

國立中央大學98學年度碩士班考試入學試題卷

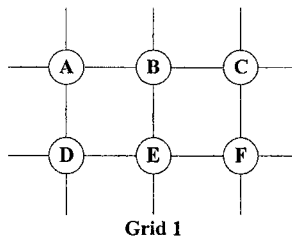
所別：工業管理研究所碩士班 乙組 科目：生產作業與管理 共 2 頁 第 1 頁  
 \*請在試卷答案卷(卡)內作答

1. (9分) Under what circumstances should a *c*-chart be used in stead of a *p*-chart?
2. (6分) What are the three major inputs to MRP? What are the three forms of output of MRP?
3. (15分) The ABC Corporation has set a processing quota of eighty insurance claims per 8-hour day. The claim process consists of five elements, which are detailed in Table 1. ABC has decided to use an assembly line arrangement to process the forms and would like to make sure they have set up the line in the most efficient fashion.
  - (a) (5分) Construct a precedence diagram for the claims process and calculate the cycle time required to meet the processing quota. 【請寫出計算過程，否則不計分】
  - (b) (5分) Balance the assembly line using the ranked positional weight technique and show your arrangement of workstations. 【請寫出使用 ranked positional weight technique 的解題過程，否則不計分】
  - (c) (5分) Calculate the efficiency of the line. 【請寫出計算過程，否則不計分】

Element	Predecessor	Performance Time (min.)
A	-	4
B	A	5
C	B	2
D	A	1
E	C, D	3

4. (10分) Napa Valley Furniture Warehouse has purchased a retail outlet with six departments, as shown in Grid 1. The anticipated number of customers that move between the departments each week is given in the load summary chart.
  - (a) (5分) Calculate the nonadjacent loads for the layout shown in Grid 1. 【請寫出計算過程，否則不計分】
  - (b) (5分) Revise Napa's layout (shown in Grid 1) such that nonadjacent loads are minimized. 【請將新 Layout 畫出，並算出其 nonadjacent loads，否則不計分】

From \ To	DEPARTMENT					
	A	B	C	D	E	F
A		70				50
B					100	
C		70				
D			80			
E	40					30
F		60			100	



5. (10分) Marie works in a cosmetic factory filling, capping, and labeling bottles. She is asked to process an average of 150 bottles per hour through her work cell. If one kanban is attached to every container, a container holds 25 bottles, it takes 30 minutes to receive new bottles from the previous workstation, and the factory uses a safety stock factor of 10 percent, how many kanbans are needed for the bottling process? 【請寫出計算過程，否則不計分】

參考用

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6. (10分)請舉一實際例子，說明為何單期報童(Single-period "newsperson" or "newsboy") 模型可以使用於此實例？【請將答案及說明分項條列】
7. (10分)請問排程上，Forward scheduling 與 Backward scheduling 之使用時機？【請將答案及說明分項條列】
8. (10分)為何服務業之流程圖上會有可視線(Line of visibility)？請解釋其用處。【請將答案及說明分項條列】
9. (10分)請條列選擇使用何種預測模型時，有哪些考慮條件？【請將答案及說明分項條列】
10. (10分)為何公司作業策略會隨時間改變？【請將答案及說明分項條列】

參考用

注意：背面有試題