

Tutorial letter 201/3/2013

Supply Chain Alignment

MNP3702

Semesters 1 & 2

Department of Business Management

IMPORTANT INFORMATION:

This tutorial letter contains important information
about your module.

BAR CODE

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1 INTRODUCTION

Dear student

This tutorial letter contains the answers to Assignments 01 and 02 and the format of the examination paper. It also includes an example of previous examination paper and revision questions.

2 GUIDELINES FOR ANSWERING ASSIGNMENT 01

This assignment covers study units 1 and 2 of the study guide and the corresponding parts in the prescribed book. Completing and submitting this assignment was **compulsory** and contributes to your year mark. You will not be allowed to write the examination unless you have completed and submitted this assignment. You should have completed this assignment on a MARK-READING SHEET. This assignment consists of ten (10) multiple-choice questions. You can expect similar types of questions in the examination.

The correct options for the answers and the relevant section in the study material are given below:

Assignment 01

- 1 Answer: 1 (Refer to page 7 in the prescribed textbook.)
- 2 Answer: 2 (Refer to page 12 in the prescribed textbook.)
- 3 Answer: 3 (Refer to page 12 in the prescribed textbook.)
- 4 Answer: 4 (Refer to page 14 in the prescribed textbook.)
- 5 Answer: 2 (Refer to page 16 in the prescribed textbook.)
- 6 Answer: 4 (Refer to page 154 in the prescribed textbook.)
- 7 Answer: 4 (Refer to page 142 in the prescribed textbook.)
- 8 Answer: 4 (Refer to page 176 in the prescribed textbook.)
- 9 Answer: 2 (Refer to page 183 in the prescribed textbook.)
- 10 Answer: 4, (Refer to page 185 in the prescribed textbook.)

3 GUIDELINES FOR ANSWERING ASSIGNMENT 02

This assignment covers study units 3 to 7 of the study guide, and the corresponding parts in the prescribed book. You should have completed this assignment on a MARK-READING SHEET. This assignment consists of ten (10) multiple-choice questions. You can expect similar types of questions in the examination.

The correct options for the answers and the relevant section in the study material are indicated below:

Assignment 02

- 1 Answer: 1 (Refer to page 257 in the prescribed textbook.)
- 2 Answer: 2 (Refer to page 257 in the prescribed textbook.)
- 3 Answer: 3 (Refer to page 309 in the prescribed textbook.)
- 4 Answer: 1 (Refer to page 310 in the prescribed textbook.)
- 5 Answer: 2 (Refer to page 314 in the prescribed textbook.)
- 6 Answer: 3 (Refer to page 321 in the prescribed textbook.)
- 7 Answer: 3 (Refer to page 325 in the prescribed textbook.)
- 8 Answer: 1 (Refer to page 356 in the prescribed textbook.)
- 9 Answer: 2 (Refer to page 448 in the prescribed textbook.)
- 10 Answer: 4 (Refer to Page 485 in the prescribed textbook.)

4 GUIDELINES FOR ANSWERING EXAMINATION QUESTIONS

It is essential to follow a systematic approach and to use headings and paragraphs when answering examination questions and essay-type assignments (such as the self-evaluation Assignment, 03, in Tutorial Letter 101). Students often ignore the importance of using headings and paragraphs, which can result in their marks being disappointing. I have also found that students struggle to answer essay-type questions. For this reason I provide some guidelines below on how to answer this type of question.

4.1 Structure and headings

Use **STRUCTURE AND HEADINGS** when answering essay-type questions. Do not, under any circumstances, write only **ONE LONG PARAGRAPH**. An essay that consists of one long paragraph indicates that you do not know how to structure your answer. When you write long, unstructured paragraphs you tend to start drifting away from the question that is being asked.

