

Register No.: Name.:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SECOND SEMESTER MBA DEGREE EXAMINATION (R), MAY 2023

(2021 Scheme)

Course Code : 21MBA108

Course Name: Operations Management

Max. Marks : 60

Duration: 3 Hours

PART A

(Answer all questions. Each question carries 2 marks)

1. What is the transformation process in Operations Management
2. A manager checked production records and found that a worker produced 200 units while working 40 hours. In the previous week, the same worker produced 150 units while working 36 hours. Did the worker's productivity increase, decrease, or remain the same? Explain.
3. Explain how process flow charts help in method analysis
4. On what concept is the ABC approach to inventory management based? How does it differ from VED analysis?
5. What is Poka-yoke and give a good example of it.

PART B

(Answer any 3 questions. Each question carries 10 marks)

6. Describe each of these systems: craft production, mass production, and lean production
7. Sales of modern fashion shoes were carefully recorded over the 20 months of its life and are published below.

Month	Sales (pairs)	Month	Sales (pairs)
1	20	11	280
2	80	12	250
3	140	13	200
4	200	14	180
5	230	15	160
6	250	16	150
7	280	17	140
8	310	18	130
9	300	19	90
10	300	20	60

- a) Plot the data in the form of a scatter diagram, and attempt to identify any trend (2 marks)

b) Prepare a 4-month moving average to estimate the sales for the 21st month and find the error performance of the forecasting techniques using MAD.

(8 marks)

8. a) Identify the four kinds of quality cost that are included in a cost of quality report. Give examples of costs that fall within each category.

(6 marks)

b) A business generates \$1,000,000 in sales. It incurs \$10,200 in Quality checks and inspections. It pays \$30,000 for appraising the purchased raw materials. Additionally, it pays \$15,000 for repairs on finished items. It maintains a provision of \$5,000 for warranty costs and product returns. Help the management determine the cost of quality as a percentage of sales.

(4 marks)

9. Discuss the role of information technology in SCM

10. Explain the following terms used in lean operations:

- i. Muda
- ii. Kanban
- iii. Heijunka
- iv. Kaizen
- v. Jidoka

PART C

(Compulsory question, the question carries 20 marks)

11. Consider a fast-food restaurant and answer the following questions:

a) The locational factors considered for establishing the enterprise.

(5 marks)

b) Techniques for comparing different location

(5 marks)

c) Type of layout

(5 marks)

d) The company has identified two locations for location the restaurant: A and B. At location A, the estimated annual sales are \$450,000 in sales. Their total variable costs would amount to \$180,000 and total fixed costs to \$200,000 annually if location A was selected. Whereas for location B, the estimated annual sales are \$500,000, total fixed cost and total variable cost was estimated to \$200,000 and \$250,000 respectively. Which location should be selected by the company?

(5 marks)
