

QUESTION 67 of 70 1.00 Marks

Passage :-

Acme Manufacturing, a leading supplier of precision automotive components, operates at near full capacity with its current production setup, reaching 90% utilization. With a surge in demand from electric vehicle manufacturers, the company faces critical capacity constraints that threaten its ability to fulfill contracts. Acme's management is evaluating three complex options: running a third production shift, expanding its existing facilities, or leveraging external suppliers to

Question :-

What is the key challenge Acme faces in making the capacity decision amid economic uncertainty?

- ☒ Balancing increased capacity with the risk of demand volatility leading to overproduction
- ☐ Securing enough financial backing to fund their expansion projects
- ☐ Hiring enough skilled labor to manage additional production shifts
- ☐ Increasing their market share in a highly competitive industry
- ☐ Complying with new environmental regulations while expanding

QUESTION 68 of 70 1.00 Marks

Passage :-

significant investment in new equipment and infrastructure, with the risk of delayed returns if demand fluctuates. Outsourcing could allow flexibility but might expose Acme to quality control issues and dependency on external vendors, potentially compromising their reputation. Complicating matters further, the decision must be made amid economic uncertainty, where demand volatility poses a risk of overproduction and inflated inventory costs.

Question :-

What is one potential issue with running a third production shift?

- ☐ Increased transportation costs
- ☐ Decline in market demand for automotive components
- ☐ Higher capital investment in new production lines
- ☐ Loss of intellectual property to competitors
- ☒ Accelerated wear on machinery and employee fatigue

QUESTION 69 of 70 1.00 Marks

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Question :-

What risk is associated with outsourcing production to external suppliers?

- ☐ Potential loss of proprietary technology
- ☐ Increased internal labor costs
- ☐ Overburdening existing employees with additional tasks
- ☒ Dependence on external vendors could compromise quality control
- ☐ Difficulty in meeting long-term sustainability goals

QUESTION 70 of 70 1.00 Marks

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Question :-

What capacity constraint is Acme Manufacturing currently experiencing?

- ☐ Operating under regulatory restrictions
- ☒ 90% utilization of production facilities due to increased demand
- ☐ Lack of trained workforce for new shifts
- ☐ Insufficient capital for expansion projects
- ☐ Limited access to external suppliers

QUESTION 67 of 70

1.00 Marks

Passage :-

ABC Motors, a leading automobile manufacturer, faced inefficiencies in their car assembly line due to an uneven distribution of tasks across workstations. Some stations were overloaded, causing bottlenecks, while others were underutilized. This imbalance led to increased production time, higher labor costs, and delays in meeting market demand. To resolve this issue, the company decided to implement assembly line balancing. The first step involved conducting a time study to measure the time taken at each station. The goal was to redistribute tasks so that each workstation had a nearly equal amount of work. The target was to reduce cycle time and improve overall productivity without increasing labor costs. The project team identified bottleneck stations and

Question :-

What method did ABC Motors use to measure the time taken at each station?

- ☐ Lean manufacturing
- ☒ Time study
- ☐ Six Sigma
- ☐ Cost-benefit analysis
- ☐ SWOT analysis

QUESTION 68 of 70

1.00 Marks

Passage :-

The time taken at each station. The goal was to redistribute tasks so that each workstation had a nearly equal amount of work. The target was to reduce cycle time and improve overall productivity without increasing labor costs. The project team identified bottleneck stations and reallocated tasks between stations based on the skill sets required and the sequence of operations. This restructuring not only eliminated bottlenecks but also improved worker satisfaction as it reduced idle time and fatigue. After the changes, ABC Motors saw a 15% improvement in output, reduced cycle time by 20%, and achieved a smoother workflow. This case illustrates the importance of efficient assembly line balancing in achieving operational excellence and meeting production goals.

Question :-

What was the primary goal of implementing assembly line balancing at ABC Motors?

- ☐ Increase machine downtime
- ☐ Increase the number of workers
- ☐ Increase labor costs
- ☐ Improve product design
- ☒ Reduce production time

QUESTION 69 of 70 1.00 Marks

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Question :-

Which of the following was an outcome after the assembly line balancing was implemented?

- ☒ 20% reduction in cycle time
- ☐ Reduced worker satisfaction
- ☐ Increased cycle time
- ☐ Higher idle time for workers
- ☐ Increase in defective products

QUESTION 70 of 70 1.00 Marks

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Question :-

What would likely happen if ABC Motors did not address the assembly line imbalance?

- ☐ Worker satisfaction would improve
- ☐ The company would face fewer bottlenecks
- ☐ The production cost would decrease
- ☒ The production cycle time would increase
- ☐ There would be no significant change in production efficiency

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QUESTION 1 of 70 1.00 Marks

In a Total Quality Management (TQM) system, which of the following is the most important focus?

- ☐ Statistical process control
- ☒ Meeting customer needs and expectations
- ☐ Continuous process improvement
- ☐ Employee training and involvement
- ☐ Reducing production costs

QUESTION 2 of 70 1.00 Marks

Which inventory management method is most suitable for products with high demand variability and frequent changes?

