



Victoria University of Bangladesh

Assessment Topic:

Mid Assessment

Course Title: Production & Operations Management

Course Code: POM-325

Submitted To:

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Answer to the question no-1

Ans:- Operation Management is a way or means through which the listed objectives of an operating system is achieved. There is always a confusion between the word operation management & Production management. It is accepted norm that operation management includes techniques which are enabling the achievement of operational objectives in an operation system.

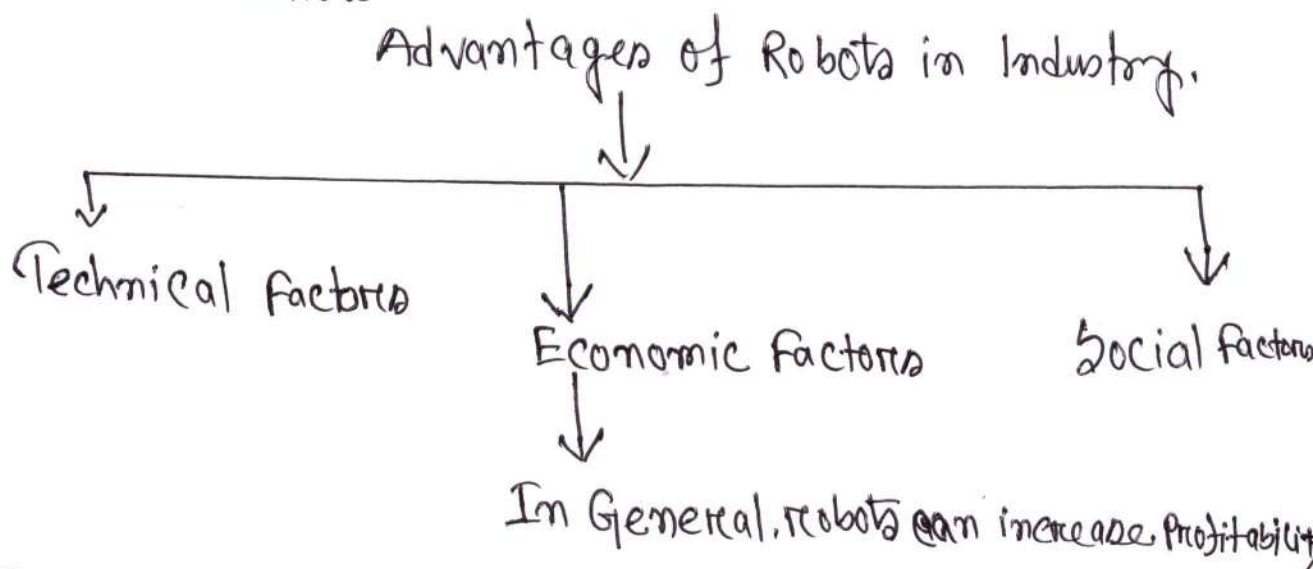
The operation system includes both manufacturing sector as well as service sector, but when you use the word production management,

The manufacturing sector but not the service sector.

Suppose:- you are designing a layout for the hospital you should say that you are applying operations management technique not the production management technique.

Answer to the question no-2

Ans:- Advantages of Robots in Industry:- We can analyse the various advantages of robots in three perspectives. There are below -



Technical factors:-

Technical factors advantages of robots in industry and human performance it is generally considered that humans cannot match the speed, quality, reliability, endurance and predictability of robotics systems. Robots therefore provide a link between the rigidity of dedicated automation and the flexibility of the human operator, in that they offer.

- * High flexibility of Product type and variation.
- * Lower preparation time than hand automation.
- * Better Product quality.
- * Fewer rejects and waste than labor-intensive production.

Economic factors:- Economic factors is Major factors. Major factors in considering the possible implementation of robots systems include are there bellow—

- * The need to increase production rates to remain competitive.
- * Pressure from the marketplace to improve quality.
- * Increase costs.
- * Shortage of skilled labor.

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In General, robots can increase profitability by:-

- * Providing maximum utilization of capital-intensive production facilities for up to 24 hours per day. Seven days per week.
- * Reducing production losses due to absenteeism and skilled labor shortage.
- * Reducing the manufacturing lead time of the product processes.
- * Reducing scrap and increasing product quality with resulting reduction in the number of customer complaints.

