Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD (now MoE)
Re-accredited with 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641 043, Tamil Nadu, India

Continuous Internal Assessment Test I – February 2025
Semester-II

Class: I P.G. **Time: 2 Hours**
Branch: MBA, MBA SF, MBA (IT&SM) **Max. Marks:60**

23MBAC10/24MBMC10 - Operations Management

Course Outcomes:

1. Gain ability to recognize situations in a production system environment and familiarize on basic concepts in decision making on operations management strategy.
2. Understand and develop deep insight on location economics and layout planning.
3. Apply the relevance of production planning and control for different types of industry.
4. Provide knowledge in basic issues and methods involved in the production of goods and integrating various inventory plans to reduce the material related costs.
5. Understand the significance of quality and its interfaces with all the functional areas.

PART A **6 x 1 =6**

Choose the Correct Answer

1. Which of the following best defines Production and Operations Management (POM)? **CO1 K1**
a) Managing only the production process
b) Managing manufacturing operations only
c) Managing resources to produce goods and services
d) Managing sales and marketing processes

2. What factors typically influence location decisions in facility location planning? **CO1 K1**
a) Labor costs, transportation costs, and taxes
b) Customer preferences and product quality
c) Marketing strategies and advertising costs
d) None of the above

3. Which type of layout arranges equipment according to the sequence of operations that a product undergoes during its manufacture? **CO2 K1**
a) Process layout b) Product layout c) Fixed-position layout d) Cellular layout

4. What type of capacity planning focuses on short-term decisions to adjust capacity to meet demand? **CO2 K1**
a) Long-range capacity planning b) Intermediate-range capacity planning
c) Short-range capacity planning d) Aggregate capacity planning

5.Which inventory control technique classifies items based on their criticality and usage value? **CO3 K1**
a) ABC analysis b) EOQ (Economic Order Quantity) model
c) JIT (Just-in-Time) inventory system d) MRP (Material Requirements Planning)

6. What is the primary objective of method study in work systems design? **CO3 K1**
a) To design new products b) To improve work methods and processes
c) To measure worker performance d) To conduct time-motion studies

PART B **3 x 6 = 18**

Answer ALL questions
Each answer should not exceed 400 words or two pages

7.a. How does Production Management differ from Operations Management in terms of focus and priorities? **CO1 K2**

(Or)

7.b. Provide examples to demonstrate how Production Management and Operations Management contribute differently to the success of manufacturing and service industries. **CO1 K2**

8.a. What are the components of a Production System **CO1 K2**

(Or)

8.b. Brief Intermittent production system with example **CO1 K2**

9.a. Explain the objectives and advantages of fixing a Plant Layout. **CO2 K3**

(Or)

9.b. Explain about line layout with a diagram **CO2 K3**

PART C **3x12=36**

Answer ALL questions

Each answer should not exceed 800 words or four pages

10.a Discuss the role of capacity planning in operations management. Provide examples of how business can effectively manage capacity to meet demand fluctuations while minimizing costs **CO1 K3**

(Or)

10.b. What are the characteristics of a good layout? **CO3 K3**

11.a. Explain about the process layout with a diagram **CO3 K3**

(Or)

11.b. Describe in detail about combination layout and fixed position layout with diagrams **CO3 K3**

12. Case Study: (Compulsory Question) **CO3 K5**

Alpha Manufacturing is a mid-sized company producing consumer electronics. Recently, the company has faced challenges meeting customer demand due to inefficiencies in its production process. The operations team identified that the assembly line had excessive idle time, frequent equipment breakdowns, and unbalanced workload distribution among workstations.To address these issues, the company hired a consultant who recommended the following actions:

1. Implementing Total Productive Maintenance (TPM) to reduce equipment breakdowns.

2. Conducting a time-and-motion study to minimize idle time.

3. Rebalancing the assembly line to ensure even workload distribution.

Three months after implementing these measures, Alpha Manufacturing reported a 15% increase in production output and a 10% reduction in manufacturing costs. However, employees raised concerns about the increased workload, leading to stress and lower job satisfaction.

Questions

1. Identify the primary challenges faced by Alpha Manufacturing in its operations before implementing the consultant's recommendations.
2. How did the consultant's recommendations address the issues identified in the production process?
3. Discuss the impact of the implemented changes on the company's operational efficiency.
4. What potential risks or challenges could arise from increased employee workload, and how can the company address these?
5. Suggest additional measures Alpha Manufacturing could implement to further optimize its operations while ensuring employee well-being.

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