- ☒ Vendor Managed Inventory (VMI)
- ☐ Economic Order Quantity (EOQ)
- ☐ Just-in-Time (JIT)
- ☐ ABC Analysis
- ☐ Periodic Inventory System

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QUESTION 3 of 70

1.00 Marks

The reorder point is determined by:

- ☐ The production capacity and storage space available
- ☐ The number of units sold daily
- ☐ The EOQ and safety stock
- ☐ The total annual demand
- ☒ Lead time demand and safety stock

QUESTION 4 of 70

1.00 Marks

An operations manager is not likely to be involved in

- ☒ the identification of customersundefined wants and needs
- ☐ the quality of products and services to satisfy customersundefined wants and needs
- ☐ the design of products and services to satisfy customersundefined wants and needs
- ☐ work scheduling to meet the due dates promised to customers
- ☐ design of processes

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QUESTION 5 of 70

1.00 Marks

Statistical Process Control (SPC) primarily focuses on:

- ☒ Monitoring and controlling process variation
- ☐ Reducing lead times for raw material orders
- ☐ Eliminating waste in the production process
- ☐ Reducing inventory levels across the supply chain
- ☐ Implementing employee training programs

QUESTION 6 of 70

1.00 Marks

In the context of global supply chain distribution, what do **Place Utility** and **Time Utility** refer to?

- ☐ Efficient production scheduling
- ☒ Availability of products in the right place at the right time
- ☐ Ensuring products are delivered with minimal cost
- ☐ Inventory management in overseas markets
- ☐ Reduction in lead times for production

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QUESTION 7 of 70

1.00 Marks

The Critical Ratio (CR) rule is calculated by:

- ☐ Setup time / Processing time
- ☒ Time until due date / Processing time
- ☐ Processing time / Due date
- ☐ Processing time / Number of machines
- ☐ Setup time / Number of jobs

QUESTION 8 of 70

1.00 Marks

What is a disadvantage of the level production strategy in aggregate planning?

- ☐ Loss of control over subcontracted work
- ☐ Frequent hiring and firing of workers
- ☒ High costs associated with inventory holding
- ☐ Decreased production efficiency
- ☐ Poor customer service levels

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QUESTION 9 of 70 1.00 Marks

In job sequencing, the Earliest Due Date (EDD) rule aims to:

- ☒ Minimize the number of late jobs
- ☐ Maximize resource utilization
- ☐ Minimize total flow time
- ☐ Prioritize jobs based on their critical ratios
- ☐ Minimize processing time variations

QUESTION 10 of 70 1.00 Marks

Which of the following terms refers to the net requirements in MRP?

- ☐ Planned orders minus inventory on hand
- ☐ Inventory on hand minus gross requirements
- ☒ Gross requirements minus inventory on hand and scheduled receipts
- ☐ Scheduled receipts minus lead time
- ☐ Lead time minus planned receipts

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QUESTION 11 of 70 1.00 Marks

Which of the following is not a part of the design process?

- ☐ Conducting feasibility studies
- ☐ Simplifying the design
- ☐ Understanding customer needs
- ☒ Implementing the design without revisions
- ☐ All are part of design process

QUESTION 12 of 70 1.00 Marks

Which of the following factors is typically considered when making global procurement decisions?

- ☐ Reduced transit time
- ☒ Supplier financial stability
- ☐ Increased product homogeneity
- ☐ Reduction of product variety
- ☐ Elimination of custom duties

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QUESTION 13 of 70

1.00 Marks

Which of the following is NOT an objective of inventory management?

- ☒ To maximize storage space utilization
- ☐ To avoid stockouts
- ☐ To minimize holding costs
- ☐ To ensure smooth production flow
- ☐ To maintain customer service levels

QUESTION 14 of 70

1.00 Marks

Scheduled receipts in MRP refer to:

- ☐ Items scheduled for quality inspection
- ☐ Orders that have been received and are in production
- ☒ Orders that have been placed but not yet delivered
- ☐ Goods waiting to be shipped to customers
- ☐ Materials that have been rejected due to defects

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QUESTION 15 of 70 1.00 Marks

Which of the following best describes a demand-defined strategy?

- ☐ Maintaining capacity levels equal to current demand without overextending resources
- ☒ Expanding capacity ahead of forecasted demand to meet potential increases
- ☐ Expanding capacity only after demand has been consistently high for an extended period
- ☐ Scaling back capacity when demand declines to prevent resource waste
- ☐ Matching capacity to demand fluctuations on a daily or weekly basis

QUESTION 16 of 70 1.00 Marks

Which logistics function involves managing the movement of people and optimizing plant or warehouse site locations?

- ☒ Functional decisions
- ☐ Outbound logistics
- ☐ Inbound logistics
- ☐ Reverse logistics
- ☐ Packaging decisions

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QUESTION 17 of 70

1.00 Marks

In the master production schedule (MPS), what does a firm planned order (FPO) represent?

- ☒ A planned production order that has been committed and is not subject to changes
- ☐ A tentative order that is subject to revision
- ☐ An order that has been placed with a supplier but can still be adjusted
- ☐ An emergency order that must be fulfilled within 24 hours
- ☐ An order that is canceled after a certain period

QUESTION 18 of 70

1.00 Marks

Why might domestic firms NOT choose to adopt global procurement strategies?

- ☒ To avoid compliance with complex international trade regulations
- ☐ To gain access to new technologies
- ☐ To access lower-cost raw materials
- ☐ To benefit from advanced supplier networks
- ☐ To introduce competition to local suppliers

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QUESTION 19 of 70 1.00 Marks

In the design review phase, what is the primary objective of evaluating functional and product specifications?

- ☒ To ensure the final design will meet customer requirements and achieve order winner characteristics
- ☐ To verify that the design aligns with competitor products in the market
- ☐ To ensure all internal processes are streamlined for cost reduction
- ☐ To prepare for large-scale production based on initial ideas
- ☐ Improving efficiency by optimizing internal production processes

QUESTION 20 of 70 1.00 Marks

Which of the following is NOT an input to the Sales and Operations Planning process?

