

CPIA

**CERTIFIED PRODUCTION AND
INVENTORY ANALYST
LEARNING OUTCOMES &
EXAM CONTENT MANUAL**



SCOPE OF SUBJECT MATTER

The aim of **Certified Production and Inventory Analyst** training is to provide the foundation skills and knowledge in production and inventory management.

Certified Production & Inventory Analyst is designed to help you develop an understanding of the formation of business, the planning & scheduling of operations, the management of company resources, and the alternate manufacturing strategies:

- Introduction to Manufacturing and Operations Management
- Operations Planning and Scheduling
- Materials Management
- Manufacturing and Manufacturing Processes
- Manufacturing and Operations Support Functions

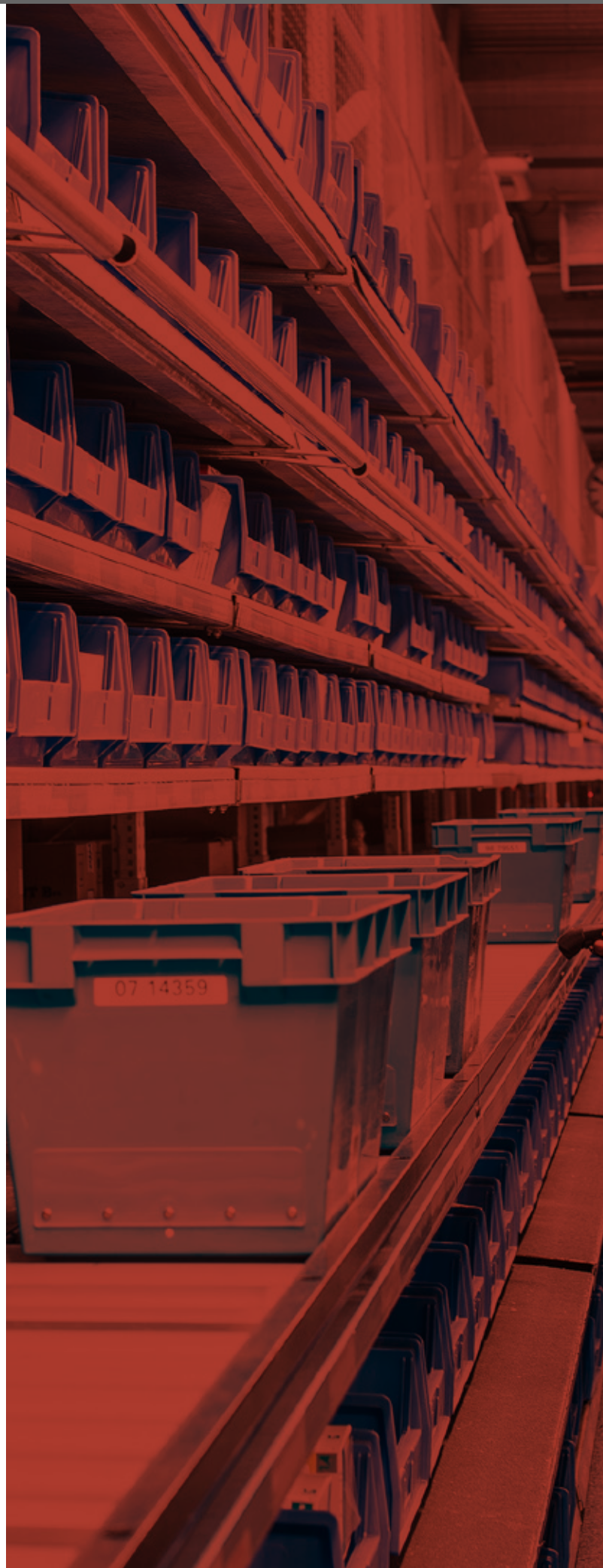
Exam Diagnostics

- | | |
|---|-----|
| 1 Introduction to Manufacturing and Operations Management | 10% |
| 2 Operations Planning and Scheduling | 15% |
| 3 Materials Management | 25% |
| 4 Manufacturing and Manufacturing Processes | 30% |
| 5 Manufacturing and Operations Support Functions | 20% |

Program Outline

The following paragraphs provide an outline of the subject matter covered in the program. The learner should read through the material, keeping in mind the exam diagnostics in relation to the emphasis placed on each module.