Social factors:-

Social factors advantage of robots in industry there are bellow —

* Robots are employed to do mindless, repetitive tasks so that the human capital can be utilized in more interesting work.

* Many low level tasks can be carried out by robots.

* Robots can be utilized to perform undesirable work in dangerous or hazardous environments and work requiring heavy physical effort.

* Robots are ~~see~~ successfully implemented in the nuclear industry for carrying out the maintenance work ~~requiring heavy physical~~ on reactors and for the handling of dangerous waste products.

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Answer to the question no-3

Ans:- Materials Management:-

we can define Materials Management as the function responsible for the coordination of planning, sourcing, purchasing, moving, storing and controlling materials in an optimum manner so as to provide a pre-decided service to the customer at a minimum cost.

Materials Management's contribution towards objectives may be divided into two categories-

- ① Primary objectives/Scopes.
- ② Secondary objectives/Scopes.

★ Secondary objectives/Scopes of Materials Management there are details below —

Secondary objectives/Scopes are so varied that they limit the possibility of listing exclusively in one breath. In one way or the other, they help to achieve the primary objective but different organizations put different emphasis on them.

The following are a ~~two~~^{three} example -

- (i) Make or Buy decision.
- (ii) Value analysis and value engineering.
- (iii) Standardization.

Make or Buy decision:-

Since the Materials Management department is immediately concerned with the selection of supply sources, materials cost, procurement cost and the availability of materials, it influences heavily the ~~the~~ Make or Buy decision. Materials department's contribution is still substantial and more direct.

Value analysis and value engineering:- Value analysis

and value engineering are close to the same things. They are approaches to cost saving goals that deal primarily with product design. The first usually refers to what the engineering department is doing in this direction and the second usually refers to the work that the buyer is doing in this area. ~~It~~ If value analysis is designed to reduce the cost of an item, standardization may often eliminate the item entirely.

Standardization:-

Standardization is essential to a mass production system which is defined as that which has been established as a model to which an object or action can be compared. However one should take note that even when a substitute is technically feasible it is not always economical to use it. The economics of standardization is not necessarily so complex.

All that is required is to compare costs of acquisition and carrying before the substitution was made with the costs after it was made. The buyer who knows who made the original components, need not pay a premium price for it to another equipment manufacturer for the same thing.

Answer to the question no-4

Ans:- Characteristics of Flow Shop Production there are bellow —

Product	The Products are standardized.
Conversion	Special purpose equipments, designed for the specific
Resources	Process of the product.
Work force	Specialized people, doing the repetitive jobs.
Workforce Job satisfaction	Job satisfaction among the employee is low because of the repetitive nature of Job, results in boredom more turn over and absentees.
Work-in-Progress inventory	Productive resources are balanced that result in less work in progress inventory.
Cycle time	Cycle time per unit is relatively low.
Cost of Production	Cost of Production per unit is relatively low.
Quantity of Production	Comparatively quantity of Production is more.
Varieties	Production to be produced of less variety.
Flexibility	This kind of production lacks in flexibility
	Small change in the product design needs the change in production system abnormally
Production planning and Control	Since less varieties of product are produced for longer period, the production planning and control activities are inbuilt in the system itself, so the production planning and control activities are not a complex one.

Answer to the question no-5

Ans:- Characteristics of Job Shop Production there are below —

Product	The product are of order based mostly non standardized.
Conversion of Resources	General purpose equipment, grouped according to their functions.
Work Force	Skilled people doing multi skilled work
Work Force Satisfaction	Job satisfaction among the employee is high because the operator role is multifaceted.
Work in progress Inventory	There is lot of waiting-time for the product to be manufactured in the system that result in more in process inventory.
Cycle time	Because of more waiting time for the product in the production line that results more manufacturing cycle time comparatively.
Cost of Production	Cost of Production per unit is relatively high
Quantity of Production	Since it is order based production, quantity produced per unit type is relatively less.
Varieties	Production system capable of producing more type of products.
Flexibility	This system has more flexibility any change in the design of the product could be incorporated without much problem.
Production Planning and Control	The arrival the operations demanded and the operations time required by the orders mostly uncertain. This makes the jobs of production planning control difficult.