

**UNIVERSITI KUALA LUMPUR
MALAYSIAN INSTITUTE OF INDUSTRIAL TECHNOLOGY**

**FINAL EXAMINATION
JANUARY 2016 SEMESTER**

COURSE CODE : JQD 30403
COURSE TITLE : PRODUCTION PLANNING AND CONTROL
PROGRAMME LEVEL : DIPLOMA
DATE : 24 MAY 2016
TIME : 02.30 PM – 05.30 PM
DURATION : 3 HOURS

INSTRUCTIONS TO CANDIDATES

- 1. Please CAREFULLY read the instructions given in the question paper.**
 - 2. This question paper has information printed on both sides of the paper.**
 - 3. This question paper consists of TWO (2) sections; Section A and Section B.**
 - 4. Answer ALL questions in Section A. For Section B, answer TWO (2) questions ONLY.**
 - 5. Please write your answers on the answer booklet provided.**
 - 6. Answer all questions in English language ONLY**
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THERE ARE 4 PAGES OF QUESTIONS EXCLUDING THIS PAGE.

SECTION A (Total: 60 marks)**INSTRUCTION: Answer ALL questions.****Please use the answer booklet provided.****Question 1**

Figure 1: Tupperware Product

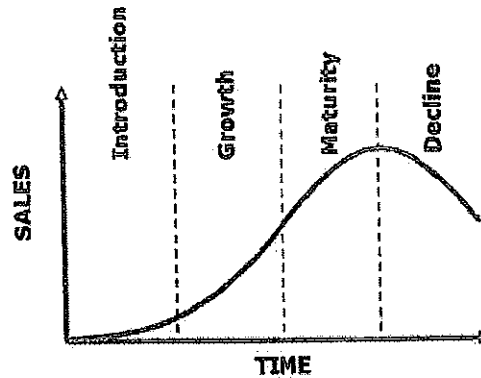
Tupperware is the name of a home products line that includes preparation, storage, containment, and serving products for the kitchen and home. Tupperware develops, manufactures, and internationally distributes its products as a wholly owned subsidiary of its parent company Tupperware Brands. In Malaysia, Tupperware has become a MUST item for household products.

- (a) Referring to the above statement, identify the business position of Tupperware in the marketplace. (6 marks)
- (b) Based on your answer in (a), state **THREE (3)** types of strategy used by Tupperware. (6 marks)
- (c) Discuss **FOUR (4)** purpose of competitive advantage. (8 marks)

Question 2

- (a) Measurement of productivity is an excellent way to evaluate a country's ability to provide an improving standard of living for its people. State and explain **TWO (2)** variables which affect to productivity increase.

(6 marks)



Graph 1: Product Life Cycle Stages

- (b) Graph 1 shows the life cycle stages of production system. Give an example of product that currently experiencing each of life cycle stages. Justify your answer.
- (c) A wrapping paper company produced 2000 rolls of paper one day. Standard price is RM1 per roll. Labor cost was RM160, material cost was RM50 and overhead was RM320. Calculate the Multifactor Productivity.

(8 marks)

(6 marks)

Question 3

- (a) Production planning and controlling is the key of organization's efficiency, effectiveness, timely delivery and customer satisfaction. Use flow chart to illustrate **THREE (3)** important stages in Production Planning and Control.
- (b) State and explain **TWO (2)** types of factors that need to be considered prior implementing those stages.
- (c) Describe **THREE (3)** objectives of production planning and controlling.

(5 marks)

(6 marks)

(9 marks)

SECTION B (Total: 40 marks)**INSTRUCTION: Answer TWO (2) questions only.****Please use the answer booklet provided.****Question 1**

- (a) Inventory defines as a stock of items kept to meet future demand. Identify **FOUR (4)** types of inventory that exist in Manufacturing Industry. (8 marks)
- (b) In inventory system management, there are two types of demands which are dependent demands and independent demands. Point out **THREE (3)** risks the company would face if above system is not properly implemented. (6 marks)
- (c) Items purchased from a vendor cost RM20 each, and the forecast for next year's demand is 1000 units. If it costs RM5 every time an order is placed for more units and the storage cost is RM4 per unit per year
- What quantity should be ordered each time?
 - What is the total ordering cost for a year?
 - What is the total storage cost for a year?
- (6 marks)

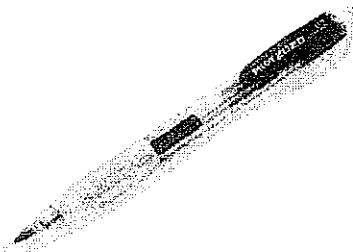
Question 2

Figure 2: Mechanical Pencil

As a new Assistant Engineer at Faber Castle (M) Sdn. Bhd., you have been assigned a task to update Bill of Materials (BOM) for new design of Mechanical Pencil at your company. The new product design as per illustrated in Figure 2.

- (a) Based on Figure 2, construct new BOM for this new design of Mechanical Pencil.
(6 marks)
- (b) Identify **TWO (2)** types of BOM and give an example(s) of each types stated.
(6 marks)
- (c) Identify **FOUR (4)** benefits of using Material Requirement Planning (MRP) to industry.
(8 marks)

Question 3

- (a) Facilities design layout refers to the arrangement of all equipment, machinery and furnishing within a building envelope after considering various objectives of the facility. Explain **THREE (3)** objectives of facilities design layout in industry.
(6 marks)
- (b) Process layouts and product layouts are two popular facilities layout that best suited to different production situations. Differentiate **TWO (2)** differences between process layout and product layout.
(8 marks)



Figure 3: Proton Manufacturing and Assembly Layout

- (c) As a young Assistant Engineer at Proton Manufacturing and Assembly Company, you have been assigned to design new facilities layout for their new factory. What type of facilities layout that you should choose and justify your answer.
(6 marks)

END OF EXAMINATION PAPER