Each module includes a number of worked examples and exercises.



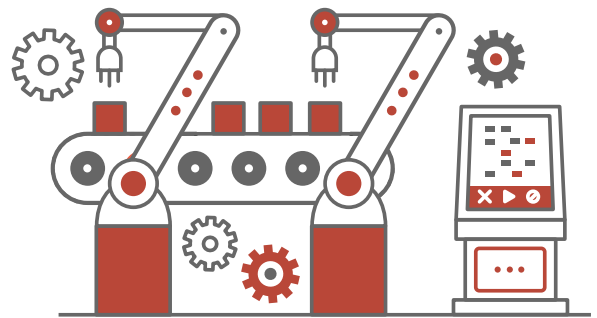


LEARNING OUTCOMES AND EXAM CONTENT

MODULE 1 INTRODUCTION TO MANUFACTURING AND OPERATIONS MANAGEMENT

Course Outline

- 1.1 Business Formation and Business Strategy
- 1.2 Business Functions and Activities
- 1.3 Management
- 1.4 Supply Chains and Customer Service



Learning Outcomes

- Name the objectives a business would establish for its operations;
- Distinguish between unincorporated businesses and incorporated businesses; give examples of each;
- Name the four primary functions of management; provide a brief explanation of each function;
- Define supply chain and supply chain management; with the aid of a diagram, show how demand, supply and information flows through the supply chain;
- Distinguish between the roles of strategic, tactical, and operations planning in supply chain management;
- Name the four leadership styles and give examples of where each leadership style would be the most appropriate;
- Define customer service; explain the importance of customers to a business;
- Outline the steps to be taken to ensure a successful communication process both within an organization and with the outside world.

Exam Content

This module outlines Business Formation and Strategy and introduces the various forms of business formation, distinguishing between incorporated businesses and unincorporated businesses, while examining the advantages and disadvantages of each.

The module reviews the purpose of a business strategy and examines the role of the vision and mission statement in formulating a business strategy. The various organization structures are explained, and a number of business functions and activities are outlined.

The module examines Management, Supply Chain, and Customer Service and introduces the role of management, the structure of the supply chain, and measures of customer service. The role of management is examined and the four management functions are outlined while distinguishing between line, function, and staff relationships.

The structure of the supply chain is outlined and a description of what a supply chain is and how a supply chain is used to improve company performance is examined. The importance of customers and customer service is emphasized and a distinction is made between internal customers and external customers.



LEARNING OUTCOMES AND EXAM CONTENT

MODULE 2 OPERATIONS PLANNING AND SCHEDULING

Course Outline

- 2.1 Forecasting and Demand Management
- 2.2 Planning and Scheduling
- 2.3 Materials Planning
- 2.4 Capacity Planning



Learning Outcomes

- Distinguish between qualitative forecasting techniques and quantitative forecasting techniques;
- Explain the importance of tracking forecast error and making adjustments to a forecast when demand exceeds forecast by a large degree;
- Compare long-range, medium-range, and short-range planning; give examples from each category;
- Distinguish between planning and scheduling; with the aid of examples describe a number of planning and scheduling tools;
- Give a description of the master scheduling process; explain the role of rough-cut capacity planning in master scheduling;
- Give the purpose of materials planning and capacity planning in a manufacturing environment;
- With the aid of a flow diagram, give an explanation of the materials planning process;
- Give an explanation of how capacity planning is used to balance load with capacity at one or more work centres.

Exam Content

This module examines Planning, Forecasting, and Scheduling and explains the roles of planning, forecasting and scheduling in a manufacturing environment.

The module distinguishes between long-range, medium-range, and short-range planning; examining the component parts of each.

The role of forecasting and demand management in a manufacturing environment is outlined and a number of different forecasting techniques are reviewed. A distinction is made between planning and scheduling and a number of scheduling tools are examined.

