

國立台灣科技大學九十九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)

1. (15%) 簡述何謂拉式(pull)系統、推式(push)系統？請說明在拉式系統中看板如何運作？看板張數如何計算？

2. (35%) 解釋及簡答：每小題各 5%

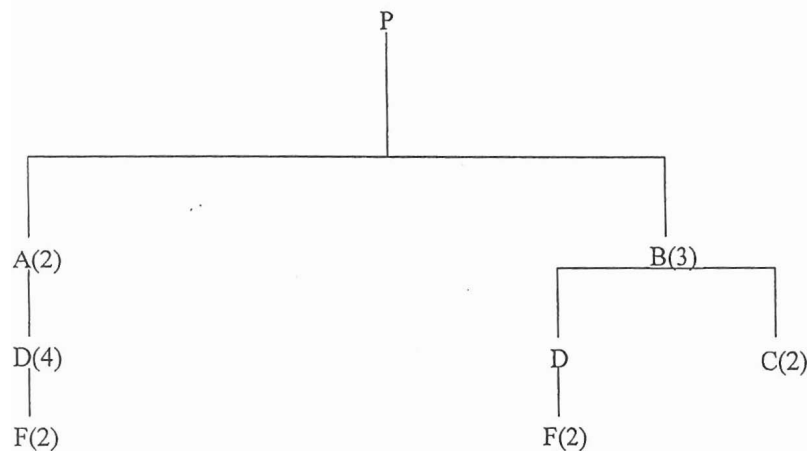
- (1) 何謂集體計劃(aggregate planning)？
- (2) 何謂平準化？有何好處？
- (3) 何謂yield management？
- (4) 何謂John 法則？何謂critical ratio？
- (5) 如何降低整備成本(set-up cost)？
- (6) 何謂FEMA？何謂TPM？
- (7) 簡述MRP與CRP如何運作？功能如何互補？

3. (20%) Develop a material requirements plan for end item P and its components, given the tree below. Assume that all lead times are one week, and that lot-for-lot ordering is used except for item F, which is ordered in multiples of 400 units.

One hundred units of P are needed at the start of each of weeks 4 and 8.

Beginning inventories are: 20 P, 100 A, and 200 F.

Scheduled receipts are: 800 F at the start of week 1.



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4. (20%) The following information refers to (1)-(4)

The dean of a school of business is forecasting total student enrollment for this year's summer session classes based on the following historical data:

YEAR	TOTAL ENROLLMENT
Four years ago	2,000
Three years ago	2,200
Two years ago	2,800
Last year	3,000

- (1). What is this year's forecast using the naive approach? (5%)
- (2). What is this year's forecast using a three-year simple moving average? (5%)
- (3). What is this year's forecast using exponential smoothing with $\alpha = .4$, if last year's smoothed forecast was 2600? (5%)
- (4). What is this year's forecast using the least squares trend line for these data? (5%)

5. (10%) Determine the center of gravity location for the destinations and shipping quantities shown below:

Destination	(x,y)	Quantity
D1	3,5	600
D2	5,1	400
D3	6,7	300
D4	8,4	500

