

Quiz Grade: 85.0% (A)

Quiz Submission

Facilities Layout and Location Planning

Student Name: Carl Anthony Leamy
Student ID: UB95597PR104819
Study Program: Production and Operational Management
Quiz ID: 0a241f2a-4423-41ba-9c32-0eb6cb2ef39a
Submission Date: July 06, 2026 at 5:11 AM
Total Questions: 10

Course Information

Course Title: Facilities Layout and Location Planning
Course Code: FLA 225
Credit Hours: 3

Quiz Questions, Student Answers, and Correct Answers

Question 1 of 10

Multiple Choice Question

Which of the following is NOT a factor to consider when designing a facility layout?

Available Options:

- (A) Location
- (B) Cost

(C) Employee satisfaction ← STUDENT SELECTED ← CORRECT ANSWER

- (D) Time

Student's Answer: Option C: Employee satisfaction

Correct Answer: Option C: Employee satisfaction

Question 2 of 10

Text Answer Question

What is the main objective of facility layout?

Student's Answer:

The main objective of a facility layout is to create a safe, efficient, and well-organized working environment by ensuring that all safety requirements are considered and properly implemented, traffic patterns are clearly defined and controlled, and all essential areas are easily accessible. An effective layout minimizes unnecessary movement of people, materials, and equipment, improves workflow, reduces delays and operating costs, supports productivity, and enhances communication and supervision while maintaining a high standard of safety for employees, contractors, and visitors.

Correct Answer:

To optimize the use of space, resources, and equipment in a facility to improve efficiency and productivity

Question 3 of 10

Multiple Choice Question

Which type of layout is best suited for high volume, standardized production?

Available Options:

- (A) Process layout
- (B) Fixed position layout
- (C) Product layout ← STUDENT SELECTED ← CORRECT ANSWER**
- (D) Cellular layout

Student's Answer: Option C: Product layout

Correct Answer: Option C: Product layout

Question 4 of 10

Text Answer Question

What is the purpose of a product flow diagram?

Student's Answer:

The purpose of a product flow diagram is to clearly illustrate the movement of materials and products through each stage of the production process. It helps establish the product flow, identify the production capacity of each piece of equipment, and determine the overall production capability of the plant. A product flow diagram is also used to identify bottlenecks, eliminate unnecessary material handling, improve workflow, optimize equipment utilization, and ensure that the production process is safe and efficient. By mapping the entire process, it supports better planning, scheduling, capacity analysis, and continuous improvement, ultimately maximizing productivity while maintaining quality and safety.

Correct Answer:

To map out the movement of materials and products throughout a facility

Question 5 of 10

Multiple Choice Question

Which location factor should be considered if a company wants to minimize transportation costs?

Available Options:

- (A) Proximity to customers
- (B) Availability of labor
- (C) Cost of land
- (D) Access to transportation infrastructure ← STUDENT SELECTED ← CORRECT ANSWER**

Student's Answer: Option D: Access to transportation infrastructure

Correct Answer: Option D: Access to transportation infrastructure

Question 6 of 10

Text Answer Question

What is a common method for evaluating potential facility locations?

Student's Answer:

A common method for evaluating potential facility locations is to assess several key factors that will affect the efficiency and long-term success of the operation. These include accessibility to raw materials, proximity to customers or buyers, and access to reliable transportation infrastructure to minimize logistics and transportation costs. Other important factors include the availability of skilled labor, land and operating costs, utilities and infrastructure, environmental and regulatory requirements, safety considerations, and the potential for future expansion. By evaluating and comparing these factors, a company can select a location that provides the best balance of cost, efficiency, accessibility, and long-term operational performance.

Correct Answer:

Factor rating method

Question 7 of 10

Multiple Choice Question

Which type of layout is best suited for custom-made products with a variety of operations and processes?

Available Options:

(A) Process layout ← STUDENT SELECTED ← CORRECT ANSWER

(B) Fixed position layout

(C) Product layout

(D) Cellular layout

Student's Answer: Option A: Process layout

Correct Answer: Option A: Process layout

Question 8 of 10

Text Answer Question

What is the definition of a bottleneck in a facility layout?

Student's Answer:

A bottleneck in a facility layout is a piece of equipment, workstation, or transfer point that has insufficient capacity and slows down the flow of materials or the production process. Because it operates more slowly than the rest of the system, it limits the overall output of the plant. Bottlenecks create delays, increase waiting time and work-in-progress inventory, reduce equipment utilization, and prevent the plant from achieving its production targets. Identifying and eliminating bottlenecks is essential to improving production efficiency, increasing throughput, and maximizing the overall performance of the facility.

Correct Answer:

A point in the production process that limits the overall output and efficiency of the facility

Question 9 of 10

Multiple Choice Question

Which location factor should be considered if a company wants to attract top talent?

Available Options:

(A) Proximity to customers

(B) Availability of labor ← STUDENT SELECTED ← CORRECT ANSWER

(C) Cost of land

(D) Access to transportation infrastructure

Student's Answer: Option B: Availability of labor

Correct Answer: Option B: Availability of labor

Question 10 of 10

Text Answer Question

What is the purpose of a block layout?

Student's Answer:

The purpose of a block layout is to provide a high-level visual representation of a facility by showing the location and arrangement of major departments, work areas, equipment, and support services. It helps optimize the flow of materials, people, and information, improves space utilization, enhances safety and accessibility, and supports efficient operations and future planning.

Correct Answer:

To visualize the layout of a facility and its different departments or areas

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Generated on July 06, 2026 at 5:11 AM