

VPM's
DR VN BRIMS, Thane
Programme: MMS (2018-20)
First Semester Examination December 2018

Subject	Operations Management		
Roll No.		Marks	60 Marks
Total No. of Questions	7	Duration	3 Hours
Total No. of printed pages	3	Date	14.12.2018

Instructions:-

- **Q. No 1** is compulsory.
- Attempt **Any Four** from the Remaining Six Questions.
- Figures to the right indicate marks in full.

Q1. Enterprise Rent-A-Car is an internationally recognized brand, operating within the United States, Canada, the UK, Ireland and Germany. It is the UK's largest car rental company. Though the company has developed, it has sought to retain the personal feel of a smaller business. One of the most important decisions a business has to make is where to locate. As the location of the business can have a significant effect on how it performs, the decisions where to locate needs to be reviewed regularly. Enterprise Rent-A-Car keeps on deciding where to locate its new or relocated branches. It aims to operate from locations that provide the maximum competitive advantage.

The company encourages its branch managers to take responsibility for local operations. Car rental is an extremely competitive market. There are many car rental companies operating in the UK. Enterprise aims to outperform its competitors through a focus on customer service. The company tries to makes it as easy as possible for customers to use its services.

Enterprise Rent-A-Car's customers include:

- Businesses, which may require regular car rentals for their staff or visitors.
- Individual customers, who may want to hire a car when they are on holiday or if their own vehicle has been involved in an accident.

Service is a core element of Enterprise's ethos and as such, employees seek to provide the highest standards of customer care.

Whenever Enterprise, spends money on opening or moving to a new location, it estimates return on this investment through increased profits. There are several ways in which Enterprise assesses whether a new branch or relocation will generate sufficient return on the required investment. The starting point for any method of investment appraisal is to forecast how much additional revenue the new operation will generate. Enterprise sets high standards so that every new branch will provide a better service for customers.

From the Above case let answer the following questions:

(5*4) 20

Marks

1. Critically examine the factors that Enterprise Rent-A-Car should look for before setting up or relocating its branch offices.
2. "The company encourages its branch managers to take responsibility for local operations" How do you feel through this decentralization their service delivery would improve?
3. What are the costs associated for relocating a new branch? Analyze.
4. "Enterprise sets high standards so that every new branch will provide a better service for customers." What augmented service can be provided for high standards?

Q2. Answer any two from the following.

(5*2) 10 Marks

- a. What are the differences between product and service industries? Explain with suitable examples
- b. You are a residential architect. Develop a layout for the residential building complex so that the project hits the market.

- c. Considering yourself a manufacturing firm, Analyze the factors would you consider to accept a sudden order of product or outsource from another organization

Q3. Answer any one from the following.

(5*2) 10 Marks

The MDH Masala Company has to process five items on three machines: - A, B & C. Processing times are given in the following table:

Item	A _i	B _i	C _i
1	4	4	6
2	9	5	9
3	8	3	11
4	6	2	8
5	3	6	7

- Find the sequence that minimizes the total elapsed time. Find total time taken to complete the job.
- Also find the idle time for machine A, B and C
- Process choice is demand driven. How much variety and volume is to be processed is the key issue. Categories the processes would you choose for which industry and why elaborate?

Q4. Answer any two from the following.

(5*2) 10 Marks

- An auto parts supplier sells Hardy-brand batteries to car dealers and auto mechanics. The annual demand is approximately 1,200 batteries. The supplier pays \$28 for each battery and estimates that the annual holding cost is 30 percent of the battery's value. It costs approximately \$20 to place an order (managerial and clerical costs). The supplier currently orders 100 batteries per month.
 - Determine the ordering, holding, and total inventory costs for the current order quantity.
 - Determine the economic order quantity (EOQ).
 - How many orders will be placed per year using the EOQ?
 - Determine the ordering, holding, and total inventory costs for the EOQ.
 - How as ordering cost changed? Holding cost? Total inventory cost?
(1+1+1+2) 5 marks
- Explain different techniques of motion study with suitable examples. Compare the advantages and disadvantages of time-based and out based Payment system from both management and workers perspective.

Q5. Answer any two from the following.

(5*2) 10 Marks

- What are the Quality Principles of ISO 9000? Why do you feel it is important for business?
- For the following data

Months	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct
Orders	120	90	100	75	110	50	75	130	110	90

- Compute the monthly demand forecast for June through November using a 5-month moving average.
- Compute the monthly demand forecast for April through November using a 3-month weighted moving average. Use weights of 0.5, 0.33, and 0.17, with the heavier weights on the more recent months.
- Compute the mean absolute deviation for June through October for each of the methods used. Which method would you use to forecast demand for November?

c. Discuss the MRP inputs with suitable examples

Q6. Answer any two from the following.

(5*2) 10 Marks

- a. Explain JIT with a conventional example. Can we deploy JIT in “Ready to Eat” food making industry?
- b. If you own a fast food business where all you will have inspection point and why to ensure quality in operation and process delivery.
- c. Explain the bullwhip effect in supply chain? Identify the reasons that leads to bullwhip effects

Q7. Answer any two from the following.

(5*2) 10 Marks

- a. Amazon has a strong supply chain network to support its business. Identify Amazon’s value chain network and how they operate?
- b. If you come across uneven demand, what basic strategies would you as an aggregate planner take to meet them, elaborate.
- c. Explain the difference between quality assurance and quality control with examples.

Q4. c. What are Value added and Non-Value Added activities? Explain with suitable example (5 Marks)