Fold each printed sheet in half lengthwise. The left side of the document will list the term and the right side will list the definition. Tape or staple the open edges of your flashcards. Cut out your flashcards on the solid lines indicated and fold them on the dotted lines.

### Module 7

Section A: Planning Distribution

### Term

Distribution

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1) The activities associated with the movement of material, usually finished goods or service parts, from the manufacturer to the customer. These activities encompass the functions of transportation, warehousing, inventory control, material handling, order administration, site and location analysis, industrial packaging, data processing, and the communications network necessary for effective management. [...] In many cases, this movement is made through one or more levels of field warehouses. Syn: physical distribution. 2) The systematic division of a whole into discrete parts having distinctive characteristics.

## Module 7

Section A: Planning Distribution

#### Term

Distribution planning

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The planning activities associated with transportation, warehousing, inventory levels, materials handling, order administration, site and location planning, industrial packaging, data processing, and communications networks to support distribution.

### Module 7

Section A: Planning Distribution

#### Term

Distribution requirements planning (DRP)

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1) The function of determining the need to replenish inventory at branch warehouses. A time-phased order point approach is used where the planned orders at the branch warehouse level are "exploded" via MRP logic to become gross requirements of the supplying source. In the case of multilevel distribution networks, this explosion process can continue down through the various levels of regional warehouses (master warehouse, factory warehouse, etc.) and become input to the master production schedule. Demand on the supplying sources is recognized as dependent, and standard MRP logic applies. 2) More generally, replenishment inventory calculations, which may be based on other planning approaches such as period order quantities or "replace exactly what was used," rather than being limited to the time-phased order point approach.

Section A: Planning Distribution

#### **Term**

Transportation

APICS CPIM Learning System

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The function of planning, scheduling, and controlling activities related to mode, vendor, and movement of inventories into and out of an organization.

## Module 7

Section A: Planning Distribution

#### Term

Dock-to-stock

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A program through which specific quality and packaging requirements are met before the product is released. Prequalified product is shipped directly into the customer's inventory. [This] eliminates the costly handling of components, specifically in receiving and inspection, and enables product to move directly into production. Sometimes referred to as ship-to-stock.

## Module 7

Section A: Planning Distribution

#### Term

Distribution network structure

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The planned channels of inventory disbursement from one or more sources to field warehouses and ultimately to the customer. There may be one or more levels in the disbursement system. Syn: bill of distribution.

## Module 7

Section A: Planning Distribution

## **Term**

**Terminals** 

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In transportation, locations where carriers load and unload goods to and from vehicles. Also used to make connections between local pickup and delivery service and line-haul service. Functions performed in [these] include weighing connections with other routes and carriers, vehicle routing, dispatching, maintenance, paperwork, and administration. [They] may be owned and operated by the carrier or the public.

Section A: Planning Distribution

## **Term**

Line haul costs

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Basic costs of carrier operation to move a container of freight, including drivers' wages and usage depreciation. These vary with the cost per mile, the distance shipped, and the weight moved.

## Module 7

Section A: Planning Distribution

### **Term**

Total line-haul cost

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Basic costs of carrier operation to move a container of freight, including drivers' wages and usage depreciation, which vary with the distance shipped and the cost per mile.

## Module 7

Section A: Planning Distribution

### Term

Pickup and delivery costs

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Carrier charges for each shipment pickup and the weight of that shipment. Costs can be reduced if several smaller shipments are consolidated and picked up in one trip.

## Module 7

Section A: Planning Distribution

## **Term**

Terminal-handling charges

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1) Carrier charges dependent on the number of times a shipment must be loaded, handled, and unloaded. Cost can be reduced by consolidating shipments into fewer parcels or by shipping in truckload quantities. 2) For shipping lines, the costs of paying container terminals for unloading and loading during shipment. These costs are borne by the shipping lines at the port of shipment or destination.

Section A: Planning Distribution

## **Term**

Demurrage

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The carrier charges and fees applied when rail freight cars and ships are retained beyond a specified loading or unloading time. See: detention, express.

## Module 7

Section A: Planning Distribution

#### **Term**

Backhauling

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The process of a transportation vehicle returning from the original destination point to the point of origin. The 1980 Motor Carrier Act deregulated interstate commercial trucking and thereby allowed carriers to contract for the return trip. [This] can be with a full, partial, or empty load. [If empty, this] is called deadheading. See: deadhead.

