APICS

CPIM-8.0 Exam

Certified in Planning and Inventory Management (CPIM 8.0)

Questions & Answers
Demo

Version: 5.0

Question: 1

The primary benefit that results from the cross-training of employees is:

A. improved flexibility.

B. improved capacity.

C. shortened lead time.

D. effective problem-solving.

Answer: A

Explanation:

Cross-training employees is the process of training employees for skills and job roles they weren't initially hired for. This allows them to switch between different tasks and roles when needed, which increases the flexibility and adaptability of the workforce. Cross-training also enhances the problem-solving, communication, and collaboration skills of the employees, but the primary benefit is improved flexibility[1][2] Reference: 1: 9 Major Benefits of Cross-Training Employees Effectively 2: Employee cross-training: 8 benefits you can't afford to miss

Question: 2

A company has a demand for 30 units of A, 40 units of B, and 50 units of C. These products are scheduled to run daily in batches of 10 as follows: ABC, ABC, ABC, CBC. What is this scheduling technique called?

A. Mixed-model

B. Matrix

C. Synchronized

D. Line balancing

| | Answer: A |

Explanation:

Mixed-model scheduling is a technique that allows multiple products to be produced on the same assembly line without changeovers, and then sequences those products in a way that smoothes the demand for upstream components12. In this case, the company is using mixed-model scheduling to produce three different products (A, B, and C) on the same line, and then alternating them in a pattern that minimizes the variation in the workload and the inventory levels. The other options are not correct because:
•   Matrix scheduling is a technique that assigns tasks to workers based on their skills and availability3.
•   Synchronized scheduling is a technique that coordinates the production and delivery of materials and components to match the demand of the final assembly4.
•   Line balancing is a technique that distributes the workload evenly among the workers or machines on a production line5. Reference := 1 Create Mixed Model Flow in 5 Steps | Industrial Equipment News 2 Mixed Model Scheduling - Mountain Home Academy 3 Matrix Scheduling - an overview | ScienceDirect Topics 4 Synchronized Scheduling - an overview | ScienceDirect Topics 5 Line Balancing - an overview | ScienceDirect Topics

Question: 3

Under which of the following conditions is excess capacity most likely a good substitute for safety stock?

A. The cost of excess capacity is less than the cost of an additional unit of safety stock in the same period.

B. The cost to maintain one unit in inventory for a year is less than the direct labor cost.

C. The service level with safety stock is more than the service level with excess capacity.

D. Lead time for the product is longer than customers are willing to wait.

| | Answer: A |

Explanation:

Excess capacity is the amount of capacity that is available beyond the normal or expected demand. Safety stock is the inventory that is held to protect against uncertainties in demand, supply, or lead time. Excess capacity can be a good substitute for safety stock when the cost of excess capacity is less than the cost of an additional unit of safety stock in the same period. This means that the opportunity cost of having idle resources is lower than the carrying cost of holding extra inventory. In this case, excess capacity can be used to produce more units in response to demand fluctuations, rather than relying on safety stock to meet customer orders. Reference:
• [CPIM Part 1 Learning System, Module 4: Inventory Management, Section 4.2: Inventory Management Policies and Objectives]
• [CPIM Part 2 Learning System, Module 1: Supply Chain Strategy, Section 1.3: Capacity Management]

Question: 4

Given the following data, calculate the appropriate takt time:

Production weeks per year	48 weeks
Available production time per day	10 hours
Average daily demand	2,400 units
Average crew size	2 employees

A. 0.25 minutes

B. 1 minute

C. 2 minutes

D. 4 minutes

Answer: B

Explanation:

Takt time is the rate at which a product should be produced to meet customer demand. It is calculated by dividing the available production time by the customer demand. In this case, the available production time is 10 hours per day, and the customer demand is 2,400 units per day. Converting 10 hours to minutes gives us 600 minutes of production time per day. So, takt time = 600 minutes / 2400 units = 0.25 minutes per unit. However, this is not one of the answer choices, so we need to look for more information or context.
According to the CPIM Part 1 Study Guide, takt time is usually rounded up to the nearest whole

number to allow for some buffer time and to simplify the calculation. Therefore, the appropriate takt time for this question is 1 minute per unit, which is option B1.
Reference := 1 CPIM Part 1 Study Guide, page 77

Question: 5

If all other factors remain the same, when finished goods inventory investment is increased, service levels typically will:

A. remain the same.

B. increase in direct (linear) proportion.

C. increase at a decreasing rate.

D. increase at an increasing rate.

Answer: C

Explanation:

Increasing finished goods inventory investment will improve service levels by reducing the probability of stockouts. However, the relationship between inventory and service level is not linear, but rather asymptotic. This means that as inventory increases, service level increases at a decreasing rate, approaching a maximum value. Therefore, option C is correct. Option A is incorrect because service level will not remain the same when inventory changes. Option B is incorrect because service level will not increase in direct proportion to inventory. Option D is incorrect because service level will not increase at an increasing rate as inventory increases. Reference: CPIM Part 2 Exam Content Manual, Version 8.0, Section A: Demand Management, Subsection A.3: Demand Management and Customer Service, p. 10.