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Centre for Open and Lifelong Learning

FEEDBACK TUTORIAL LETTER

1st SEMESTER 2020

ASSIGNMENT 1

Operations Management (old Business Operations)
OPM611S

Feedback Tutorial Letter

Business Management (OPM611S) (old BOP611S)

Assignment number 1: March 2020

Dear Students,

Let me congratulate you in completing your assignment number 1 for Business Management in the first semester. As you are aware, the COVID-19 viral outbreak has adversely affected various socio-economic activities globally. It has been a challenge semester to everyone. In general, your performance in this assignment has been good; we are particularly impressed by the way you made use of sources to expand your answers. I would like to however to caution you on how you make use of sources when you consult for references. Please avoid using direct quotes from these sources, without citing as this is classified as plagiarism. Plagiarism is an unethical behaviour that can result in you losing marks. Please avoid this by all means. Instead, try summarising other people's work in your own words and then acknowledge the source.

We would also like to commend those who made efforts to seek assistance from tutor-markers where they did not understand, this is the way to go in distance education. Finally, let me conclude by wishing you all the best for Assignment 2.

I have highlighted issues pertaining to your assignment number 1 below, please go through and make sure you understand, it may be of vital importance for your preparation for Assignment 2 and the exam.

1. Which of the following statements describes the concept *value added*?

- a) Processes exploited to conceive and deliver goods and services at cheaper prices.
- b) Additional value of a commodity over the cost of commodities used to produce it from the previous stage of production.
- c) Additional value in the price of a product in comparison with competitive products.
- d) Additional value added to a product when training staff to work smarter.
- e) None of the above.

Answer B

2. The three major functional areas of an organisation are:

- a) Strategy, human resources and finance.
- b) Human resources, marketing and finance.
- c) Operations, procurement and sales.
- d) Operations, finance and marketing.
- e) None of the above

Answer D

3. A supply chain is a set of organisations directly linked by:

- a) Upstream, demand side, and downstream, supply side, flow of products, services, finances, and information from a supplier to a customer, and finally the consumer or end-user.
- b) Upstream, supply side, and downstream, demand side, flow of products, services, finances, and information from a supplier to a customer, and finally the consumer or end-user.
- c) Upstream, supply side, and downstream, demand side, flow of products, services, finances, and information from a customer to a supplier, and finally the consumer or end-user.
- d) Upstream, supply side, and downstream, supply side, flow of products, services, finances, information from a supplier to a customer and finally the supplier or end-user.

Answer B

4. There are a number of other influences on the Supply Chain that management should consider. Which one of the following relates to the execution of business transactions over the Internet?
- a) Pricing and revenue management.
 - b) eBusiness.
 - c) Information technology.
 - d) Globalisation.

Answer B

5. _____ is a measurement of how products and services supplied by an organisation meet the customers' expectations.

- a) Demand forecasting.
- b) Sales forecasting.
- c) Customer satisfaction.
- d) None of the above.

Answer C

6. _____ is an on-going process to improve products, services, or processes.

- a) Robust design.
- b) Change control process.
- c) Quality leadership process.
- d) Continuous improvement process

Answer D

7. If an organisation manufactures 480 hats per week that they plan to sell at R150 per hat and the total cost to produce the hats is R38200, what will the productivity ratio be?

- a) 1.767.
- b) 17.67.
- c) 176.7.
- d) 0.176.

Answer A

8. Which of the following is not a feature common to all forecasts?

- a) The underlying system of the past will be present in the future
- b) No precise prediction can be made
- c) The shorter the time horizon the less reliable the forecast
- d) Forecasts for groups of items are more accurate
- e) All of the above options are features common to all forecasts

Answer C

9. Exponential smoothing is characterised by all but one of the following:

- a) Sophisticated method
- b) Smoothing constant
- c) Actual demand
- d) Previous forecast
- e) Regression.

Answer E

10. There are various reasons why organisations hold inventory. Which of these reasons relates to holding inventory found in retail outlets such as Pick n Pay, Edgars or Woolworths?

- a) To distance an organisation from uncertain demand.
- b) In order to decouple the production process.
- c) To smooth the production requirements.
- d) To facilitate availability of a wide variety of products for the customer.

Answer D

(10) Marks

Question 2

Describe the main objective of designing supply chain networks and discuss the different process design elements. **(5) Marks**

The objectives of designing supply chain networks is customer satisfaction, market structures and segmentation and cost control.

- i) Procurement: identifying suitable suppliers and their location

- ii) Manufacturing: location, processes, resources and market access
- iii) Finish goods: distribution of finish goods

Question 3

Question 3. (Design of goods & Services)

Read the case study below and answer the questions accordingly.

An elevator manufacturing company

Mrs Beauty, the general Manager of a company manufacturing elevators, was frustrated with the lack of co-operation between the mechanical engineers, who designed new elevators, and the manufacturing engineers, who determined how to make the elevators. The mechanical engineers would often design an elevator without consulting the manufacturing engineers and expect the factory to figure out how to build it. The products were difficult or nearly impossible to build, and their quality and cost suffered tremendously. Designs frequently moved between the engineers in order to improve manufacturability. Customers suffered as a result because they have to wait for long periods of time.