## Module 7

Section A: Planning Distribution

### Term

Break-bulk

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1) Dividing truckloads, railcars, or containers of homogeneous items into smaller, more appropriate quantities for use. 2) A distribution center that specializes in [these types of] activities. 3) Unitized cargo in bales, boxes, or crates that is placed directly in a ship's holds rather than in containers.

# Module 7

Section A: Planning Distribution

### **Term**

Freight consolidation

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The grouping of shipments to obtain reduced costs or improved utilization of the transportation function. [It] can occur by market area grouping, grouping according to scheduled deliveries, or using third-party pooling services such as public warehouses and freight forwarders.

Section A: Planning Distribution

## **Term**

Center-of-gravity approach

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A methodology for locating distribution centers at approximately the location representing the minimum transportation costs between the plants, the distribution centers, and the markets, in order to maximize revenue.

## Module 7

Section A: Planning Distribution

#### **Term**

Warehousing

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The activities related to receiving, storing, and shipping materials to and from production or distribution locations.

## Module 7

Section A: Planning Distribution

### Term

Distribution center (DC)

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Typically a finished goods warehouse designed for demand-driven rapid distribution to retailers (retail distribution centers), wholesalers, or direct shipments to customers (order fulfillment centers). Cross-docking warehouses are another type of distribution center. See: cross-docking.

# Module 7

Section A: Planning Distribution

## **Term**

Distribution warehouse

A facility where goods are received in large-volume uniform lots, stored briefly, and then broken down into smaller orders of different items required by the customer. Emphasis is on expeditious movement and handling.

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Section A: Planning Distribution

## **Term**

Materials handling

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Movement and storage of goods inside the distribution center. This represents a capital cost and is balanced against the operating costs of the facility.

## Module 7

Section A: Planning Distribution

#### **Term**

Unitization

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In warehousing, the consolidation of several units into larger units for fewer handlings.

# Module 7

Section A: Planning Distribution

### **Term**

Unit load

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A shipping unit made up of a number of items; bulky material arranged or constrained so the mass can be picked up or moved as a single unit. Reduces material handling costs. Often shrink-packed on a pallet before shipment.

# Module 7

Section A: Planning Distribution

## **Term**

Receiving

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The function encompassing the physical receipt of material, the inspection of the shipment for conformance with the purchase order (quantity and damage), the identification and delivery to destination, and the preparation of receiving reports.

Section A: Planning Distribution

#### **Term**

Order picking

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Selecting or "picking" the required quantity of specific products for movement to a packaging area (usually in response to one or more shipping orders) and documenting that the material was moved from one location to shipping. Syn: order selection. See: batch picking, discrete order picking, zone picking.

### Module 7

Section A: Planning Distribution

#### Term

Fixed-location storage

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A method of storage in which a relatively permanent location is assigned for the storage of each item in a storeroom or warehouse. Although more space is needed to store parts than in a random-location storage system, fixed locations become familiar, and therefore a locator file may not be needed. See: random-location storage.

## Module 7

Section A: Planning Distribution

#### Term

Random-location storage

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A storage technique in which parts are placed in any space that is empty when they arrive at the storeroom. Although this random method requires the use of a locator file to identify part locations, it often requires less storage space than a fixed-location storage method. Syn: floating inventory location system, floating storage location. See: fixed-location storage.

## Module 7

Section A: Planning Distribution

### **Term**

Zone

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1) A warehouse location methodology that includes some of the characteristics of fixed and random location methods. [These] locations hold certain kinds of items, depending on physical characteristics or frequency of use. 2) The specific warehouse location assigned to an order picker. In picking items for an order, the stock picker gets only the items for each order that are within [the specific one of these that he/she is assigned to.] The picker then fills the next order for items from [the same one of these.]

Section A: Planning Distribution

## **Term**

Pallet positions

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A calculation that determines the space needed for the number of pallets for inventory storage or transportation based on a standard pallet size. Pallet dimensions vary around the globe, but are typically a constant in regional markets. The term is frequently used to quote storage and transportation rates.

## Module 7

Section A: Planning Distribution

#### Term

Bar code

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A series of alternating bars and spaces printed or stamped on parts, containers, labels, or other media, representing encoded information that can be read by electronic readers. [This] is used to facilitate timely and accurate input of data to a computer system.

# Module 7

Section A: Planning Distribution

### **Term**

Radio frequency identification (RFID)

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A system using electronic tags to store data about items. Accessing or retrieving this data is accomplished through a specific radio frequency and does not require close proximity or line-of-sight access. See: active tag, passive tag, semi-passive tag.