Master scheduling and the role of master scheduling in a manufacturing environment is explained, along with a description of how rough-cut capacity planning is used in master scheduling.

Material and Capacity Planning is explained in manufacturing and the greater supply chain. The material requirements planning process is described and a range of different bills of material formats is examined.

The capacity planning process is examined with an explanation of how capacity and load are balanced at each stage in the priority and control hierarchy. Different productivity and capacity measures are examined.

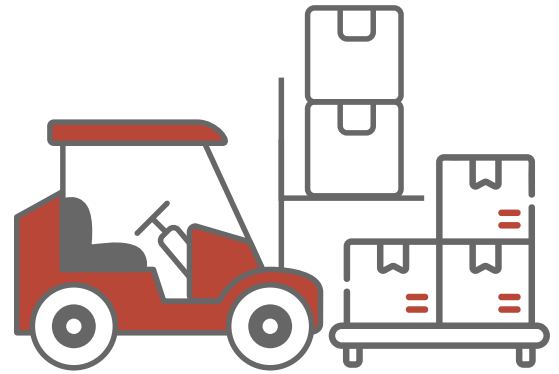


LEARNING OUTCOMES AND EXAM CONTENT

MODULE 3 MATERIALS MANAGEMENT

Course Outline

- 3.1 Purchasing, and Warehousing
- 3.2 Inventory Management and Materials Handling
- 3.3 Transportation and Distribution



Learning Outcomes

- Define materials planning; give the role of materials planning in the supply chain;
- Describe the purchasing cycle; outline the requirements when selecting a supplier;
- Give the role of warehousing in the supply chain; describe a number of warehouse activities;
- Explain what inventory is, and why it is necessary to hold inventory at various points along the supply chain;
- Distinguish between the various types, functions and costs of inventory; give examples from each, outline the importance of managing each;
- Name and give an explanation of each category of materials handling equipment;
- Discuss the role of transport and transportation in the distribution of goods to customers;
- Explain the process of physical distribution; distinguish between carriers and the modes of transportation;

Exam Content

This module examines Materials Management and outlines the role of materials management in manufacturing and the greater supply chain. Purchasing is discussed with the role of purchasing and the purchasing process is explained.

Warehousing in the supply chain and the importance of effective warehouse practices is examined. Different categories of warehouse are reviewed along with the advantages and disadvantages associated with each.

The process of inventory and inventory management is examined and a distinction is made between the types and functions of inventory. The importance of managing inventory and inventory costs is explained. Methods of managing inventory are outlined.

Materials handling and materials handling equipment is examined and the role of materials handling and storage equipment in the warehouse and distribution explained.

Transportation is examined with an explanation of freight management and the different modes of transport in moving goods through the supply chain is explained.

Physical distribution in the supply chain is examined, and an introduction to protective packing is given.

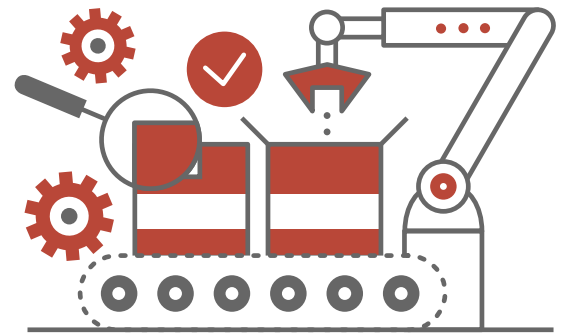


LEARNING OUTCOMES AND EXAM CONTENT

MODULE 4 MANUFACTURING AND MANUFACTURING PROCESSES

Course Outline

- 4.1 Manufacturing and Technology
- 4.2 Manufacturing Strategies
- 4.3 Types of Production
- 4.4 Manufacturing Processing, and Manufacturing Materials



Learning Outcomes

- Name the major groups of knowledge in business; give a brief explanation of each;
- Name and give a brief explanation of each of the components of a representative technological transformation system;
- With the aid of a diagram, give an explanation of the volume-variety matrix;
- Explain the importance of teaming up with suppliers and customers at each level in the supply chain;
- Distinguish between primary sector industries, secondary sector industries and tertiary sector; give examples from each sector;
- Name the different types of production systems; give examples of the products produced by each;
- Name the manufacturing processing families; indicate the significant differences between them;
- Distinguish between engineering materials and non-engineering materials; give examples from each category.

