KUMARAGURU
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MBA DEGREE EXAMINATIONS: NOV/DEC 2024

(Regulation 2021)

Third Semester

MASTER OF BUSINESS ADMINISTRATION

P21MBE0128: Production Planning and Control

COURSE OUTCOMES

CO1: Explain the fundamental concepts in production planning and control and its applications in business organisations.

CO2: Propose suitable tools and techniques of production planning and control for improving productivity.

CO3: Display analytical thinking skills in the application of suitable production planning and control tools for effective business decision making.

Time: Three Hours   **Maximum Marks: 100**

PART A (1Q x 20 Marks = 20 Marks)

1	Explain the objectives, functions, and importance of Production Planning and Control (PPC). Discuss how sustainable resource planning, particularly in energy and waste management, enhances productivity in a manufacturing organization.	CO1	[K$_5$]

PART B (6Q x 5 Marks = 30 Marks) Answer Any 6 Questions Only

2	Define productivity. Calculate the productivity ratio for a manufacturing process where 500 units are produced using 250 labor hours.	CO2	[K$_1$]
3	Discuss the concept of Takt Time and solve the following: A company needs to produce 240 units per 8-hour shift. Calculate the Takt Time.	CO2	[K$_6$]
4	Explain the role of dispatching in production control and how it contributes to effective progress monitoring.	CO2	[K$_2$]
5	Outline the components involved in process planning. How do routing and scheduling contribute to effective production?	CO2	[K$_2$]
6	What is the Theory of Constraints (TOC)? Briefly discuss its role in managing production constraints.	CO2	[K$_1$]
7	Explain the Master Production Schedule (MPS) and its significance in the planning process.	CO2	[K$_2$]

8	Explain the concept of Enterprise Resource Planning (ERP) and its role in Production Planning and Control.	CO2	[K$_2$]

Part – C (5Qx10 Marks = 50 marks) Answer Any 5 Questions Only

9	Distinguish between deterministic and probabilistic inventory control models. Solve an Economic Order Quantity (EOQ) problem where the annual demand is 5,000 units, the ordering cost is ₹1,000 per order, and the holding cost per unit per year is ₹50.	CO3	[K$_4$]
10	Explain the process flow design and how it impacts process selection in manufacturing industries.	CO3	[K$_5$]
11	Create a Gantt chart based on given production scheduling data (assume any simple schedule). Interpret the results and discuss their significance.	CO3	[K$_6$]
12	Explain the concept of Bill of Materials (BOM) and its relevance in Material Requirements Planning (MRP). Provide a simple BOM structure example.	CO3	[K$_5$]
13	Discuss the steps involved in aggregate planning with a suitable example.	CO3	[K$_6$]
14	Elaborate on the role of Enterprise Resource Planning (ERP) in integrating various functional modules of production and inventory control.	CO3	[K$_6$]

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