gogoro as your competitor to complete the house of quality (10%). Do competitive evaluation and technical evaluation. Conclude what you find in the evaluation.

6 (20%) 請為以下 5 項工作排序，列出總流程時間、總延遲時間。

6.1(5%)使用 SPT 法則。

6.2(5%)使用 EDD 法則。

6.3(10%) 使用 CR(關鍵比率)法則(計算二回合即可)。

工作	工作時間(小時)	到期日(現在起幾小時)
1	11	61
2	29	45
3	31	31
4	1	33
5	2	32

