University Examinations 2023/2024

FIRST YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE MASTER OF SCIENCE IN SUPPLY CHAIN MANAGEMENT

BBS 5202: STRATEGIC INVENTORY MANAGEMENT

DATE: APRIL 2024   **TIME:3 HOURS**

INSTRUCTIONS: *Answer question **one** and any other **two** questions*

QUESTION ONE (24 MARKS)

Lean manufacturing concept has been implemented widely in the automotive industry. Due to the increasing competition in the automobile industry, car manufacturers have to launch a new model to the market more frequently like, BMW manages a long-term planning, Ford applies lean concept to the new product development and Hyundai manages the production planning and control. BMW uses a 12-year planning horizon and divides it into an annual period. After that, they will make an annual sales forecast for the whole planning horizon. After the demand is obtained, they divide sales into 8 market and then select the appropriate production sites for each market, considering overall capacity constraints and total cost. As you may notice, this kind of a long-range planning has to be done strategically.

Ford manufacturers calls its product development system as "work streams" which include the body development, engine development, prototyping and launch process. The cross-functional team are the experts and their roles are to identify key processes, people, technology and inventory necessary for the development of new prototype. Each work stream team is responsible

to develop timeline of each process. Detailed plan is usually presented on A3 sized paper. Major issues they are facing which slows down production is adequate inventory which they document with supporting data, drawings and pictures. On weekly basis, they organize a big group meeting of all work stream team to discuss the coordination issues.

Hyundai manufacturers deploys a centralized planning system covering both production and sales activities across the facilities and functional areas. They develop a 6-month master production plan and a weekly and a daily production schedule for each month in advance. During a short-term planning (less than one month), they pay much attention to the coordination between purchasing, production and sales. Providing a long-term planning data to its suppliers help to stabilize production of its part makers a lot.

a) Discuss the role of the strategic roles that BMW inventory manager would play to help the company Outwit its competitors (6 marks)

b) Discuss the inventory provisioning techniques that would enable Ford Manufacturers improve on product development and match competition in the industry (6 marks)

c) Discuss reasons that would necessitate the need for material forecasting by Hyundai manufacturers (6 marks)

d) Explain four emerging issues that would affect the day to day operations of BMW company (6 marks)

QUESTION TWO (12 MARKS)

a) Stockout cost is the lost income and expense associated with a shortage of inventory. This cost can either be sales related or internal process related. Discuss Major elements of the stock out cost (8 marks)

b) Outlining the systems involved explain the role of information technology in inventory management (4 marks)

QUESTION THREE (12 MARKS)

a) Proper packaging is essential aspects of inventory management, discuss   (8 marks)

b) Explain the relationship of proper inventory management to better customer service

(4 marks)

QUESTION FOUR (12 MARKS)

a)   Demand forecasting is not an easy venture to undertake in todays varied and turbulent business environment, explain   (8 marks)

b)   Explain the need for proper documentation in Inventory management (4 marks)

QUESTION FIVE (12 MARKS)

a)   Stores planning and layout requires to follow certain criteria, explain these criteria in relation to inventory management   (8 marks)

b)   Discuss the concept of ethics in relation to inventory management (4 marks)