THE OPEN UNIVERSITY OF SRI LANKA

COMMONWEALTH EXECUTIVE MASTER OF BUSINESS/PUBLIC ADMINSTRATION (CEMBA/CEMPA) PROGRAMME

LEVEL 9

MSP9304/MCP1604 – OPRATIONS MANAGEMENT

FINAL EXAMINATION - 2021

DURATION – THREE (03) HOURS [ANSWERS SHOULD BE COMPLETED AND UPLOADED WITHIN THREE (03) HOURS]

Date: 25th September 2021 **Time: 9.30 am to 12.30 pm**

Note to the students:

- Answer only one question according to the instruction given below.
- Answers should be focused and methodical.
- Write down your Student Registration Number on each page. All pages should be numbed and properly arranged and submitted electronically.
- All written answer scripts should be safely kept with you and need to be submitted to the University when instructed.

- This question paper carries 2 Questions.
- Each student will have a to answer only one question based on their Student Registration Number.
- Please follow the table to know the Question relevant to you.

Last digit of the Student Registration Number	Relevant Question for you
0, 2, 4, 6, 8	1
1, 3, 5, 7, 9	2

- Only the answers made according to the relevant Question as per the above Table will be evaluated.

Question 1

Read the case study on the process design of Boeing's 777 aircraft and answer all the questions given at the end of the case.

Boeing brings its customers on board

No doubt that, most innovative new passenger aircraft to enter service over the last few years was the Boeing 777, a new twin-engine aircraft, in the 300-plus seats category, to compete with established models from McDonnell and Airbus. When Boeing developed the 747 'Jumbo 'jet aircraft, it had no direct competitors. The company's customers either wanted the product or they didn't. For Boeing 777; the company knew that it must consider its customers' requirements. The company had to take a new course of actions to understand its customers' needs and then to transform that knowledge into an aircraft that could best meet those needs.

Boeing has always maintained close involvement with its customers, but this project called for a new depth of listening and understanding. Initially, eight large potential customers (including British Airways, Japan Airlines and Qantas) were invited to participate in creating the design concepts. It soon became clear that the customers did have important requirements, the most vital of which was that the aircraft should be around 25 per cent wider than the 767. In fact, Boeing had originally planned to lengthen the 767 fuselage to give the extra capacity, so avoiding some of the costs involved in a completely new fuselage.

The customers also wanted much more flexibility in the configuration of the passenger space. Conventionally, cabin space had been divided up into sections, separated by fixed galleys and toilets at predetermined positions, fixing the ratio of passenger capacities of each class. However, the airlines all indicated that they wanted to be able to configure the cabin to their own requirements. Finally, the airlines insisted that the new design should be free of the usual level of minor, but irritating, faults which had bugged the early operations of some of the other aircraft.

Boeing did meet its customers' requirements and even improved upon them in some ways. They achieved this by using design/build teams, and by a particularly powerful computer-aided design (CAD) system. Customers were closely involved right from the start of the design. They even came up with some good suggestions. For example, one airline suggested a new layout for the rear galley which allowed an extra 12 seats to being included in the aircraft.

Questions

a) What problems do you think might be associated when bringing customers together in the way that Boeing did? Explain with the advantages of adopting the system.

b) Explain why Boeing's customers wanted the flexibility to configure passenger space? Do you think it will make Boeing more competitive in the airline industry? Explain.

c) Write an article critique carrying out a critical review of the case giving your comments and suggestions.

d) Discuss the type of operations carried out by an aircraft manufacture; identifying the input resources, conversion and the output provided by the system.

[Total 100 marks]

Question 2

Read the case study on Cadbury Schweppes Production Method and answer all the questions given at the end of the case.

Cadbury Schweppes Production Method

Cadbury Schweppes is a multinational soft drink (beverages) and confectionery business that is based in the UK. The business is a public limited liability company. It involves in the manufacture, marketing and distribution of its many branded products. Cadbury Schweppes employs over 40000 people, and its products are available over 200 countries. The company's products can be divided into:

• Beverages (carbonated soft drinks and non-carbonated soft drinks (waters and fruit juices)

• Confectionery (chocolate products, sugar products, chewing gum)

Much of Cadbury Schweppes' manufacturing still takes place in the UK, Australia and North Africa. However, in the 1990s the company moved some of its production to Russia, Poland, Argentina and China, countries with then expanding markets. To satisfy most of its shareholders, Cadbury Schweppes' has set out a strategy to help achieve its objective. This strategy consists of:

• Creating strong regional positions through organic growth, acquisitions and disposals

• Developing strong brands through marketing

• Expanding its marketing share through innovation in products and packaging

• Regularly updating its product portfolio

Despite manufacturing its goods in large quantities, Cadbury Schweppes uses batch rather than flow production methods.

The company must ensure the products are of high quality. Not only there are strict laws about how foodstuff is made, but also Cadbury Schweppes would not want to damage its reputation by allowing inferior products to be sold. The research and development (R&D) wing of Cadbury Schweppes undertakes extensive research to develop new products and to find ways of manufacturing existing brands more efficiently. Cadbury Schweppes uses the services of a specialist at R&D business division based at Reading, England for its UK confectionery business.

Questions

a) Describe the differences between 'batch production' and 'flow production' or differences between 'batch production' and 'assembly line production with the advantages and disadvantages of the two methods.

b) Critically assess the reasons why Cadbury Schweppes uses batch production when making chocolate bars.

c) Which of the following two quality control methods would be better for Cadbury Schweppes? Support your answer highlighting advantages and disadvantages of both method given below:

    i. checking samples of the products after they have been made

    ii. making workers responsible for the quality of their own work

d) Discuss whether establishing a Total Quality Management System is more suitable to ensure superior quality at the Cadbury Schweppes factory.

[Total 100 marks]

(End of the Question Paper)