Advanced Certificate in Inventory Management in Aviation

Fundamentals of Inventory Management

ABC Analysis: ABC Analysis is a categorization technique used in inventory management to classify items based on their importance. Items are typically divided into three categories: A, B, and C. Category A items are considered the most important and typically account for a large portion of the inventory value but a small portion of the total items. Category B items are moderately important, while Category C items are the least important and usually make up the largest portion of the inventory but have the lowest value.

Batch Ordering: Batch Ordering is a method of replenishing inventory where items are ordered in large quantities at specific intervals. This approach helps to reduce ordering costs and take advantage of economies of scale. However, it can lead to higher carrying costs and tie up capital in excess inventory.

Capacity Planning: Capacity Planning is the process of determining the optimal production capacity needed to meet demand while minimizing costs. It involves evaluating current capacity, forecasting future demand, and making decisions about expanding or reducing capacity to ensure efficient inventory management.

Carrying Costs: Carrying Costs refer to the expenses associated with holding inventory over a certain period. These costs typically include warehousing fees, insurance, depreciation, obsolescence, and opportunity cost of capital. Effective inventory management aims to minimize carrying costs while maintaining adequate stock levels.

Continuous Review System: The Continuous Review System is an inventory control method where the inventory level is continuously monitored, and orders are placed to replenish stock when it reaches a predetermined reorder point. This system helps to avoid stockouts and ensures that inventory levels are maintained at optimal levels.

Cycle Counting: Cycle Counting is a method of inventory auditing where a subset of inventory items is counted on a regular basis, usually on a daily or weekly schedule. This approach helps to identify and correct discrepancies in inventory records, improve accuracy, and reduce the need for physical inventory counts.

Demand Forecasting: Demand Forecasting is the process of estimating future customer demand for products or services. It involves analyzing historical data, market trends, and other factors to predict future demand accurately. Effective demand forecasting is essential for inventory management to ensure that the right amount of stock is available to meet customer needs.

Economic Order Quantity (EOQ): The Economic Order Quantity (EOQ) is a formula used to determine the optimal order quantity that minimizes total inventory costs. It considers factors such as ordering costs, carrying costs, and demand rate to calculate the most cost-effective quantity to order at a given time.

Inventory Turnover: Inventory Turnover is a measure of how quickly inventory is sold and replaced over a specific period, usually a year. It is calculated by dividing the cost of goods sold by the average inventory level. High inventory turnover indicates efficient inventory management, while low turnover may suggest excess stock or slow-moving items.

Just-In-Time (JIT) Inventory: Just-In-Time (JIT) Inventory is a strategy that aims to minimize inventory levels by receiving goods only when they are needed in the production process. This approach helps to reduce carrying costs, improve cash flow, and increase efficiency. However, it requires close coordination with suppliers and careful planning to avoid stockouts.

Kanban System: The Kanban System is a visual inventory control method that uses cards or signals to indicate when to replenish stock. Each card represents a specific item or product, and when inventory levels reach a predetermined point, a card is sent to the supplier to request a new shipment. The Kanban system helps to streamline production and reduce waste.

LIFO (Last-In, First-Out): LIFO (Last-In, First-Out) is a method of inventory valuation where the most recently acquired goods are assumed to be the first sold. This approach can result in lower taxable income during periods of rising prices since the cost of goods sold reflects the higher cost of recent purchases.

Materials Requirement Planning (MRP): Materials Requirement Planning (MRP) is a production planning and inventory control system that helps to manage manufacturing processes more efficiently. MRP uses bill of materials, inventory data, and production schedules to calculate material requirements and ensure that the right amount of raw materials is available at the right time.

Order Lead Time: Order Lead Time is the amount of time it takes from placing an order to receiving the goods. It includes the time required for order processing, shipping, and delivery. Understanding order lead time is essential for inventory management to ensure that stock levels are replenished in a timely manner.

Perpetual Inventory System: The Perpetual Inventory System is a method of tracking inventory levels in real-time using technology such as barcodes or RFID tags. This system continuously updates inventory records as goods are bought or sold, providing accurate and up-to-date information on stock levels.

Reorder Point: The Reorder Point is the inventory level at which a new order should be placed to replenish stock before it runs out. It is calculated based on factors such as lead time, demand variability, and safety stock. Maintaining an appropriate reorder point helps to prevent stockouts and ensure continuous supply.

Safety Stock: Safety Stock is additional inventory held as a buffer to protect against unexpected fluctuations in demand or supply. It helps to mitigate the risk of stockouts and ensure that there is enough stock available to meet customer needs. Determining the right level of safety stock is crucial for effective inventory management.

Stock Keeping Unit (SKU): A Stock Keeping Unit (SKU) is a unique code or number used to identify and track

individual products within an inventory system. SKUs are typically assigned to each product variant, size, color, or other distinguishing features to facilitate accurate inventory management and tracking.

Supply Chain Management: Supply Chain Management is the coordination of activities involved in sourcing, production, and distribution of goods or services to meet customer demand. Effective supply chain management aims to optimize processes, reduce costs, and improve efficiency throughout the entire supply chain.

Vendor Managed Inventory (VMI): Vendor Managed Inventory (VMI) is a collaborative inventory management approach where the supplier is responsible for monitoring and replenishing stock at the customer's location. This strategy helps to reduce stockouts, improve inventory accuracy, and strengthen relationships between suppliers and customers.