Exam Content

This module examines Manufacturing and Manufacturing Strategies and introduces the field of manufacturing, giving an explanation of each manufacturing strategy.

The module outlines the major groups of knowledge, and the role technology plays in manufacturing. The elements of technological systems are explained and a distinction is made between the various types of technological systems.

The module outlines the manufacturing strategies and differentiates between the product positioning strategies and process strategies. The steps for teaming up with customers are examined and a number of management support functions is outlined.

The Types of Production and Production Materials is examined and the different types of production along with a range of manufacturing materials is discussed.

Manufacturing inputs, processes and outputs for different types of production are explained and a distinction between primary, secondary and tertiary industries is outlined.

The module outlines a range of manufacturing processes and distinguishes between the different materials used in manufacturing.

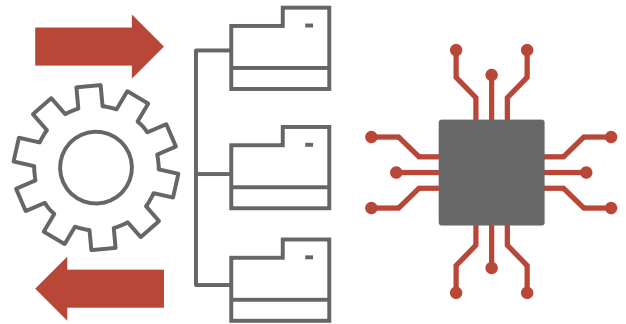


LEARNING OUTCOMES AND EXAM CONTENT

MODULE 5 MANUFACTURING & OPERATIONS SUPPORT FUNCTIONS

Course Outline

- 5.1 Industrial Engineering and Productivity Improvement
- 5.2 Quality, Inspection, Metrology, & Maintenance
- 5.3 Lean and Waste Management
- 5.4 Continuous Improvement



Learning Outcomes

- Explain the role of industrial engineering in a manufacturing environment;
- Define productivity; name the resources, and discuss how productivity influences the wealth of a nation;
- Name the component parts of work study; briefly describe the procedure for a work study investigation;
- Distinguish between quality, inspection, and metrology; explain why quality is everyone's responsibility?
- Name and give a brief explanation of the types of plant maintenance activities in a manufacturing organization;
- Describe the lean process; explain how lean is used to increase the productive use of a company's resources;
- Identify the types of waste; give examples of each waste from the workplace;
- With the aid of sketches, give an explanation of the seven basic quality tools; give one example of the application of each.

Exam Content

This module examines Industrial Engineering Support and introduces a range of industrial engineering support activities necessary for the successful operation of a manufacturing company.

The role of productivity, work study, and ergonomics in improving the productive use of a company's manufacturing resources is discussed, with example given on how to increase productivity utilizing work study and ergonomics.

The module examines the role of quality, inspection, metrology and planned maintenance in manufacturing, and examines how each is utilized in the providing quality cost-effective goods and services.

The module examines Lean, Waste, and Continuous Improvement and introduces the key components of lean, waste, and continuous improvement. Lean and lean thinking is examined, outlining how lean can be used to improve the productive use of a company's limited resources.

Different forms of waste [muda] are identified and a number of suggestions on how to minimize waste in the value chain are given.

The module introduces the process of continuous improvement and describes a number of different quality tools and continuous improvement techniques.



KEY TERMS

Learners wishing to achieve the certification in "Certified Production and Inventory Analyst" should familiarize themselves with the following terms. The glossary of Term accompanying this program provides an explanation of each term.