- ☒ Machine specifications
- ☐ Demand forecasts
- ☐ Financial constraints
- ☐ Capacity constraints
- ☐ Company policy

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QUESTION 21 of 70 1.00 Marks

Training cost is part of which of the following quality cost:

- ☐ Internal failure cost
- ☐ External failure cost
- ☐ Appraisal costs
- ☒ Prevention cost
- ☐ fixed cost

QUESTION 22 of 70 1.00 Marks

What key factor does a decision tree analysis consider when planning capacity?

- ☒ Probabilities of future demand outcomes
- ☐ Short-term costs of expansion
- ☐ Immediate customer feedback
- ☐ Current employee satisfaction levels
- ☐ Competitor product launches

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QUESTION 23 of 70 1.00 Marks

Which of these is not a characteristic of a project?

- ☐ It begins and ends at specific points
- ☒ It is designed to be extended as needed
- ☐ It has a temporary and definite duration
- ☐ It is constrained by time
- ☐ It encompasses a complete set of defined objectives

QUESTION 24 of 70 1.00 Marks

Which element is least associated with project planning?

- ☐ Planning the schedule
- ☐ Identifying project deliverables
- ☐ Setting measurable objectives
- ☒ Planning for unplanned extensions
- ☐ Making supporting plans

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QUESTION 25 of 70 1.00 Marks

Which of the following smoothing constants would make an exponential smoothing forecast equivalent to a naïve forecast?

- ☐ 1 divided by number of periods
- ☐ 0.5
- ☐ 0
- ☒ 1
- ☐ 0.3

QUESTION 26 of 70 1.00 Marks

Peak demand strategy is most appropriate when:

- ☐ The company is focused on cost-cutting
- ☐ There is low competition for labor resources
- ☐ Inventory holding costs are minimal
- ☐ Demand fluctuations are minor
- ☒ Customers demand very high levels of service

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QUESTION 27 of 70 1.00 Marks

Which of the following is a key reason why supply chains are often referred to as undefined supply networks undefined?

- ☐ Supply chains operate strictly within a geographic region
- ☒ Supply chains involve multiple interdependent entities and processes
- ☐ Supply chains only move in one direction
- ☐ Supply chains handle only physical goods
- ☐ Supply chains are not involved in reverse logistics

QUESTION 28 of 70 1.00 Marks

Which of the following best describes the term undefined supply network undefined or undefined supply web undefined?

- ☐ A non-linear, interconnected system of supply chain activities
- ☐ A system where only logistics and delivery operations are emphasized
- ☐ A linear model where all flows are in one direction
- ☒ A system that focuses solely on information flow
- ☐ A looped system focusing only on customer feedback

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QUESTION 29 of 70 1.00 Marks

The Bill of Materials (BOM) in MRP is primarily used to:

- ☒ Determine the quantity of components needed for production
- ☐ Calculate the total cost of raw materials required
- ☐ Define the production schedule for finished goods
- ☐ Schedule the shipment of products to customers
- ☐ Assess the financial performance of the production process

QUESTION 30 of 70 1.00 Marks

Which of the following methods is commonly used for quantitative forecasting?

- ☒ Moving Averages
- ☐ Market Research
- ☐ Delphi Method
- ☐ Expert Opinion
- ☐ Focus Groups

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QUESTION 31 of 70 1.00 Marks

If an MRP system shows planned orders being generated with no inventory available, this could be due to:

- ☐ Excess capacity in production
- ☐ Inaccurate demand forecasts
- ☐ A short lead time
- ☒ Inaccurate inventory records
- ☐ Incorrect routing information

QUESTION 32 of 70 1.00 Marks

In the undefinedDesign for Environmentundefined (DFE) approach, which of the following is emphasized?

- ☐ Increasing production efficiency by using non-recyclable materials
- ☒ Designing products with minimal environmental impact
- ☐ Maximizing the use of new materials in manufacturing
- ☐ Disposing of products immediately after their first use
- ☐ Reducing labor costs

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QUESTION 33 of 70 1.00 Marks

A retailer has an average inventory of Rs. 15,000 and annual cost of goods sold of Rs. 90,000. What is the inventory turnover ratio?

- ☒ 6 times
- ☐ 5 times
- ☐ 4 times
- ☐ 7 times
- ☐ 8 times

QUESTION 34 of 70 1.00 Marks

In the context of Quality Function Deployment (QFD), how is the relationship matrix used in the design process?

- ☐ It assesses the financial viability of a product
- ☐ It tracks competitor performance in fulfilling customer expectations
- ☐ It evaluates the feasibility of product characteristics based on production capabilities
- ☐ It determines which products should be removed from the market based on customer feedback
- ☒ It maps out the extent to which each product characteristic is related to customer requirements

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QUESTION 35 of 70

1.00 Marks

The forecasting method that is appropriate when the time series has no significant trend, cyclical, or seasonal effect is

- ☐ mean average deviation
- ☐ mean squared error
- ☐ moving averages
- ☐ qualitative forecasting methods
- ☒ exponential smoothing

QUESTION 36 of 70

1.00 Marks

Which aspect of project management focuses on the strategic alignment of project goals with business objectives?

- ☐ Project Control
- ☐ Project Planning
- ☒ Project Performance Management
- ☐ Project Evaluation
- ☐ Project Audit

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QUESTION 37 of 70 1.00 Marks

Why is it important to assess both utilization and efficiency in capacity planning?

- ☒ To get a comprehensive view of both the maximum potential and the actual performance of operations
- ☐ To ensure that expansion decisions are made based on optimal demand forecasts
- ☐ To identify gaps in financial performance and customer satisfaction
- ☐ To determine how many employees need to be hired to handle additional workloads
- ☐ To compare operational performance to that of industry competitors

QUESTION 38 of 70 1.00 Marks

Kanban systems are primarily used for:

- ☐ Implementing statistical process control (SPC)
- ☐ Reducing machine downtime in a production system
- ☒ Controlling inventory and production flow in a pull-based system
- ☐ Scheduling large batch production runs
- ☐ Managing supplier relationships in a lean supply chain

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QUESTION 39 of 70 1.00 Marks

What is the significance of the undefined Make-or-Buy decision in global procurement?

