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BACHELOR OF BUSINESS ADMINISTRATION (B.B.A.)

EXAMINATION : MAY - 2024

SEMESTER - IV

Sub. : Productions and Operations Management (BBA15- 413)

Date : 17/05/2024

Total Marks : 60

Time: 2.00pm to 4.30pm

- Instructions:** 1) All questions are compulsory.
 2) Figures to the right indicate full marks.

Q. 1. Choose the most appropriate option. (05)

1. is called for when the products have variety and relatively having a small value.

a) Mass Production	b) Batch Production
c) Unit Manufacture of Projects	d) Job Shops
2. is a very flexible and general system depending upon a type of job in hand.

a) Line or Product Layout	b) Functional and Process Layout
c) Group or Cellular Layout	d) Job shop Layout
3. Activities that cannot be started until one or more of the other activities are completed, but immediately succeed them are called

a) predecessor activities	b) Successor activities
c) concurrent activities	d) None of the above
4. maintenance is also known as corrective maintenance.

a) Breakdown	b) Preventive
c) Risk-based	d) Condition-based
5. In Sample is drawn in two stages. The second sample is drawn only when a clear cut decision cannot be drawn from the first sample.

a) Single Sampling Plan	b) Double Sampling Plan
c) Sequential Sampling Plan	d) A or B

Q. 2. State True / False (05)

1. Visible cost includes cost of material, cost of scrap or rework, cost of direct and indirect labour and the maintenance cost

a) True	b) False
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2. The ideal situation for Batch production would be when large volumes of one product (without any changes in design) are to be produced continuously for an extended period of time.

a) True	b) False
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3. The plant location decisions affect most of the fixed costs as well as variable costs.

a) True	b) False
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4. The production control strives to set the production targets and plans the availability of resources for translating the targets in to realities.

a) True	b) False
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5. Maintenance raises the level of machine performance, as well as improves the running cost.

a) True	b) False
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Q. 3. Write Short notes on (Any Three) (15)

1. Functions of Manufacturing Management
2. The Conversion Process
3. Line or Product Layout
4. Breakdowns Maintenance
5. Functions of Inspection

- Q. 4. Answer in detail (Any Two) (20)**
1. What are the different objectives of production management?
 2. Explain Production System with diagram.
 3. What are the different function of production planning Contro

Q. 5. Case study (15)

ABC Manufacturing is a leading automobile component manufacturer. The company specializes in producing critical engine parts such as pistons, camshafts, and crankshafts. Due to an increase in demand, ABC Manufacturing decided to revamp its plant layout to improve production efficiency and reduce costs.

Challenges Faced:

Inefficient Material Flow: The existing plant layout had disjointed material flow, leading to delays in production, increased handling time, and higher chances of errors.

Limited Space Utilization: The available space was not optimized, resulting in congestion and reduced flexibility for future expansion.

Inadequate Communication: Poor communication between different departments hindered coordination and collaboration, leading to delays and errors.

Strategies Implemented:

Value Stream Mapping: ABC Manufacturing conducted a thorough analysis of its production processes using value stream mapping. This helped identify bottlenecks, waste, and areas for improvement.

Grouping Machines: Similar machines were grouped together based on their functions and production requirements. This reduced material handling time and improved overall workflow.

Implementing Cellular Manufacturing: ABC Manufacturing implemented cellular manufacturing by creating small, self-contained production cells. Each cell was responsible for producing a specific component, enabling better coordination and reducing material movement.

Enhancing Communication: The company introduced visual management tools such as digital displays, signboards, and standardized work instructions to enhance communication and coordination between different departments.

Ergonomic Considerations: The plant layout was redesigned to prioritize ergonomic considerations, ensuring a safe and comfortable working environment for the employees.

Results and Benefits:

Improved Productivity: The optimized plant layout resulted in a significant increase in productivity. The reduction in material handling time, improved workflow, and better coordination among departments resulted in a faster production cycle.

Cost Reduction: The streamlined material flow and efficient space utilization led to cost savings. The reduced handling time and minimized waste resulted in lower operational costs.

Enhanced Quality: The implementation of cellular manufacturing and improved communication facilitated better quality control. Defects and errors were minimized, leading to higher customer satisfaction.

Increased Flexibility: The redesigned plant layout allowed ABC Manufacturing to adapt to changing production requirements more easily. The flexible layout enabled the company to efficiently accommodate new machinery and expand production capacity.

Questions:

Q. 1: What were the main challenges faced by ABC Manufacturing in their existing plant layout?

Q. 2: What strategies did ABC Manufacturing implement to optimize their plant layout?

Q. 3: What were the benefits of the optimized plant layout for ABC Manufacturing?