



# TECHNICAL UNIVERSITY OF MOMBASA

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SCHOOL OF BUSINESS

DEPARTMENT OF MANAGEMENT SCIENCE

UNIVERSITY EXAMINATION FOR:

PhD BUSINESS ADMINISTRATION (SUPPLY CHAIN  
MANAGEMENT OPTION)

BPC 6101: SUPPLY CHAIN MANAGEMENT THEORY

END OF SEMESTER EXAMINATION

ORDINARY EXAMINATIONS

SERIES: AUGUST 2019

TIME: THREE HOURS

DATE: AUGUST 2019

## **Instructions to Candidates**

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of FIVE questions. Attempt Question One and Any other Three Questions.

**Do not write on the question paper.**

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## **QUESTION ONE**

MANUF Corporation is the leading manufacturer of home appliances in the country. This year MANUF Corporation is intending to formally create a supply chain department with the idea of making supply chain its key competitive advantage. MANUF Corporation is hoping to focus on two key metrics: forecast accuracy and demand variability. To improve its performance, on these two metrics, MANUF Corporation will work on industry level initiatives for supply chain external integration such as Collaborative Planning Forecasting and Replenishment (CPFR)

initiative using the structured process approach; Efficient Customer Response (ECR) and Vendor Managed Inventory (VMI). It will first ensure that there is internal as well as external buy-in.

In light of the above, answer the following questions:

- a) Advise the management of MANUF Corporation on how they can use the Supply Chain Operations Reference (SCOR) Model in measuring its supply chain performance (10 marks)
- b) MANUF Corporation is worried that demand fluctuations at different stages of the supply chain will be a big problem. Explain to them the prominent causes of bullwhip effect in the supply chains (10 marks)
- c) For MANUF Corporation to succeed in managing the supply chain, they will have to effectively integrate with the other supply chain partners. Advise the management on the steps in building successful relationships (10 marks)
- d) Explain to the management of MANUF Corporation the major features of Efficient Customer Response that they should focus on if they are to succeed with their proposed strategies (10 marks)

## **QUESTION TWO**

- a) Various *competitive strategies* of agile, responsive and flexible SCs have been developed over the last decade. Discuss the key triggers for designing and implementing SC with regard to agility, flexibility and responsiveness (10 marks)
- b) Critically analyze the main directions of research in Supply Chain Management (10 marks)

## **QUESTION THREE**

- a) Model-based decision making support has become a common phenomenon in modern day organizations. Advise your management on the properties of good supply chain management models (10 marks)
- b) Identify any two inventory management models and discuss their application in supply chain management (10 marks)

## **QUESTION FOUR**

- a) The impact of various supply chain initiatives can be estimated in terms of costs and benefits. Propose to the management of your organization how they can reduce costs through effective supply chain management (12 marks)
- b) The increasing need for collaboration has increased the importance of ERP system as well as the need for new generation of systems that support internal and external integration. Using a suitable criteria, distinguish between ERP and ERP II (8 marks)

#### **QUESTION FIVE**

- a) Firms that specialize in production of input usually achieve higher economies of scale vis-à-vis vertically integrated firms. Discuss the four major sources of economies of scale (12 marks)
- b) Advise your firm on the different elements of transaction costs that should be closely monitored when contracting (8 marks)