1-10

5S-CANDO
7+1 wastes

A

ABC classification
Accounting
Action messages
Allowances
Articles of Association
As-built bill of material
Assemble-to-order
Assembling processes
Autocratic leader

B

Backlog
Bill of materials [BOM]
Bill of material structure
Bill of resources
Breadboard model
Business goals
Business culture

C

Capacity requirements planning [CRP]
Capital
Carrier
Casting and molding
Categories of inspectors
Ceramic materials
Chain of suppliers
Channels of distribution
Chase production planning strategy
Comfort zone
Commercial waste
Communications
Companies Act
Competition
Competitive market
Composites
Conditioning processes
Conformance to specification
Continuous improvement
Continuous production systems

Contract warehouses
Control equipment
Controlled waste
Controlling
Corporate strategy
Cumulative lead-time [CLT]
Custom designed
Customer base
Customer service levels [CSL]
Cycle counting

D

Data
Decision-making
Deed of partnership
Defect (S)
Defect waste
Degree of control
Demand
Demand forecasting
Demand management
Democratic leader
Demonstrated capacity
Descriptive studies
Design
Dictator
Directive waste
Distribution
Distribution inventories
Doable schedule

E

Efficiency
Employee empowerment
Employee involvement
Employees
Engineering
Engineering materials
Engineer-to-order [ETO]
Environmental engineering
Equipment productivity
Ergonomic improvements
Ergonomics
Exception messages
Extension strategies
Extra processing waste

F

Fabrication
Factory planned orders
Feedback loop
Ferrous metals
Final assembly schedule [FAS]
Finance
Financial incentives
Finishing processes
First-off
Fitness for purpose
Fixed-position layout
Flow-shop
Focus forecasting
Forecasting
For-hire carriers
Forming processes
Form utility
Fourth-party logistics provider [4PL]
Free-reign leader
Functional layout
Functions of inventories

G

Galvanizing
General public
General-purpose equipment
Global market
Goal-management
Goals
Goods
Goods availability
Goods' receiving process
Gross requirements

H

Handicraft era
Health and safety
Health and safety engineer
Household waste

Human capital
Human factor engineering
Humanities
Hybrid production planning strategy

I

Incorporated businesses
Indented bill of material
Industrial engineering
Industrial engineers
Industrial Revolution
Industrial waste
Informal organization
Information
Inorganic materials
Input-output control
Input-output report
Inputs
Inspection
Inspection activity
Inspection stations
Intermittent production
Inventory
Inventory management
Inventory record accuracy
Inventory waste
Item
Item data
Item record

J

Jidoka
Job production
Job relatedness
Job satisfaction
Job shop

K

Kaizen
Kanban
Key performance indicators [KPIs]
Knowledge

L

Labour productivity
Leading
Lean initiatives
Lean philosophy
Legal identity
Level production planning strategy
Levels of inspection
Limited [Ltd] company
Limited liability
Liquid assets
Load profile
Logistics
Long-range planning

M

Machines
Maintenance
Make-to-order [MTO]
Make-to-stock [MTS]
Management functions
Management processes
Manpower
Manufacturing
Manufacturing inputs
Manufacturing inventories
Manufacturing lead-time [MLT]
Manufacturing outputs
Manufacturing processes
Manufacturing [producer] environment
Manufacturing team
Marketing
Market niche
Mass production
Master production schedule [MPS]
Master scheduler
Master scheduling
Material flow cycle
Material planner
Materials planning process
Material requirements planning [MRP]
Materials
Materials handling equipment [MHE]
Materials management
Medium-range planning
Memorandum of Association
Metallic materials
Metrologist
Mixed-model scheduling
Modes of transport
Motion waste
MRP record
Multi-skilling
Multi-tasking

N

Negative feedback
Net requirements
Nonferrous metals
Non-financial incentives
Not-for-hire carrier

O

Observed time
Occupational Health and Safety
Administration [OSHA]
Off-the-shelf
Open data models
Open order status
Operations research [OR]

Order cycle
Organizations
Original equipment manufacturer [OEM]
Outputs
Overproduction
Owners