Mrs Beauty believed that if these managers communicated effectively during design, most of the problems would be resolved. At her wits' end, she found a large empty room and moved these engineers into it. A month later, to her surprise, both group engineers learnt to co-operate by building a wall of bookcases between them.

What would you do in this case to resolve such a scenario?

Students can discuss concepts such as but not limited to:

- The importance of the customer in product and service design, **(4)**
- What happened to the teams when effective communication is omitted **(3)**
- Product development team , etc. **(3)**

Students are required to list the importance of goods and services design, basis of competitiveness, functions of goods and service designs, product development.

- If an organisation's goods and services are well designed, the organisation is much more likely to be successful than is a competitors organisation that has poorly designed goods or services.

- Goods design includes all activities connected with introducing a new good to a market; service design includes all activities connected with bringing a new service to a market.
- Managers needs to be aware that there are many aspects to product design this includes:
- Pressure and **outside influence** from other variety of sources, customers and markets, both local and international
- Full exploitation of the latest **technologies** available
- **Economic indicators** , where goods and services can be produced more cheaply
- Pressures brought to bear due to the change in customer demand
- ***The competition***
- ***Cost availability***

An organisation needs to focus on customer **preferences, requirements, and expectations** during the design of the new good or service, the following can be considered:

- The specifications of the good and services must ***be specified and documented***
- The teams involved in the designing of the elevators' ***must work together*** to avoid confusions, and achieve ***customer satisfaction***
- The teams must ***meet constantly*** and ***research and interpret*** the desires and requirements of customers, to exceed the customers' expectations.
- Product development team is involved in identifying customer's requirements, finding out about the product specification.
- The teams must ***co-operate in setting up quality standards*** and to make sure that the new good or service are thoroughly tested
- ***Cost targets*** must be developed

During the phase of design the following objectives must be satisfied:

- **Time** it will take to design the new goods or services
- It is important for organisation to become ***close to customers*** and include customers during the product development phase.
- Steps in designing and development :
- ***Planning phase***
- ***Concept development phase***
- ***System design phase***
- ***Detailed design phase***
- ***Testing and improvement phase***

System, parameter, and tolerance design

- The **system design of the (elevators)** - is the process of applying scientific and engineering knowledge to produce a basic functional design that meets both customer needs and manufacturing requirements.
- **Parameter** establishes specifications, which represent the transition from a designer's concept to a producible design.
- **Tolerance** provides specification limits during manufacture, it also involves the determination of permissible variations in a specifications.

In conclusion the mechanical engineer has to oversee the following:

- Analyze problems to see how a mechanical device might help solve the problem
 - Design or redesign mechanical devices, creating blueprints so the device can be built
 - Develop a prototype of the device and test the prototype
 - Analyze the test results and change the design as needed
 - Oversee the manufacturing process

Manufacturing Engineers focus on the design and operation of integrated systems for the production of high-quality, economically competitive products

- to reduce costs and improve product quality
- Develop the best assignment of machines and equipment
- Develop and implement fabrication processes
- Identify the most cost-effective material handling and facility layout

Question 4.

- **Question 4. (Process Design)**
- Discuss the strategies for manufacturing process (6)
- Make to order – low volume, big variety ,customers specification e.g. furniture making
- Asemble to order- small number of assemblies, large diversity, shortest time e.g. Paint shop
- Make to order- large quantity, into stock, in anticipation of demand, e.g consumer goods producers.

Question 5. (Forecasting)

Actual sales of washing machines for the first six month in 20XX were as follows:

January	60	February	80	March	42
April	68	May	44	June	72

Use this information and determine in whole numbers:

- i. The average actual monthly sales for that period **(2)**
- ii. Trends: Reduce this average by 6% per month for the next three months **(3)**
- iii. SMA: make a forecast for July using a three months simple moving average. **(3)**
- iv. WMA: make forecast for July, using three months weighted moving average where the weights are 0.5; 0.3 and 0.2 respectively. **(4)**

Make a forecast for July, using the exponential smoothing technique, if the forecast for June was 74 and the smoothing constant is 0,5 **(5)**

- i) **Average** = $60+80+42+68+44+72=366/6=61$
- ii) **Trends:** July: $61-6\% = 61-3.66= 57$ washing machines
 Aug: $57-6\%=57-3.42=54$ washing machines
 Sept: $53-6\%=53-3.18=51$ washing machines
- iii) **SMA:** $(68+44+72)/3=61$ washing machines

- iv) **WMA:** April: $68 \times 0.2 = 13.6$
 May: $44 \times 0.3= 13.2$
 June: $72 \times 0.5= 36$
 63 washing machines

- v) **Exponential smoothing:**
 $= F = F + \alpha (A - F)$
 $= 74 + 0,5 (72 - 74)$
 $= 74 + 0,5(-2)$
 $= 74 - 1$
 $= 73$ washing machines

Question 6. (Inventory Management)

- List 2 reasons for holding inventory **(2)**
- To decouple the production process
- The insecure supply of raw materials
- Distance oneself from uncertain demand
- Present customers with a wide variety of products
- Advantages of discounts from suppliers
- To avoid price increases
- The reality of pipe line inventory
- To smooth out production requirements (seasonality)

- Prevent of stock-outs
- Advantage of ordering cycle

Any two of the above

Wishing all the best with the upcoming exams, Stay safe!

Ms. D. Shikale