

**BOTSWANA COLLEGE OF DISTANCE AND OPEN LEARNING**

**In collaboration with**

**THE COMMONWEALTH OF LEARNING**

**Commonwealth Executive Masters in Business Administration**

**Commonwealth Executive Masters in Public Administration**

**OPERATIONS MANAGEMENT**

**Sessional Examination**

**Marks: 100**

**Time allowed: 3 hours**

---

**Instructions**

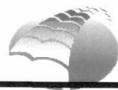
1. This paper comprises of Part A and Part B. Answer **ALL** questions in Part A and any **THREE** (3) questions in Part B.
2. Answer questions according to instructions given in each section
3. Write answers in the answer booklet provided
4. Answer **ALL** questions, in grammatical **English**.



Answer all questions

**Question 1**

Wolf Motors has just expanded its network of auto dealerships to include its first auto supermarket where three different makes of cars are sold at the same facility. John Wolf, the president and owner of the dealership, has identified three factors that have contributed to the success of the dealerships: volume, “one price-lowest price” concept of pricing and after-the sale service to the cars sold. Focusing on the service aspect, three components are critical to providing quality after-the-sale service: well-trained technicians, the latest equipment technologies, and an adequate supply of service parts and materials. Currently each dealership is responsible for ordering and managing its inventory of parts and service materials. The recent growth has brought with it both space and financial resource constraints. John is now wondering what, if anything can be done with respect to the purchasing of service parts and materials that would help address some of these concerns. Analysis Wolf Motors is trying to reduce the total operating costs in order to compete effectively in a very price competitive market with its “one price-lowest price” strategy, while at the same time it needs to maintain a high level of service. High service levels have traditionally been linked to high levels of inventory of spare parts. There is a need to maintain timely delivery of service parts due to the limited space available. There are various categories of parts and materials. One key distinction is that some parts are available only from the auto manufacturer or its certified dealer/wholesaler. Other parts and materials (i.e., oil, lubricants, fan belts, and so on) are more generic and can be purchased from a number of sources, including local vendors. Parts are not only used to service and repair cars but are also sold over-the-counter to the do-it-yourself mechanic or other repair garages. Therefore, the overall levels of demand and supporting inventory must be coordinated among service needs, sales, and special promotions such as free brake inspections or discounts on oil changes and air conditioner service. Weather also plays a role in the demand for parts: extreme cold affects the electrical/ignition systems, heat affects the air-conditioning, and rain affects the wipers.



Issues faced by Wolf Motors 1. Structural Issues: Structural issues faced by Wolf Motors pertaining to the purchase of parts and materials. These issues include two categories of decisions: (1) centralized purchasing versus continuing a decentralized model of letting each dealership purchase and manage its own inventories and (2) the responsibility relationships purchasing should maintain with inventory management and control, including the distribution of parts for service and over-the-counter sales. Although there is some advantage to be gained by maintaining a decentralized, local purchasing function, it appears that Wolf Motors has grown to the point where a more formal central purchasing function is warranted. Wolf's size should give it some economy of scale leverage to help maintain low costs and timely deliveries. Within the supplier relationship process, personnel could be assigned specific responsibilities for vendors such as:

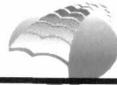
- Specific auto manufacturers or their certified distributors
- Wholesale distributors of generic parts such as alternators, carburetors, or brake pads
- Wholesale distributors of consumable materials such as oils, lubricants, or filters

The second structural issue pertains to the level of integration that needs to be structured and maintained between purchasing, inventory stocking and control, and parts distribution. Should these be separate functions that "hand off" the responsibility for materials as they flow through the system, or should an integrated supply chain be implemented? The issue is one of being able to balance the purchasing costs, inventory carrying costs, distribution/logistics costs, and target service levels.

2. Policies and Procedures: Given that the parts and materials being purchased differ quite a bit with respect to availability, usage, costs, and delivery lead time, the policies and procedures used to order various parts may be different. Alternative policies that may be used include:

- Competitive bidding
- Single-source contracting
- Blanket orders
- Open-ended orders

Of course, these approaches are not mutually exclusive and may be combined for certain categories of parts. Going out for competitive bids would be most appropriate for "commodity" type items that are readily available from a number of vendors. Given that other aspects of the service, such as reliability and dependability, are comparable, then a competitive bid will help reduce purchase costs. Where the quality of the parts and/or service provided differs, and then a single-source contract may be warranted. This should lead to a partnership



arrangement that is beneficial to both parties. Blanket orders are used when a number of parts are to be purchased from a single supplier. Blanket orders help reduce the overall ordering and distribution costs by grouping items under a single order. This may be an appropriate procedure for purchasing oils and lubricants from a local supplier or for ordering “factory certified” parts from a manufacturer or its designated distributor. Open-ended orders provide flexibility in allowing items to be added or deleted from an order or for the time period of the order to be extended, such as in a blanket order of oil. Factors such as the item’s availability, relative importance, usage levels, and costs will have a significant impact on the way the item should be procured. This has implications also in determining how the supplier relationship process’s performance should be measured and evaluated. Just getting the lowest price is no longer good enough. Other measures of performance, such as product quality, reliable on-time delivery, and ordering flexibility with respect to the size and timing of the order, may be more important than price.

3. Inventory Management Issues: The financial resource and space constraint issues brought out in the case provide the opportunity to discuss the close relationship and necessary integration that purchasing must have with inventory management. There is the issue of where to stock different parts in the storeroom or warehouse. Frequently used material should be stored in easily accessed locations, and a random location system will minimize space requirements.

**Question 1**

- a) What recommendations would you make to John Wolf with respect to structuring the purchasing process for the Wolf Motors dealership network?

**[15 Marks]**

- b) How might purchasing policies and procedures differ as the dealerships purchase different types of service parts and materials (e.g., lubricants versus genuine GM parts)?

**[15 Marks]**



- c) How can supply-chain management concepts help John Wolf reduce investment and space requirements while maintaining adequate service levels?

[10 Marks]

**Part B**

**(60 marks)**

Answer any **THREE (3)** of the following questions. Each question contributes 20 marks.

**Question 1**

Write short notes on:

- a) Benchmarking
- b) Lean Services
- c) Determinants of buyer power
- d) Value chain analysis

[20 Marks]

**Question 2**

Evaluate, with the aid of practical examples, the difference between ‘Product’ and ‘Service’ in operations management.

**Question 3**

Analyse and appraise the role and responsibilities of an operations manager within an organization.

[20 Marks]

**Question 4**

Justify with an appropriate example, how a materials requirement planning (MRP) system works.

[20 Marks]

**End of Exam.**