4.2 Relevance

Make sure your answer is relevant to the question being asked. Do not try to include irrelevant information in your answer. You will not receive any marks for such information. Make sure you identify exactly what is being asked and that you answer the question directly. Unfortunately, some students provide a very thorough and detailed discussion on a question that was not asked! These answers are then marked as incorrect.

4.3 Answer the entire question

Make sure you read the question and answer **everything** that is being asked. Some students only answer part of the question and then expect full marks. If a student answers only 40% of the question being asked, he or she cannot be given more than 40% of the marks for that question. For example; a 25 marks-question that requires an answer to be presented in five steps of equal length. If you discuss only the first two steps, and write five pages about these two steps, you will not receive more than ten marks for this question, simply because you only answered part of the question.

4.4 Time management

Many students complain that they did not have enough time to complete the examination paper. However, part of the examination process is to determine whether students can identify what is being asked, and give a concise, but complete answers. You have to be able to identify the important aspects of the question, which means that you should only provide information that is strictly relevant.

Please consult Tutorial Letter MNALLE-Q/4/301/2013, which provides clear guidelines on the correct approach to answering essay-type questions.

5 FORMAT OF THE EXAMINATION PAPER

The format of the examination paper will be as follows:

- Section A: 20 Multiple-choice questions (20 marks)
- Section B: A compulsory question that may be based on a case study (25 marks)
- Section C: Two essay-type questions or paragraph-type questions of 25 marks each. You **must** answer either of the two questions (25 marks)

Total: 70 marks

The year mark contributes 10% to the final mark and the examination 90%. The examination is two hours long.

5.1 Multiple-choice questions (section A)

Section A of the examination consists of 20 multiple-choice questions and must be answered in pencil on the mark-reading sheet that will be provided to you by the invigilator. Examples of multiple-choice questions can be found in Assignments 01 and 02. You can expect similar questions in the examination.

Please remember to write your student number and module code on the mark-reading sheet. Also write the answers to the questions in section A in your examination answer book in case the mark-reading sheet gets lost.

5.2 Example of how to answer a case study (section B)

When answering sections B and C of the examination paper, you need to start by analysing the questions carefully and critically in order to determine precisely what is required of you.

6 CONCLUDING REMARKS

I trust you will find these guidelines helpful. If you experience any problems, please do not hesitate to contact your lecturer.

Best wishes

Mr IM Ambe

DEPARTMENT OF BUSINESS MANAGEMENT

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7 PREVIOUS EXAMINATION PAPER

UNIVERSITY EXAMINATIONS



UNIVERSITEITSEKSAMENS

UNISA 
university
of south africa

MNP303K (483236) October/November 2012
RMP303F (478300)

SUPPLY CHAIN ALIGNMENT

Duration : 2 Hours

70 Marks

EXAMINERS :

FIRST :

SECOND :

MR IM AMBE

PROF JA BADENHORST

Use of a non-programmable pocket calculator is permissible.

Closed book examination.

This examination question paper remains the property of the University of South Africa and may not be removed from the examination venue.

EXTERNAL EXAMINER: DR MJ NAUDE

This paper consists of 8 pages, which include the instructions for completing a mark-reading sheet.

This examination paper remains the property of the University of South Africa and may not be removed from the examination room.

SECTIONS A AND B ARE COMPULSORY. IN SECTION C YOU MAY ANSWER ANY ONE OF THE TWO QUESTIONS.

SECTION A**[Total: 20]**

All questions in section A are compulsory. Answer all the questions on the mark-reading sheet. Each question counts one mark.

Question 1

Which one of the following is best considered as the end item manufacturer's second tier supplier in a supply chain?

- 1 the raw materials supplier
- 2 *the components manufacturer*
- 3 the final end item consumer
- 4 the wholesale distributor

Question 2

Which of the following options best describes the *future* of supply chain management?

