KUMARAGURU
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Register Number: ……

MBA DEGREE EXAMINATIONS: APRIL / MAY 2023

(Regulation 2021)

Third Semester

MASTER OF BUSINESS ADMINISTRATION

P21MBE0128: Production Planning and Control

COURSE LEARNING OUTCOMES

CLO1 Explain the fundamental concepts in production planning and control and its applications in business organisations

CLO2 Propose suitable tools and techniques of production planning and control for improving productivity

CLO3 Display analytical thinking skills in the application of suitable production planning and control tools for effective business decision making

Time: Two Hours **Maximum Marks: 50**

PART A (1Q x 10 = 10 Marks) - Case Study – Compulsory:

1 An established pump manufacturing organisation catering to the domestic and international markets has a good demand for its products throughout the year. But it has an erroneous production and distribution situation with many challenges. The company struggled in production, inventory management, distribution and shipment of its products to both domestic and international customers.

Due to improper demand planning, production planning and inventory control, the production of the company often failed to receive needed raw materials and to meet customer orders because of no end-to-end planning. Additional shipments were often needed to get the materials to the plant which created labour and plant inefficiencies and affected margins. All this also resulted in inventory shortages and surpluses that put significant pressure on pricing and cost. The Chief Operating Officer promised significant improvements in the situation by hiring a consultant to solve the above problems.

Question:

As a consultant, explain the production planning and control measures that are immediately needed to solve the problems of the organisation. CLO3 K5

PART B (5Q x 2 = 10 Marks) Answer all the questions:

2	Define Material Productivity and list measures to improve the same.	CLO1	K1
3	Distinguish between routing, loading and scheduling	CLO1	K4
4	Define Line Balancing and list its objectives.	CLO1	K1
5	For a sales volume of 1000 units, select the best manufacturing process if fixed cost is Rs.200 and variable cost is Rs.1 per unit for process A and is Rs.100 and Rs.2 per unit for process B, respectively.	CLO1	K3
6	If the annual demand for an item is 5000 units, ordering cost is Rs.100 per order and the carrying cost per unit per year is Rs.10, estimate EOQ.	CLO1	K5

PART C (3Q x 10 = 30 Marks) Answer Any Three Questions only:

7	Explain the procedure for computing MRP for a product of your choice based on lead time, minimum order quantity and stock on hand.	CLO2	K5
8	Construct a flow process chart for manufacturing a product of your choice and suggest measures to improve productivity.	CLO2	K6
9	A distributor for tyres has an annual requirement of 9600. Each tyre costs Rs.1,600. Ordering cost is Rs.75 and inventory carrying cost is 1 percent per unit per year of the tyre cost. The company operates 300 days in a year. a) Estimate EOQ b) Determine number of orders per year c) Estimate length of order cycle d) If the supplier offers 5 percent discount on price for a minimum order size of 1000 tyres, decide whether the offer can be accepted.	CLO2	K5
10	Explain the modules of ERP and its applications with examples.	CLO2	K5

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