- ☐ Determining supplier costs based on local currency exchange rates
- ☒ Choosing whether to outsource procurement or develop internal suppliers
- ☐ Deciding which suppliers to establish short-term relationships with
- ☐ Selecting suppliers based on international trade agreements
- ☐ Establishing supplier performance metrics

QUESTION 40 of 70 1.00 Marks

A company follows a chase demand strategy. If demand is forecasted to increase by 1,000 units in the next month, and each worker produces 100 units per month, how many additional workers must be hired to meet the increased demand?

- ☐ 11 workers
- ☒ 10 workers
- ☐ 5 workers
- ☐ 15 workers
- ☐ 20 workers

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QUESTION 41 of 70 1.00 Marks

How would you describe the relationship between utilization and efficiency in a manufacturing setup?

- ☐ Utilization focuses on resource allocation, while efficiency focuses on production speed
- ☐ Efficiency measures time-related performance, while utilization measures cost-related performance
- ☒ Utilization measures how close actual output is to effective capacity, while efficiency compares actual output to design capacity
- ☐ Utilization compares actual output to design capacity, while efficiency compares actual output to effective capacity
- ☐ Efficiency measures workforce productivity, while utilization measures customer satisfaction

QUESTION 42 of 70 1.00 Marks

Which of the following supply chain strategies is primarily forecast-driven rather than customer order-driven?

- ☐ Engineer-to-Order (ETO)
- ☐ Assemble-to-Order (ATO)
- ☒ Make-to-Stock (MTS)
- ☐ Make-to-Order (MTO)
- ☐ Pull-based strategy

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QUESTION 43 of 70

1.00 Marks

A Johnson's Rule is used for:

- ☒ Minimizing makespan in a two-machine sequencing problem
- ☐ Scheduling jobs with equal processing times on two machines
- ☐ Scheduling jobs with unequal processing times on a single machine
- ☐ Determining the earliest start time for each job in a project
- ☐ Minimizing total tardiness in a multi-job scheduling problem

QUESTION 44 of 70

1.00 Marks

A manufacturer has a holding cost of Rs. 2 per unit per month and an ordering cost of Rs. 100 per order. The annual demand is 12,000 units. What is the optimal number of orders per year based on EOQ?

- ☐ 30
- ☐ 24
- ☐ 20
- ☒ 36
- ☐ 40

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QUESTION 45 of 70 1.00 Marks

In the 5S methodology, the term Seiso refers to:

- ☐ Standardizing processes and practices
- ☒ Maintaining a clean and organized workplace
- ☐ Sorting out unnecessary items
- ☐ Sustaining improvements over time
- ☐ Structuring workflows for efficiency

QUESTION 46 of 70 1.00 Marks

In a single-machine scheduling problem, which rule will generally result in the lowest average flow time?

- ☐ Longest Processing Time (LPT)
- ☐ First Come, First Served (FCFS)
- ☒ Shortest Processing Time (SPT)
- ☐ Earliest Due Date (EDD)
- ☐ Critical Ratio (CR)

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QUESTION 47 of 70 1.00 Marks

Which of the following services is not unique, i.e., customized to a particular individual's needs?

- ☐ legal services
- ☒ elementary education
- ☐ hairdressing
- ☐ dental care
- ☐ none of these

QUESTION 48 of 70 1.00 Marks

Which of the following does not directly contribute to project success according to project management literature?

- ☐ Adequate resources
- ☒ Involving minimal stakeholders
- ☐ Clear goals
- ☐ Competent project manager
- ☐ Client involvement

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QUESTION 49 of 70 1.00 Marks

In global procurement, why might a firm opt for a short-term relationship with a supplier?

- ☐ To build long-term strategic alliances
- ☐ To centralize procurement decisions
- ☐ To reduce international regulations
- ☐ To improve currency exchange rates
- ☒ To handle demand fluctuations

QUESTION 50 of 70 1.00 Marks

Which logistics challenge is exacerbated by increasing product line diversity and rapid innovation?

- ☐ Lower costs for transporting raw materials
- ☐ Decreased demand for logistics experts
- ☒ Increased need for flexible and agile suppliers
- ☐ Standardized transportation systems
- ☐ Simplified supply chain management

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QUESTION 51 of 70 1.00 Marks

A company needs to schedule 4 jobs on a single machine. The processing times are 10, 15, 5, and 8 minutes, respectively. Using the Shortest Processing Time (SPT) rule, what is the average flow time for these jobs?

- ☐ 13.5 minutes
- ☐ 11.25 minutes
- ☐ 9.5 minutes
- ☒ 15.25 minutes
- ☐ 17.5 minutes

QUESTION 52 of 70 1.00 Marks

How does Failure Mode and Effect Analysis (FMEA) contribute to product design?

- ☐ It creates prototypes that are tested under different conditions to assess durability
- ☐ It focuses on identifying and eliminating all controllable factors in product failure.
- ☐ It assesses the financial viability of a product
- ☒ It systematically predicts and evaluates potential failure modes and their impact on customer safety
- ☐ It maximizes customer satisfaction through innovative designs

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QUESTION 53 of 70 1.00 Marks

The Delphi method of forecasting involves:

- ☐ Collecting survey data from customers
- ☒ Using expert opinions to reach a consensus on future events
- ☐ Using past sales data to predict future outcomes
- ☐ Developing algorithms for data analysis
- ☐ Running simulations to determine possible outcomes

QUESTION 54 of 70 1.00 Marks

A p-chart is used to monitor the proportion of defective items in a process. If the average proportion defective is 0.02 and the sample size is 200, what are the upper control limit (UCL) and lower control limit (LCL) at 3 sigma?