- 1 Supply chain relationship formation and extension
- 2 Increased supply chain capabilities
- 3 Inventory management and cost containment
- 4 Mass manufacturing

Question 3

The term supply chain management and the field of study it represents today seem to have emerged in the:

1. 1960s
2. 1970s
3. *1980s*
4. 1990s

Question 4

Which one of the following statements is TRUE about supply chain management?

- 1 Supply chain management was invented by the auto manufacturing industry.
- 2 Purchasing is seen as the final and most difficult step in the supply chain.
- 3 Service response logistics is the digital distribution of services.
- 4 Strategic partnerships are seen as one of the foundations of supply chain management.

Question 5

Which one of the following is an important issue in the purchasing function of an organisation?

- 1 demand management
- 2 supply base reduction
- 3 network design
- 4 performance management

Question 6

Some measures of forecasting accuracy include mean absolute deviation, mean absolute percentage error, and mean squared error. The formula for each is dependent on the forecast error, which is calculated by using the equation:

- 1 Actual demand for period t divided by the forecasted demand for period t
- 2 Actual demand for period t plus the forecasted demand for period t
- 3 Actual demand for period t minus the forecasted demand for period t
- 4 The average of actual demand for period t and forecasted demand for period t

Question 7

Which one of the following is a qualitative forecasting method?

- 1 Time series forecasting models
- 2 Cause-and-effect forecasting models
- 3 Multiple regressions forecast
- 4 Jury of executive opinion

Question 8

Which one of the following basic production strategies used for addressing the aggregate planning problem would work best with make-to-order manufacturing firms?

- 1 Capacity Production Strategy
- 2 Level Production Strategy
- 3 Backlog Production Strategy
- 4 *Chase Production Strategy*

Question 9

Which of the following is NOT one of the three basic methods used to calculate the available-to-promise quantities?

1. Discrete available-to-promise
2. Indiscrete available-to-promise
3. Cumulative available-to-promise without looking ahead
4. Cumulative available-to-promise with looking ahead

Question 10

Which of the following is an engineering document that shows an inclusive listing of all the component parts and assemblies making up the final product?

- 1 Master Production Schedule
- 2 Distribution Requirement Plan
- 3 Resource Requirement Plan
- 4 Bill of Materials

Question 11

A key manufacturing philosophy that emphasizes waste elimination and the minimizing of inventories is:

- 1 Just-in-time (JIT)
- 2 Quick Response (QR)
- 3 Efficient Consumer Response (ECR)
- 4 *Total Quality Management (TQM)*

Question 12

Japanese manufacturing firms sometimes create cooperative coalitions with their suppliers in order to provide the suppliers with a certain degree of financial support. What are these cooperative coalitions called?

1. Jidoka Networks
2. Keiretsu Networks
3. Kanban Networks
4. *Kaizen Networks*

Question 13

Which one of the following carriers typically transports goods for the company that owns the carrier? They are not subject to economic regulation, and since the fleets are rather large the cost of transport is very likely less than if the company had hired another company to provide the service.

- 1 Common carrier
- 2 Exempt Carrier
- 3 Private Carrier
- 4 Contract Carrier

Question 14

Which one of the following modes of cargo transport can be characterized as being the most inexpensive and very slow, yet good for transporting very heavy goods a long-distance?

- 1 Water Carriers
- 2 Air Carriers
- 3 Rail Carriers
- 4 Motor Carriers

Question 15

Which one of the following relates to a cost-of-service pricing strategy used by logistics service providers?

- 1 Carriers price their services at competitive levels.
- 2 Carriers desire to establish prices that vary according to fixed and variable cost.
- 3 There is an increasing level of competition.
- 4 It is a profit-maximising approach.

Question 16

The acts of receiving shipments, breaking down shipments, repackaging shipments, and distributing components to a manufacturing location or finished products to customers by a distribution center is referred to as:---

- 1 Piggy backing
- 2 Transshipping
- 3 Crossdocking
- 4 Customs Brokering

Question 17

Which of the following is NOT consistent with a decentralized warehousing system?

