



Department of Electronic and Computer Engineering

B324 Electronics Manufacturing

Semester 2 Examination

1.5 hours

Instructions:

Write your student ID number clearly on page 2.

Write your answers to all 5 questions within the spaces provided in this examination paper. Handwritten notes are permitted with this examination.

Additional Information:

This is an open book exam

Provided:

NIL

Calculators:

Casio FX 85 Series or Casio FX 83 Series

Examiners:

Mr C Nguyen

External Examiner:

Dr A Rossiter

Student ID Number

QUESTION 1

- a) Place an "X" in the box next to **3 terms** that are **significant differences between the craftsman and factory production methods.** [6 Marks]

<input type="checkbox"/>	quantity of raw materials
<input type="checkbox"/>	quantity of production tools
<input type="checkbox"/>	coordination of buyers
<input type="checkbox"/>	coordination of sellers
<input type="checkbox"/>	coordination of workers

<input type="checkbox"/>	inventory insurance
<input type="checkbox"/>	inventory management
<input type="checkbox"/>	responsibility for theft
<input type="checkbox"/>	responsibility for safety
<input type="checkbox"/>	responsibility for quality

- b) Use all of the terms you selected in part (a) to **compare 2 similar products, but, one is produced using the craftsman method and the other is produced using the factory method.** [14 Marks]

QUESTION 2

- a) Place an "X" in the box next to **3 terms** that are **forms of company stock** as it evolved through from the time of Royal Charters to the present day. [6 Marks]

<input type="checkbox"/>	Stock capital
<input type="checkbox"/>	Joint-stock capital
<input type="checkbox"/>	Mutual-stock capital
<input type="checkbox"/>	Limited assets
<input type="checkbox"/>	Limited subscriptions

<input type="checkbox"/>	Corporate debt
<input type="checkbox"/>	Corporate shares
<input type="checkbox"/>	Corporate capital
<input type="checkbox"/>	Transferable writs
<input type="checkbox"/>	Transferable subscriptions

- b) Use all of the terms you selected in part (a) to provide a **brief description and comparison of the evolution of the company stock concept in chronological order** from the time of Royal Charters to the present day. [14 Marks]

QUESTION 3

- a) Place an "X" in the box next to **3 terms** that are **conceptual models for describing and comparing businesses**. [6 Marks]

<input type="checkbox"/>	sales
<input type="checkbox"/>	retail
<input type="checkbox"/>	service
<input type="checkbox"/>	wholesale
<input type="checkbox"/>	warehouse

<input type="checkbox"/>	independent
<input type="checkbox"/>	cooperative
<input type="checkbox"/>	coordination
<input type="checkbox"/>	distribution
<input type="checkbox"/>	capabilities

- b) **Select 2 companies** who compete against each other in the electronics industry. **Briefly describe how constraints are expressed in each model** and **compare the companies by using each of the conceptual models** you selected in part (a). [14 Marks]

QUESTION 5

a) Place an "X" in the box next to **3 terms** that are directly involved in **analysing pooling variability to determine the optimal efficiency of inventory buffering configurations.** [6 Marks]

<input type="checkbox"/>	standard error
<input type="checkbox"/>	standard deviation
<input type="checkbox"/>	standard variation
<input type="checkbox"/>	pooling agreement
<input type="checkbox"/>	service level agreement

<input type="checkbox"/>	excess inventory
<input type="checkbox"/>	contingency inventory
<input type="checkbox"/>	absolute efficiency
<input type="checkbox"/>	standard efficiency
<input type="checkbox"/>	comparative efficiency

b) For each of the terms you selected in part (a), indicate its value in the analysis of the pooling variability scenario below. [14 Marks]

A manufacturer has 24 retailer customers. Each customer orders a monthly average of 600 products, with a monthly variation of 84 products. The manufacturer has committed to fulfil orders at a 99.73% rate. Analyse the pooling variability of using one warehouse per customer versus one warehouse per 6 customers.