

*Operations
Management
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Q1: Define operation management then mention its scope?

Operation Management:

The management of systems or processes that create goods and / or provide services.

Scope of Operations Management:

1-Forecasting

2-Capacity planning

3-Scheduling

4-Managing inventories

5-Assuring quality

6-Motivating employees

7-Diciding where to locate facilities

And more.....

Q2: Mention the Key Differences between production of goods and providing services?

Key Differences:

1-Customer contact.

2-Uniformity of input.

3-Labor content of jobs.

4-Uniformity of output.

5-Measurement of productivity.

6-Production and delivery.

7-Quality assurance.

8-Amount of inventories.

Q3: Discuss the main Responsibilities of Operation Management?

Planning:

- 1-Capacity.***
- 2-Location.***
- 3-Products and Services.***
- 4-Make or buy.***
- 5-Layout.***
- 6-Projects.***
- 7-Scheduling.***

Organizing:

- 1-Degree of centralization.***
- 2-process selection.***

Staffing:

- 1-Hiring /Laying off.***
- 2- Use of overtime.***

Directing:

- 1-Incentive plans.***
- 2- Issuance of work orders.***
- 3- Job assignments.***

Controlling / Improving:

- 1- Inventory.***
- 2- Quality.***
- 3- Costs.***
- 4- Productivity.***

Q4: Define Competitiveness and how can business compete using operation?

Competitiveness:

How effectively an organization meets the wants and needs of customers relative to others that offer similar goods or services.

Businesses compete using operations:

1-Product and service design.

2-Cost.

3-Location.

4-Quality.

5-Quick response.

6-flexibility.

7-Inventory management.

8-Supply chain management.

9-Service.

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Aya Alaa

Q5: Define Distinctive Competencies then mention their example?

Distinctive Competencies:

The special attributes or abilities that give an organization a competitive edge.

Examples:

1- Price.

2- Quality.

3- Time.

4- Flexibility.

5- Service.

6- Location.

Q6: Define Productivity. Solve the exercise.

Productivity:

A measure of the effective use of resources, usually expressed as the ratio of output to input.

Some laws to solve exercises

$$\text{Productivity} = \frac{\text{Outputs}}{\text{Inputs}}$$

هذا القانون الرئيسي لقياس الانتاجية.
و لكن انشق منه ثلاث طرق اخرى لقياس الانتاجية
و هي اكثر تحديدا.

2-26 Competitiveness, Strategy, and Productivity

Measures of Productivity

Table 2.4

Partial measures	$\frac{\text{Output}}{\text{Labor}}$	$\frac{\text{Output}}{\text{Machine}}$	$\frac{\text{Output}}{\text{Capital}}$	$\frac{\text{Output}}{\text{Energy}}$
Multifactor measures	$\frac{\text{Output}}{\text{Labor} + \text{Machine}}$		$\frac{\text{Output}}{\text{Labor} + \text{Capital} + \text{Energy}}$	
Total measure	$\frac{\text{Goods or Services Produced}}{\text{All inputs used to produce them}}$			

١ - *Partial* ← جزئى : يقيس الانتاجية بالنسبة لعامل واحد من عوامل المستخدمة فى التصنيع.

٢ - *Multifactor* ← متعدد العوامل : يقيس الانتاجية بالنسبة للأكثر من عامل من العوامل المستخدمة فى التصنيع.

٣ - *Total* ← مجموع : يقيس الانتاجية بالنسبة لكل العوامل اللى استخدمتها فى الصناعة.

Example 3

7040 Units produced

Sold of \$1.10/unit

Cost of labor: \$1000

Cost of materials: \$520

Cost of overhead: \$2000

What is the multifactor productivity?

To get Output = Number of units*Price of each unit

$$\text{MFP} = \frac{\text{Output}}{\text{Labor} + \text{Materials} + \text{Overhead}}$$

$$\text{MFP} = \frac{(7040 \text{ units}) * (\$1.10)}{\$1000 + \$520 + \$2000}$$

$$\text{MFP} = 2.20$$

Q7: Mention the main activities of product or service design?

The main activities are:

1- Translate customer wants and needs into product and service requirements.

2- Refine existing products and services.

3- Develop new products and services.

4- Formulate quality goals.

5- Formulate cost targets.

6- Construct and test prototypes.

7- Document specification.

Q8: Illustrate life cycle of product or service design?