- 1 Higher safety stocks required
- 2 Shorter lead times
- 3 Lower total operating costs
- 4 Lower transportation fees

Question 18

Which one of the following is NOT a desired customer relationship management (CRM) capability in the area of sales force automation?

- 1 Event-based marketing
- 2 Sales activity management
- 3 Sales territory management
- 4 Lead management

Question 19

Which one of the following is the **first** activity of the supply chain management integration model?

- 1 align supply chain strategies with key process objectives
- 2 identify critical supply chain trading partners
- 3 review and establish supply chain strategies
- 4 develop internal performance measures for key process effectiveness

Question 20

Which one of the following is NOT a step in creating a set of world class performance measures?

- 1 Identify the firm's strategic objectives
- 2 Implement the new performance system
- 3 Identify internal and external trends likely to affect the firm and its performance over time.
- 4 Develop a demand driven network that is flexible and responsive.

SECTION B: COMPULSORY

READ THE FOLLOWING EXCERPT AND ANSWER THE QUESTIONS THAT FOLLOW.

[TOTAL: 25 Marks]

SUPPLY CHAIN MANAGEMENT IN ACTION: Manufacturing planning at General Nutrition centres, Inc

General Nutrition Centres, Inc (GNC), the world's largest nutrition supplement retailer, began as a simple humble store in Pittsburg, Pennsylvania. Then it became a health food store called Lackzoom, where profits were initially modest. With the advent of the health-conscious 1960s, however, founder David Shakarian was able to expand his business outside of Pennsylvania and into other states. A name change ensued, and GNC soon began producing not only supplements, but food, drinks, and cosmetics as well. Today, the company has more than 5,000 locations inside the United States and more than 830 locations in 46 international markets. As implied by the company's motto, "GNC focuses on marking quality products that encourage consumers to pursue healthier lifestyles. GNC ensures product integrity in various fashions, from engaging in scientific research and product discovery to requiring transparency about ingredient safety.

Nutra manufacturing, the manufacturing division of GNC, produces these nutritional supplements in a plant with an annual capacity of 13 billion units in Greenville, South Carolina. The bulk products are shipped to a 300, 000 square foot facility about 30 miles away in Anderson, South Carolina, for packaging. Nutra manufacturing faces multiple production challenges. First, the production process is extremely intricate, with multiple changeable parts. There are roughly eight primary manufacturing operations per product, and each of these operations may be individually associated with alternative operations. Second, production planning proves difficult with the sheer number of products Nutra manufacturing produces. Third, the dietary supplement market has a very short product life and new supplements come in vogue quickly due to shifting demographics.

Nutra manufacturing needed new planning and information technology to combat these production challenges. A project team within Nutra Manufacturing was formed to improve manufacturing planning. After the evaluation of a range of solutions, the team settled on Voyager manufacturing Planning software from Logility, an Atlanta-based supplier of collaborative solutions to optimise supply chains. Selected for its affordability and user friendliness, the new solution enables Nutra Manufacturing to collaborate and synchronise planning, sourcing, production and logistics activities with its supply chain members. Internally, the solution enables the manufacturing division to quickly create constraint-based capacity plans and master production schedules. Moreover, the new solution also indicates excess capacity available that can be sold to third-party customers.

The solution quickly proved its worth by providing greater confidence that production plans can become executable schedules. In addition to standardisation packaging across the various nutritional supplements, the solution also allowed analysts to review things such as backlog levels, trends in

demand, and production plan performance compared to the budget, among other capabilities. This was a marked improvement where previously Nutra Manufacturing utilized Microsoft Excel for operations planning and scheduling. The former system had numerous acute limitations, such as no constraint visibility, suboptimal production schedules, no graphical analysis of planning and most importantly, the creation of production plans that were not always executable. Another notable benefit of the new implementation at Nutra Manufacturing is the ability of the new solution to integrate with GNC's enterprise resources planning (ERP) systems. This improved synchronization has improved workflows, inventory turn-over, and information-sharing across functional divisions within the firm, and unlocked valuable ERP data for strategic business planning and decision making.