- ☐ UCL = 0.05, LCL = 0.01
- ☐ UCL = 0.06, LCL = 0
- ☐ UCL = 0.07, LCL = 0
- ☐ UCL = 0.04, LCL = 0
- ☒ UCL = 0.05, LCL = 0

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QUESTION 55 of 70 1.00 Marks

Which production system is likely to have the highest level of customer involvement in the product design process?

- ☐ Assemble-to-Order (ATO)
- ☐ Make-to-Stock (MTS)
- ☐ Batch production
- ☒ Engineer-to-Order (ETO)
- ☐ Make-to-Order (MTO)

QUESTION 56 of 70 1.00 Marks

Given an actual demand of 61, forecast of 58, and an α of .3, what would the forecast for the next period be using simple exponential smoothing?

- ☐ 61.6
- ☒ 58.9
- ☐ 57.1
- ☐ 62
- ☐ 64.3

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QUESTION 57 of 70 1.00 Marks

Poka-Yoke in Lean manufacturing is designed to:

- ☐ Ensure that every product meets Six Sigma standards
- ☒ Prevent mistakes by designing error-proof systems
- ☐ Measure statistical variations in quality
- ☐ Control inventory levels through just-in-time methods
- ☐ Standardize production processes

QUESTION 58 of 70 1.00 Marks

Three commonly used productivity variables are

- ☒ technology, raw materials, and labor
- ☐ labor, capital, and management
- ☐ quality, external elements, and precise units of measure
- ☐ education, diet, and social overhead
- ☐ education, quality, and raw material

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QUESTION 59 of 70 1.00 Marks

What is a significant factor driving companies to locate their manufacturing facilities closer to customers in regions like South and Southeast Asia?

- ☒ High demand for automobiles and cellphones in these regions
- ☐ Lower logistics costs in emerging economies
- ☐ Availability of cheaper labor
- ☐ Strict environmental regulations
- ☐ Government subsidies for local production

QUESTION 60 of 70 1.00 Marks

In a two-machine flow shop, four jobs need to be scheduled. The processing times for Machine 1 are 4, 3, 6, and 5 minutes, and for Machine 2 are 5, 6, 3, and 4 minutes, respectively. Using Johnson's Rule, what is the

- ☐ Job 3, Job 2, Job 4, Job 1
- ☐ Job 2, Job 3, Job 1, Job 4
- ☐ Job 1, Job 4, Job 2, Job 3
- ☐ Job 4, Job 1, Job 3, Job 2
- ☒ Job 2, Job 1, Job 4, Job 3

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QUESTION 61 of 70

1.00 Marks

A company has a lead time of 5 days and an average demand of 200 units per day. What is the reorder point if the company wants to keep a safety stock of 100 units?

- ☐ 900 units
- ☐ 800 units
- ☐ 500 units
- ☐ 1,000 units
- ☒ 1,100 units

QUESTION 62 of 70

1.00 Marks

The critical path of a network is the:

- ☐ path with the most activities
- ☐ path with the fewest activities
- ☐ shortest time path through the network
- ☒ longest time path through the network
- ☐ any path with path time between longest time path and shortest time path

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QUESTION 63 of 70 1.00 Marks

A company operates on a level production strategy and produces 12,000 units annually. If demand fluctuates between 1,200 units per month in low-demand periods and 1,800 units per month in high-demand periods, what is the average inventory the company will hold by the end of the year?

☒ 300 units

☐ 200 units

☐ 100 units

☐ 400 units

☐ 500 units

QUESTION 64 of 70 1.00 Marks

A company's annual demand for a product is 10,000 units. The ordering cost per order is Rs. 200, and the holding cost per unit per year is Rs. 50. What is the Economic Order Quantity (EOQ)?

☒ 300

☐ 200

☐ 100

☐ 400

☐ 600

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QUESTION 65 of 70 1.00 Marks

Which intermediary is responsible for handling almost all logistical aspects of transactions post-sale, such as tracking inland transportation and negotiating freight charges?

- ☐ Export Packer
- ☐ Export Management Company (EMC)
- ☐ Customs Broker
- ☐ Non-Vessel Operating Common Carrier (NVOCC)
- ☒ Freight Forwarder

QUESTION 66 of 70 1.00 Marks

Which procurement strategy is likely to be used when a company prioritizes quick delivery of critical commodities?

- ☐ International Procurement Organization (IPO)
- ☐ Imports through subsidiaries
- ☐ Imports via agents
- ☐ Integrated global sourcing
- ☒ Local procurement from local buyers

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QUESTION 1 of 70 1.00 Marks

Gibson Valves produces cast bronze valves on an assembly line. If 1600 valves are produced in an 8-hour shift, the productivity of the line is

- ☐ 2 valves/hr
- ☐ 40 valves/hr
- ☐ 80 valves/hr
- ☒ 200 valves/hr
- ☐ 220 valves/hr

QUESTION 2 of 70 1.00 Marks

In the Quality Function Deployment (QFD) process, what is the primary goal?

- ☐ To eliminate competitors' products from the market
- ☒ To map customer needs to product characteristics for improvement
- ☐ To reduce production costs by eliminating customer input
- ☐ To increase the complexity of the product design
- ☐ Product or service selection

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QUESTION 3 of 70 1.00 Marks

Which of the following describes the function of **Sourcing** in the supply chain process?