## Module 7

Section A: Planning Distribution

### **Term**

Discrete order picking

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A method of picking orders in which the items on one order are picked before the next order is picked. See: batch picking, order picking, zone picking.

Section A: Planning Distribution

### **Term**

Batch picking

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A method of picking orders in which order requirements are aggregated by product across orders to reduce movement to and from product locations. The aggregated quantities of each product are then transported to a common area where the individual orders are constructed. See: discrete order picking, order picking, zone picking.

## Module 7

Section A: Planning Distribution

#### Term

Wave picking

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A method of selecting and sequencing picking lists or items to minimize the waiting time of the delivered material. Shipping orders may be picked in waves combined by common carrier or destination, and manufacturing orders in waves related to work centers.

## Module 7

Section A: Planning Distribution

### **Term**

Zone picking

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A method of subdividing a picking list by areas within a storeroom for more efficient and rapid order picking. [This kind of order] must be grouped to a single location before delivery or must be delivered to different locations such as work centers. See: batch picking, discrete order picking, order picking.

## Module 7

Section A: Planning Distribution

### **Term**

Picking list

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A document that lists the material to be picked for manufacturing or shipping orders. Syn: disbursement list, material list, stores issue order, stores requisition.

Section A: Planning Distribution

### **Term**

Private warehouse

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A company-owned warehouse.

## Module 7

Section A: Planning Distribution

#### Term

Public warehouse

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The warehouse space that is rented or leased by an independent business providing a variety of services for a fee or on a contract basis. These services can include product inspection, product rating, and repackaging. These facilities are typically located near primary roads, railways, or inland waterways to facilitate rapid receiving and shipping of products. Syn: duty paid warehouse.

## Module 7

Section A: Planning Distribution

### **Term**

Transportation management

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The process of executing requirements for the planning, scheduling, and budgeting of transportation assets, services, and related systems of the shipping process through delivery.

# Module 7

Section A: Planning Distribution

## **Term**

Tapering rate

A rate structure in which a shipping rate increases as the distance shipped increases, but the increases are not directly correlated to the increase in the distance shipped.

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Section A: Planning Distribution

## **Term**

Intermodal transport

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1) Shipments moved by different types of equipment combining the best features of each mode. 2) The use of two or more different carrier modes in the through movement of a shipment.

## Module 7

Section A: Planning Distribution

### **Term**

Private carrier

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A group that provides transportation exclusively within an organization. Ant: common carrier.

# Module 7

Section A: Planning Distribution

### **Term**

Common carrier

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Transportation available to the public that does not provide special treatment to any one party and is regulated as to the rates charged, the liability assumed, and the service provided. [It] must obtain a certificate of public convenience and necessity from the Federal Trade Commission for interstate traffic. Ant: private carrier.

## Module 7

Section A: Planning Distribution

## **Term**

Contract carrier

A carrier that does not serve the general public, but provides transportation for hire for one or a limited number of shippers under a specific contract.

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Section A: Planning Distribution

### **Term**

Truckload (TL) carriers

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Carriers that deliver/charge only for full truckload shipments.

### Module 7

Section B: Replenishment and Order Management

#### Term

Decentralized inventory control

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Inventory decision making exercised at each stocking location for SKUs at that location.

### Module 7

Section B: Replenishment and Order Management

### Term

Centralized inventory control

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Inventory decision making for all stockkeeping units exercised from one office or department for an entire company.

# Module 7

Section B: Replenishment and Order Management

## **Term**

Time-phased order point (TPOP)

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MRP-like time planning logic technique for independent demand items, where gross requirements come from a forecast, not via explosion. Can be used to plan distribution center inventories as well as to plan for service (repair) parts, because MRP logic can readily handle items with dependent demand, independent demand, or a combination of both. An approach that uses time periods, thus allowing for lumpy withdrawals instead of average demand. When used in distribution environments, the planned order releases are input to the master schedule dependent demands. See: fixed reorder quantity inventory model.

Section B: Replenishment and Order Management

### **Term**

Base stock system

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A method of inventory control that includes most of the systems in practice as special cases. In this system, when an order is received for any item, it is used as a picking ticket, and duplicate copies, called replenishment orders, are sent back to all stages of production to initiate replenishment of stocks. Positive or negative orders, called base stock orders, are also used from time to time to adjust the level of the base stock of each item. In actual practice, replenishment orders are usually accumulated when they are issued and are released at regular intervals.