Source: Adapted from Wisner, JD; Tan, K-C and Leong, GK. 2008. Principles of supply chain management: A balanced Approach. Mason, Ohio: South-Western Cengage learning; pp 173.

Questions

[25]

From the case study, it is acknowledged that one of the notable benefits of the new implementation of Nutra Manufacturing is the ability to integrate with the General Nutrition Centre Inc (GNC) enterprise resources planning (ERP).

- 1 What are the two key differences between Legacy system Material Resources Planning (MRP) systems and integrated Enterprise Resources Planning (ERP) systems? (10)
- 2 Why should an organization such as GNC pursue or get an ERP system? (5)
- 3 Briefly describe how an integrated ERP system can work at GNC. (10)

SECTION C

ANSWER ANY ONE OF THE FOLLOWING QUESTIONS.

[TOTAL: 25]

Question 1

[25]

- 2.1 Define the term "supply chain management". (5)
- 2.2 Briefly explain the elements of lean production under the following headings:
 - i Lean supply chain relationships (5)
 - ii Lean layouts (5)
 - iii Continuous improvements (5)
 - iv Workforce commitments (5)

Question 2

- 2.1 Briefly explain the term "collaborative planning, forecasting and replenishment" (CPFR). (3)
- 2.2 Explain the benefits of "collaborative planning, forecasting and replenishment" (CPFR) (7)
- 2.3 Briefly explain forecasting techniques under the following headings:
 - i Types of qualitative forecasting methods (8)
 - ii Time series forecasting models as a quantitative method. (7)

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8 EXAMINATION REVISION QUESTIONS

Chapter 1/study unit 1

1. Provide an example of three problems retail consumers face that can be blamed on an ineffective and/or inefficient supply chain. What factor in the supply chain could lead to these problems? (15)
2. Discuss the differences between supply chain partnerships of the past and modern supply chain partnerships. (15)
3. The textbook indicates "effective supply chain management relies on high levels of trust, cooperation, collaboration and honest, accurate communications". Briefly explain what this means and why it is true. (10)
4. Name the four elements of supply chain management and provide a short description of each of these four elements. What types of failures might each of those elements create within the supply chain? Why might those results be linked to errors in a particular element? (20)

Chapter 5/study unit 2

1. List and describe two types of qualitative forecasting methods. (10)
2. The four components of time series data are: trend variations, cyclical variations, seasonal variations, and random variations. Briefly describe each type of variation. (12)
3. List FOUR benefits that can be achieved by implementing a successful CPFR programme. (12)

Chapter 6/study unit 3

1. Briefly describe the differences between dependent and independent demand. Provide examples of dependent and independent demand items for each of the following industries: the automotive industry, the personal computer industry and the bicycle industry. (20)
2. Briefly define the following six terms as they apply to MRP: (18)
 1. parent
 2. gross requirement
 3. scheduled receipt
 4. planned order release
 5. lot size
 6. projected on-hand inventory

Chapter 7/study unit 4

1. What are TWO key differences between legacy MRP systems and integrated ERP systems? (8)
2. What is ERP? Why was it developed? (5)
3. Why should the organisation obtain an ERP system? (10)
4. Why might the organisation not want to get an ERP system? (10)
5. If an organisation did obtain an ERP system, what would be required for its successful implementation? (10)

Chapter 9/study unit 6

1. Why is the workforce considered such an important element of JIT? (5)
2. List four of the five modes of transportation. For each mode, provide a brief description (with examples) of the type of cargo that typically travels via that mode of transport. (20)

- 3 Warehousing is considered a very important part of the transportation process. Why is it, though, that many buildings that used to be called “warehouses” are usually referred to today as “distribution centres”?
(5)