- ☐ Designing new products to meet customer demand
- ☒ Managing the flow of materials and goods from suppliers
- ☐ Delivering finished products to the customer
- ☐ Handling returns of defective products
- ☐ Planning market research and development strategies

QUESTION 4 of 70 1.00 Marks

In the **Design for Environment (DFE)** approach, which of the following is emphasized?

- ☐ Maximizing the use of new materials in manufacturing
- ☒ Designing products with minimal environmental impact
- ☐ Increasing production efficiency by using non-recyclable materials
- ☐ Disposing of products immediately after their first use
- ☐ Reducing labor costs

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QUESTION 5 of 70 1.00 Marks

Which of the following is a key reason why supply chains are often referred to as undefined supply networks?

- ☐ Supply chains only move in one direction
- ☒ Supply chains involve multiple interdependent entities and processes
- ☐ Supply chains operate strictly within a geographic region
- ☐ Supply chains handle only physical goods
- ☐ Supply chains are not involved in reverse logistics

QUESTION 6 of 70 1.00 Marks

Which of the following best describes a capacity leads demand strategy?

- ☐ Expanding capacity only after demand has been consistently high for an extended period
- ☒ Expanding capacity ahead of forecasted demand to meet potential increases
- ☐ Maintaining capacity levels equal to current demand without overextending resources
- ☐ Scaling back capacity when demand declines to prevent resource waste
- ☐ Matching capacity to demand fluctuations on a daily or weekly basis

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QUESTION 7 of 70 1.00 Marks

In MRP the planned order release is determined by:

- ☐ The gross requirements of components
- ☐ The available labor hours in the production process
- ☐ The inventory level and scheduled receipts
- ☒ The net requirements and lead time
- ☐ The supplier's delivery schedule

QUESTION 8 of 70 1.00 Marks

Which of the following is NOT an input to the Sales and Operations Planning process?

- ☐ Financial constraints
- ☐ Demand forecasts
- ☐ Machine specifications
- ☐ Capacity constraints
- ☒ Company policy

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QUESTION 9 of 70 1.00 Marks

In project management, which aspect is specifically targeted by undefinedproject analysisundefined?

- ☐ Ensuring teamwork
- ☐ Financial planning
- ☒ Risk assessment and mitigation
- ☐ Immediate implementation
- ☐ Customer satisfaction feedback

QUESTION 10 of 70 1.00 Marks

Walter Shewhart is listed among the important people of operations management because of his contribution to

- ☐ assembly line production
- ☐ measuring the productivity in the service sector
- ☐ Just-in-time inventory methods
- ☒ statistical quality control
- ☐ standardization of parts

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QUESTION 11 of 70 1.00 Marks

The reorder point is determined by:

- ☐ The EOQ and safety stock
- ☐ The number of units sold daily
- ☐ The production capacity and storage space available
- ☐ The total annual demand
- ☒ Lead time demand and safety stock

QUESTION 12 of 70 1.00 Marks

In aggregate planning, resource capacity is typically expressed as:

- ☐ Number of finished goods
- ☒ Labor or machine hours
- ☐ Raw material availability
- ☐ Total revenue from sales
- ☐ Number of customers served

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QUESTION 13 of 70

1.00 Marks

Scheduled receipts in MRP refer to:

- ☒ Orders that have been placed but not yet delivered
- ☐ Orders that have been received and are in production
- ☐ Items scheduled for quality inspection
- ☐ Goods waiting to be shipped to customers
- ☐ Materials that have been rejected due to defects

QUESTION 14 of 70

1.00 Marks

In break-even analysis, which assumption is typically made about variable costs?

- ☐ Variable costs increase at a decreasing rate as production increases.
- ☒ Variable costs remain constant per unit as production volume changes.
- ☐ Variable costs decrease as production increases due to economies of scale.
- ☐ Variable costs fluctuate unpredictably with changes in demand.
- ☐ Variable costs only apply to physical product production, not services.

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QUESTION 15 of 70 1.00 Marks

Which of the following is a key challenge of global logistics related to the movement of goods across geographical boundaries?

- ☐ Simplified customs procedures
- ☐ Reduced transportation costs
- ☐ Multimodal tariffs and logistics intermediaries
- ☒ Limited access to global transportation routes
- ☐ Lower insurance costs for cross-border shipments

QUESTION 16 of 70 1.00 Marks

In global supply chain risk management, which lesson was highlighted after the Suez Canal blockage?

- ☒ Reassessment of suppliers and logistics monitoring
- ☐ Prioritizing single-source suppliers
- ☐ Using only air transport for logistics
- ☐ Complete elimination of reverse logistics
- ☐ Decentralizing supply chains across different regions

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QUESTION 17 of 70 1.00 Marks

Which of the following is NOT a part of the supply chain process?

- ☐ Planning
- ☐ Sourcing
- ☐ Delivering
- ☒ Pricing
- ☐ Returning

QUESTION 18 of 70 1.00 Marks

Which of the following is not a part of the design process?

- ☐ Understanding customer needs
- ☐ Simplifying the design
- ☐ Conducting feasibility studies
- ☒ Implementing the design without revisions
- ☐ All are part of design process

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QUESTION 19 of 70 1.00 Marks

When using decision trees for capacity decisions, which of the following steps is critical for calculating expected monetary value (EMV)?