### Module 7

Section B: Replenishment and Order Management

#### Term

**Bucketed system** 

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An MRP, DRP, or other time-phased system in which all time-phased data is accumulated into time periods called buckets. If the period of accumulation is one week, then the system is said to have weekly buckets.

### Module 7

Section B: Replenishment and Order Management

### Term

**Bucketless system** 

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An MRP, DRP, or other time-phased system in which all time-phased data is processed, stored, and usually displayed using dated records rather than defined time periods (buckets).

# Module 7

Section B: Replenishment and Order Management

### **Term**

Bottom-up replanning

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In MRP, the process of using pegging data to solve material availability or other problems. This process is accomplished by the planner (not the computer system), who evaluates the effects of possible solutions. Potential solutions include compressing lead time, cutting order quantity, substituting material, and changing the master schedule.

Section B: Replenishment and Order Management

### **Term**

Aggregate plan

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A plan that includes budgeted levels of finished goods, inventory, production backlogs, and changes in the workforce to support the production strategy. Aggregated information (e.g., product line, family) rather than product information is used [...].

### Module 7

Section B: Replenishment and Order Management

#### Term

**Echelon** 

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A level of supply chain nodes. For example, a supply chain with two independent factory warehouses and nine wholesale warehouses delivering product to 350 retail stores is a supply chain with three [of these] between the factory and the end customer. One [of these] consists of the two independent factory warehouses, one consists of the nine wholesale warehouses, and one consists of the 350 retail stores. Each [of these] adds operating expense, holds inventory, adds to the cycle time, and expects to make a profit. See: disintermediation.

### Module 7

Section B: Replenishment and Order Management

#### Term

Global trade identification number (GTIN)

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An identification number that uniquely identifies all products and services that are sold, delivered, and invoiced at any point in the supply chain. [These] are typically found at points of sale and on cases and pallets of products in a distribution or warehouse environment.

# Module 7

Section B: Replenishment and Order Management

### **Term**

Freight claim

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A formal legal claim filed by the transportation buyer that the carrier failed to protect the freight properly, seeking monetary compensation for damaged freight, delayed or incorrect deliveries, overcharges, or other service failures. The amount of damages can be up to the value of the goods had they been safely delivered on time.

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Section B: Replenishment and Order Management

### **Term**

Pre-expediting

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The function of following up on open orders before the scheduled delivery date to ensure the timely delivery of materials in the specified quantity.

### Module 7

Section C: Waste Hierarchy and Reverse Logistics

#### Term

Waste hierarchy

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A tool that ranks waste management options according to what is most environmentally sound. Gives top priority to preventing waste in the first place and can be applied to various applications.

# Module 7

Section C: Waste Hierarchy and Reverse Logistics

### **Term**

Reverse logistics

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A complete supply chain dedicated to the reverse flow of products and materials for the purpose of returns, repair, remanufacture, and/or recycling.

# Module 7

Section C: Waste Hierarchy and Reverse Logistics

## **Term**

Returns

A step in the reverse logistics process where a customer sends a product back for any of several possible reasons including the product being defective, damaged, out of season, or outdated (end-of-life), or that it failed to meet expectations or represented excess inventory.

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Section C: Waste Hierarchy and Reverse Logistics

## **Term**

Green reverse logistics

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The responsibility of the supplier to dispose of packaging materials or environmentally sensitive materials such as heavy metals.

### Module 7

Section C: Waste Hierarchy and Reverse Logistics

#### **Term**

Material review board (MRB)

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An organization within a company, often a standing committee, that determines the resolution or disposition of items that have questionable quality or other attributes.

### Module 7

Section C: Waste Hierarchy and Reverse Logistics

### **Term**

Return goods handling

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The work a company puts into accepting returned goods from its customers.

# Module 7

Section C: Waste Hierarchy and Reverse Logistics

## **Term**

Returns inventory costs

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All of the costs associated with handling returned inventory.

Section C: Waste Hierarchy and Reverse Logistics

# Term

Returns processing cost

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All of the costs associated with dealing with returned items after they have been received. These costs occur when returned items are repaired, discarded, or replaced.

# Module 7

Section C: Waste Hierarchy and Reverse Logistics

## **Term**

Return disposal costs

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The costs that occur from discarding or recycling products that are returned because they have reached the end of their useful life or are obsolete. Commonplace in the consumer goods industry.