P

Packaging materials
Packaging waste
Partners
Part number
PDCA cycle
Performance measures
Periodic stocktake
Personal protective equipment [PPE]
Place utility
Planning
Planning factors
Planning horizons
Plant maintenance
Polymeric materials
Positioning equipment
Primary material input
Principles of lean production
Private sector companies
Private warehouses
Process engineering
Processes
Processing logic
Process layout
Process production
Process strategies
Product development
Product engineering
Production
Production activity control [PAC]
Production planning
Production planning and control [PPC]
Production planning strategies
Productive resources
Productivity
Productivity people
Productivity ratio
Productivity trends
Product layout
Product mix
Product positioning strategies
Product-process matrix

Product volume
 Profitability
 Proprietary limited [Pty] Ltd. companies
 Protective packaging
 Public sector companies
 Public warehouses
 Purchase planning and control
 Purchasing
 Purchasing cycle

Q

Quality assurance [QA]
 Quality circles [QCs]
 Quality control [QC]
 Quality control and inspection
 Quality management
 Quality of work-life [QWL]

R

Rated capacity
 Recycling
 Resource planning
 Resources
 Relaxation allowances
 Rough-cut capacity planning [RCCP]
 Routing file

S

Scheduled receipt
 Scheduling rules
 Science
 Secondary processing
 Self inspection
 Separating processes
 Seven basic quality tools
 Seven wastes

Shareholders
 Shop calendar
 Short-range planning
 Single-level bill of material
 Single-minute exchange of dies [SMED]
 SKU
 Societal goals
 Sole proprietor
 Special category warehouse
 Specialization
 Special-purpose equipment
 Special waste
 Specification
 Standardized work
 Standard operating procedures [SOPs]
 Standards
 Standard time
 Storage equipment
 Strategic decision-making
 Subassembly
 Subcontract
 Subcontracting production planning strategy
 Summarized bill of material
 Supplier relationships
 Supplier selection
 Supply pipe
 Support functions
 Swarf
 System goals
 Systemic errors

T

Tactical decision-making
 Targets
 Technology
 Technology systems
 Third-party logistics provider [3PL]
 Theoretical capacity
 Time-based maintenance

Time-span
 Time utility
 Total quality management [TQM]
 Transformation process
 Transportation
 Transport company
 Transport equipment
 Transport waste
 Tree structure
 Types of ergonomics
 Types of inventory

U

Under-utilized people waste
 Undesirable outputs
 Unincorporated businesses
 Unit loads
 Utilities
 Utilization

V

Value analysis
 Value engineering
 Value stream
 Voice of the customer [VOC]

W

Waiting waste
 Warehousing activities
 Waste
 Waste elimination
 Work centre load report
 Work centres
 Work content
 Work environment
 Workforce
 Work measurement techniques



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SAMPLE QUESTIONS

The sample questions included here are similar in format to the questions contained in the final exam.

These questions are included to enable you to become familiar with the approach to answering questions that you will encounter when you take the exam. Remember these are only sample questions and your score in this sample should not be interpreted as your potential for successfully achieving a pass in the final exam.

Select the most correct answer for each of the following multiple choice questions.

When answering multiple choice questions do the following: Read the question, read the question again underlining the key words and eliminating any definite wrong answers. Read the question again. Remember there is no negative marking, so if in doubt at least take your best shot.

Indicate your answer by circling the appropriate letter, a, b, c, or d.

Question No. 1

Which is **NOT** an incorporated business?

- a. Personal Liability Company.
- b. Limited Partnership.
- c. Private Limited Company.
- d. Limited Company.

Question No. 2

Which statement regarding "flows" within the supply chain is **CORRECT**?"

- a. Goods flow from customers to suppliers.
- b. Demand flows from suppliers to customers.
- c. Information flows in both directions.
- d. Each of the above statements is correct.

Question No. 3

Which product positioning strategy has the longest customer lead-time?

- a. Engineer-to-order.
- b. Make-to-order.
- c. Assemble-to-order.
- d. Make-to-stock.

Question No. 4

Which is **NOT** a qualitative forecasting technique?

- a. Delphi method.
- b. Exponential smoothing.
- c. Executive opinions.
- d. Consumer surveys.

Question No. 5

Which is the **CORRECT** action to take when load exceeds capacity?