- ☐ Determining how many decision nodes exist in the tree
- ☒ Multiplying the payoffs of each event branch by its probability and adding them
- ☐ Adjusting for fixed costs associated with each alternative
- ☐ Determining which branch has the lowest potential cost
- ☐ Analyzing which alternative provides the fastest return on investment

QUESTION 20 of 70 1.00 Marks

Productivity can be improved by

- ☐ Increasing inputs while holding outputs steady
- ☒ decreasing outputs while holding inputs steady
- ☐ increasing inputs and outputs in the same proportion
- ☐ decreasing inputs while holding outputs steady
- ☐ none of these

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QUESTION 20 of 70 1.00 Marks

Productivity can be improved by

- ☐ increasing inputs while holding outputs steady
- ☒ decreasing outputs while holding inputs steady
- ☐ increasing inputs and outputs in the same proportion
- ☐ decreasing inputs while holding outputs steady
- ☐ none of these

QUESTION 21 of 70 1.00 Marks

In the design review phase, what is the primary objective of evaluating functional and product specifications?

- ☐ To ensure all internal processes are streamlined for cost reduction
- ☐ To verify that the design aligns with competitor products in the market
- ☒ To ensure the final design will meet customer requirements and achieve order winner characteristics
- ☐ To prepare for large-scale production based on initial ideas
- ☐ Improving efficiency by optimizing internal production processes

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QUESTION 22 of 70 1.00 Marks

Training cost is part of which of the following quality cost:

- ☐ Appraisal costs
- ☐ External failure cost
- ☐ Internal failure cost
- ☒ Prevention cost
- ☐ fixed cost

QUESTION 24 of 70 1.00 Marks

Which factor is NOT typically a challenge associated with global procurement compared to local sourcing?

- ☐ Currency exchange fluctuations
- ☐ Cultural and language differences
- ☒ Shorter lead times
- ☐ Custom requirements
- ☐ Longer supply chains

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QUESTION 25 of 70 1.00 Marks

Which logistics function involves managing the movement of people and optimizing plant or warehouse site locations?

- ☐ Inbound logistics
- ☒ Outbound logistics
- ☐ Functional decisions
- ☐ Reverse logistics
- ☐ Packaging decisions

QUESTION 26 of 70 1.00 Marks

Which of the following is NOT one of the objectives of Supply Chain Management?

- ☐ Delivering the right product at the right time
- ☐ Ensuring the right source for raw materials
- ☐ Maintaining the right price for products
- ☐ Meeting the right quality standards for the product
- ☒ Guaranteeing maximum profit for the manufacturer

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QUESTION 27 of 70 1.00 Marks

An operations manager is not likely to be involved in

- ☒ the design of products and services to satisfy customers' wants and needs
- ☐ the quality of products and services to satisfy customers' wants and needs
- ☐ the identification of customers' wants and needs
- ☐ work scheduling to meet the due dates promised to customers
- ☐ design of processes

QUESTION 28 of 70 1.00 Marks

Which inventory management method is most suitable for products with high demand variability and frequent changes?

- ☒ Just-In-Time (JIT)
- ☐ Economic Order Quantity (EOQ)
- ☐ Vendor Managed Inventory (VMI)
- ☐ ABC Analysis
- ☐ Periodic Inventory System

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QUESTION 29 of 70 1.00 Marks

In the context of global supply chain distribution, what do undefinedPlace Utilityundefined and undefinedTime Utilityundefined refer to?

- ☐ Ensuring products are delivered with minimal cost
- ☒ Availability of products in the right place at the right time
- ☐ Efficient production scheduling
- ☐ Inventory management in overseas markets
- ☐ Reduction in lead times for production

QUESTION 30 of 70 1.00 Marks

Which element is least associated with project planning?

- ☐ Setting measurable objectives
- ☐ Identifying project deliverables
- ☐ Planning the schedule
- ☒ Planning for unplanned extensions
- ☐ Making supporting plans

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QUESTION 31 of 70 1.00 Marks

What is the difference between design capacity and effective capacity?

- ☐ Design capacity is always lower than effective capacity
- ☒ Effective capacity accounts for delays and breakdowns, while design capacity assumes ideal conditions
- ☐ Design capacity measures financial constraints, while effective capacity measures time constraints.
- ☐ Effective capacity measures peak performance, while design capacity accounts for constraints
- ☐ Design capacity only applies to product-based businesses, while effective capacity applies to service-based businesses

QUESTION 32 of 70 1.00 Marks

Which of the following smoothing constants would make an exponential smoothing forecast equivalent to a naïve forecast?

- ☐ 0
- ☐ 0.5
- ☐ 1 divided by number of periods
- ☒ 1
- ☐ 0.3

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QUESTION 33 of 70 1.00 Marks

Which of the following factors is typically considered when making global procurement decisions?

- ☐ Increased product homogeneity
- ☒ Supplier financial stability
- ☐ Reduced transit time
- ☐ Reduction of product variety
- ☐ Elimination of custom duties

QUESTION 34 of 70 1.00 Marks

In the context of Quality Function Deployment (QFD), how is the relationship matrix used in the design process?

- ☐ It evaluates the feasibility of product characteristics based on production capabilities
- ☐ It tracks competitor performance in fulfilling customer expectations
- ☐ It assesses the financial viability of a product
- ☐ It determines which products should be removed from the market based on customer feedback
- ☒ It maps out the extent to which each product characteristic is related to customer requirements

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QUESTION 35 of 70 1.00 Marks

In the five-step planning process of Sales and Operations Planning, which of the following is typically Step 4?

- ☐ Gather and manage data
- ☐ Develop demand plan
- ☐ Supply planning
- ☒ Reconciliation of plans (Pre-S&OP meeting)
- ☐ Executive S&OP meeting

QUESTION 36 of 70 1.00 Marks

Which logistic decision involves handling insurance advisories, customs updates, and stock in transit verification?

