

Register No.: Name.:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SECOND SEMESTER MBA DEGREE EXAMINATION (R,S), MAY 2024

(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. Distinguish product design and service design.
2. List out types of productivity.
3. What do you mean by work study?
4. Explain ABC analysis.
5. What is blockchain technology?

PART B

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

6. Trace out the evolution of Operations Management and explain its influence on the functions of Operations Management.
7. Discuss different forecasting techniques.
8. A factory, producing only one item, which it sells for R. 10.50 per unit, has a fixed cost Rs. 50,000 and variable cost Rs.6.50 per unit.
How many units must be produced to break even?
How many units must be produced to procure a profit of Rs. 10,000
What would be the profit if 20,000 units are produced and sold?
9. Analyze the role of information technology in SCM.
10. Evaluate lean manufacturing? Explain principles of lean management.

PART C

(Compulsory question, the question carries 20 marks)

11. Aravind Ltd. is a manufacturing company engaged in the manufacturing of valves. They have been in the business for last 5 years and have been manufacturing only one type of valves. Mr. Madhu is the production head and Mr. Naveen who is the Purchase manager of Aravind Ltd. Mr. Madhu and Mr. Naveen have collected their data and they have presented the data in the meeting. Mr. Madhu presented his report and explained the details as follows:
 - One supervisor with monthly salary of Rs. 6000 with expected increase of 10 % per year.
 - Direct wages of worker as Rs. 5 per unit.

- With 10 % reduction in second year, no change in 3rd year and increase of 10 % every subsequent year.
- Material cost of Rs. 12 per unit with an increase of 10 % every year.
- Power and fuel cost of Rs. 2 per unit with increase of 10 % every year.
- Indirect labor as 50 % of direct labor.
- They will have to buy a new machine with a cost of Rs. 50 lac. with usable life of 5 years.

Mr. Naveen explained his details as follows:

- Component price from supplier at Rs. 22 for the first 3 years with an increase of 10 % every subsequent year.
- Transportation cost of Rs. 2 per unit for the first year with increase of Rs. 0.20 every subsequent year.
- Inventory cost (storage cost) as 5 % per year of the basic material cost.

The Marketing manager has given the sales forecast for next 5 years as follows:

Year	1	2	3	4	5
Sales	400,000	500,000	800,000	900,000	10,00,000

- a) Based on this data, is it economical for Aravind Ltd. to go for buying the product from market or manufacturing in house.
Marks (10)
- b) What other factors should Aravind Ltd. look at for making this decision?
Marks (10)