- a. Reduce load and reduce capacity.
- b. Increase load and reduce capacity.
- c. Reduce capacity or increase load.
- d. Increase capacity or reduce load.

Question No. 6

Which are examples of intermittent production systems?

- a. Job production and batch production.
- b. Job production and repetitive production.
- c. Repetitive production and process production.
- d. Process production and batch production.

Question No. 7

The type of maintenance that is "condition-based" is:

- a. Periodic maintenance.
- b. Preventive maintenance.
- c. Breakdown maintenance.
- d. Predictive maintenance.

Question No. 8

Which business function is responsible for getting the finished goods to customers?

- a. Distribution management.
- b. Materials management.
- c. Production planning and control.
- d. Marketing management.

Question No. 9

Each is a type of materials transport equipment **EXCEPT**:

- a. Conveyors.
- b. Hoists.
- c. Industrial trucks.
- d. Cranes.

Question No. 10

Which is **NOT** a sub-category of controlled waste?

- a. Industrial waste.
- b. Commercial waste.
- c. Directive waste.
- d. Household waste.



ANSWERS TO SAMPLE QUESTIONS

Question No. 1

Which is **NOT** an incorporated business?

- a. Personal Liability Company.
- b. Limited Partnership.**
- c. Private Limited Company.
- d. Limited Company.

Explanation

Incorporated businesses are a class of business in which the business has an identity that is separate from its owners, and should the business be sued the owners themselves are protected from debt payment.

A private limited company is a state-authorized business structure that has state-specific regulations; composed of members, who are the owners.

A limited partnership is an unincorporated business set up by a number of individuals to conduct similar business;

some of the members contributing financially, but take no active part in the day-to-day running of the business. These partners are known as "sleeping" partners.

A personal liability company is a state-authorized business structure that falls under state-specific regulations that is composed of members, who are the owners.

Question No. 2

Which statement regarding "flows" within the supply chain is **CORRECT?**"

- a. Goods flow from customers to suppliers.
- b. Demand flows from suppliers to customers.
- c. Information flows in both directions.**
- d. Each of the above statements is correct.

Explanation

Demand "flows" from the customer back to the supplier base; supply follows the route from supplier to customer.

For a supply chain to perform efficiently reliable information needs to "flow" in both directions.

Question No. 3

Which product positioning strategy has the longest customer lead-time?

- a. **Engineer-to-order.**
- b. Make-to-order.
- c. Assemble-to-order.
- d. Make-to-stock.

Explanation

With an engineer-to-order strategy time is required to design the goods for specific customers, procure the necessary materials, make the goods, and then ship the goods to the customer.

With a make-to-order strategy time is required to procure the materials, make the goods and ship the goods to the customer.

An assemble-to-order product positioning strategy requires time to finish the goods, making use of the final assembly schedule (FAS) and then shipping the goods to customers.

A make-to-stock product positioning strategy has the shortest customer lead-time - ship the goods to customers. Here the goods are produced and held in the finished goods warehouse until requested by a customer or end user.

Question No. 4

Which is **NOT** a qualitative forecasting technique?

- a. Delphi method.
- b. **Exponential smoothing.**
- c. Executive opinions.
- d. Consumer surveys.

Explanation

The Delphi method is a group technique in which a panel of experts is questioned individually about their perceptions of future events.

Exponential smoothing is a quantitative forecasting technique using historical data - weighted to favour the most recent information.

Executive opinion uses the subjective views of

company executives or external subject matter experts to generate a forecast relating to future sales.

Consumer surveys use a company's own market surveys regarding specific consumer purchases. Surveys may consist of telephone contacts, personal interviews, or questionnaires. Each is a means of obtaining data.

Question No. 5

Which is the **CORRECT** action to take when load exceeds capacity?

- a. Reduce load and reduce capacity.
- b. Increase load and reduce capacity.
- c. Reduce capacity or increase load.
- d. **Increase capacity or reduce load.**

Explanation

The correct action to take when load exceeds capacity is to increase capacity or reduce load. Increasing capacity requires the provision of additional resources. The way to reduce load is to make fewer of the same items or reduce the total number of jobs in the system at that time.

Each of the other suggested answers would only aggravate the situation by either having too much load available, too little load available, too little capacity with which to execute the master production schedule, or too much capacity. The outcome achieved would depend on the action taken at a particular time.

Question No. 6

Which are examples of intermittent production systems?

- a. Job production and batch production.**
- b. Job production and repetitive production.
- c. Repetitive production and process production.
- d. Process production and batch production.

Explanation

Job production and batch production are both examples of intermittent production, usually associated with a high variety - low volume product mix. These industries produce their goods and services against a make-to-order or an engineer-to-order product positioning strategy. They employ a fixed-location layout or a functional layout.

Repetitive production and process production are examples of continuous production, where the volumes are high and the product variety is relatively low. With this type of production the product positioning strategy is make-to-stock or assemble-to-order. Here use is made of flow production techniques to produce the outputs.

Question No. 7

The type of maintenance that is "condition-based" is:

- a. Periodic maintenance.
- b. Preventive maintenance.
- c. Breakdown maintenance.
- d. Predictive maintenance.**

Explanation

Periodic maintenance is a type of time-based maintenance consisting of periodically inspecting, servicing, cleaning equipment, and replacing parts so as to prevent sudden failure and process-stability problems.

Preventive maintenance attempts to "prevent" failure through the prevention of deterioration, periodic inspection, or equipment condition diagnosis.

Breakdown maintenance is a type of maintenance where maintenance personnel wait until the equipment fails and then repair or replace it - depending on the extent of the breakdown.

Predictive maintenance ensures every piece of equipment in a production process is always able to perform its required task. This allows production to continue without interruptions.

Question No. 8

Which business function is responsible for getting the finished goods to customers?

- a. Distribution management.**
- b. Materials management.
- c. Production planning and control.
- d. Marketing management.

Explanation

Distribution management has the responsibility of getting goods to market, utilizing one of the available modes of transport, and making the correct selection of carrier.

Materials management has the responsibility of ensuring materials are available at the time they are needed; and that these materials are made available in the quantities requested.

Production planning and control schedule work for each of the production facilities and then manage the progress and completion of that work.

Marketing management has the role of determining the market for a company's goods and services, then satisfying that demand through sales.

Question No. 9

Each is a type of materials transport equipment **EXCEPT**:

- a. Conveyors.
- b. Hoists.**
- c. Industrial trucks.
- d. Cranes.

Explanation

There are three types of transport equipment frequently used in a warehouse environment; conveyors, cranes, and industrial trucks.

Conveyors are a horizontal, inclined, or vertical device for moving or transporting bulk material, packages, or objects in a path predetermined by the design of the device, and having points of loading and discharge, fixed or selective.

Hoists are classified as a piece of positioning equipment. Other forms of positioning equipment include air-film device, balancers, ball transfer tables, lift-and-tilt tables, parts feeders, and rotary index tables.

Industrial trucks include wheeled vehicles used in the factory, warehouse or distribution centre, in the dock area, [and in some cases also in the yard or on construction sites], to pick up, transport, and deposit single loads.

Cranes are machines for lifting or lowering a load and moving it horizontally. Drives may be manual, powered, or a combination of both.

Question No. 10

Which is **NOT** a sub-category of controlled waste?

- a. Industrial waste.
- b. Commercial waste.
- c. Directive waste.**
- d. Household waste.

Explanation

Directive waste includes any substance or object which the producer or the person in possession of it discards, intends to discard, or is required to discard. This forms the basic definition of waste as we understand it in the workplace.

Controlled waste is waste subject to legislative control in both its handling and disposal.

Controlled waste encompasses all forms of household, industrial and commercial waste - or any other such waste that has no future economic value attached to it.



“

VCARE Academy was founded with the vision to become the world class leader in research and education in the field of value chain management. **VCARE Academy** is partnered with many International affiliates around the globe. This enables us to provide our clients with internationally recognized accredited qualifications and research opportunities in the ever-evolving field of value chain management. **VCARE Academy** in association with its international affiliates is able to offer a wide range of training and education programs to help you grow and excel in your career.

”

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