- ☐ Order management
- ☒ Procurement
- ☐ Packaging decisions
- ☐ Warehousing decisions
- ☐ Salvage disposal

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QUESTION 37 of 70 1.00 Marks

A company needs to schedule 4 jobs on a single machine. The processing times are 10, 15, 5, and 8 minutes, respectively. Using the Shortest Processing Time (SPT) rule, what is the average flow time for these jobs?

- ☐ 9.5 minutes
- ☐ 11.25 minutes
- ☐ 13.5 minutes
- ☒ 15.25 minutes
- ☐ 17.5 minutes

QUESTION 38 of 70 1.00 Marks

A Johnson's Rule is used for:

- ☐ Scheduling jobs with unequal processing times on a single machine
- ☐ Scheduling jobs with equal processing times on two machines
- ☒ Minimizing makespan in a two-machine sequencing problem
- ☐ Determining the earliest start time for each job in a project
- ☐ Minimizing total tardiness in a multi-job scheduling problem

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QUESTION 39 of 70 1.00 Marks

The transportation method of linear programming helps in Sales and Operations Planning by:

- ☐ Reducing the complexity of workforce scheduling
- ☒ Optimizing the movement of raw materials between locations
- ☐ Determining the most cost-effective distribution of capacity across multiple locations
- ☐ Analyzing customer feedback to improve demand forecasts
- ☐ Automating sales orders

QUESTION 40 of 70 1.00 Marks

In global procurement, why might a firm opt for a short-term relationship with a supplier?

- ☐ To reduce international regulations
- ☐ To centralize procurement decisions
- ☐ To build long-term strategic alliances
- ☐ To improve currency exchange rates
- ☒ To handle demand fluctuations

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QUESTION 41 of 70 1.00 Marks

A company has a lead time of 2 weeks for Component A and requires 200 units in Week 5. There is no safety stock, and the inventory on hand at the start of Week 1 is 50 units. What is the net requirement for Week 5?

- ☐ 50 units
- ☐ 100 units
- ☒ 150 units
- ☐ 200 units
- ☐ 250 units

QUESTION 42 of 70 1.00 Marks

Poka-Yoke in Lean manufacturing is designed to:

- ☐ Measure statistical variations in quality
- ☒ Prevent mistakes by designing error-proof systems
- ☐ Ensure that every product meets Six Sigma standards
- ☐ Control inventory levels through just-in-time methods
- ☐ Standardize production processes

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QUESTION 43 of 70 1.00 Marks

The forecasting method that is appropriate when the time series has no significant trend, cyclical, or seasonal effect is:

- ☒ moving averages
- ☐ mean squared error
- ☐ mean average deviation
- ☐ qualitative forecasting methods
- ☐ exponential smoothing

QUESTION 44 of 70 1.00 Marks

Which of the following best describes the concept of lead time in inventory management?

- ☐ The time taken to manufacture a product
- ☒ The time between placing an order and receiving it
- ☐ The time spent on inventory counting
- ☐ The time required to sell all on-hand inventory
- ☐ The time required for supplier negotiation

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QUESTION 45 of 70 1.00 Marks

Inventory turnover ratio is a measure of:

- ☒ The number of times inventory is replenished in a period
- ☐ The time it takes to reorder inventory
- ☐ The cost of holding inventory
- ☐ The ratio of finished goods to raw materials
- ☐ The value of inventory at any given time

QUESTION 46 of 70 1.00 Marks

Three commonly used productivity variables are

- ☐ quality, external elements, and precise units of measure
- ☐ labor, capital, and management
- ☒ technology, raw materials, and labor
- ☐ education, diet, and social overhead
- ☐ education, quality, and raw material

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QUESTION 47 of 70 1.00 Marks

A closed-loop MRP system integrates which of the following processes?

- ☐ Sales, marketing, and logistics
- ☐ Finance, inventory management, and accounting
- ☒ Production planning, capacity planning, and shop-floor control
- ☐ Procurement, customer service, and distribution
- ☐ Human resource planning and production control

QUESTION 48 of 70 1.00 Marks

What is the significance of the undefined Make-or-Buy decision in global procurement?

- ☐ Deciding which suppliers to establish short-term relationships with
- ☒ Choosing whether to outsource procurement or develop internal suppliers
- ☐ Determining supplier costs based on local currency exchange rates
- ☐ Selecting suppliers based on international trade agreements
- ☐ Establishing supplier performance metrics

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QUESTION 49 of 70 1.00 Marks

Given an actual demand of 61, forecast of 58, and an α of .3, what would the forecast for the next period be using simple exponential smoothing?

- ☐ 57.1
- ☒ 58.9
- ☐ 61.6
- ☐ 62
- ☐ 64.3

QUESTION 50 of 70 1.00 Marks

What does Concurrent Design in product development involve?

- ☐ Involving only the design team in the early stages of product development
- ☒ Simultaneous input from multiple departments such as marketing, operations, and finance
- ☐ Focusing only on the feasibility of the product concept
- ☐ Delaying product testing until after market release
- ☐ Understanding customer needs

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QUESTION 51 of 70 1.00 Marks

What is a defining characteristic of the Make-to-Order (MTO) supply chain strategy?

- ☐ High volume and standardized production
- ☒ Production initiated after receiving a customer order
- ☐ Low product variety
- ☐ Products are assembled from pre-made components
- ☐ Products are produced based on forecasts

QUESTION 52 of 70 1.00 Marks

A p-chart is used to monitor the proportion of defective items in a process. If the average proportion defective is 0.02 and the sample size is 200, what are the upper control limit (UCL) and lower control limit (LCL) at 3 sigma?

- ☐ UCL = 0.07, LCL = 0
- ☐ UCL = 0.06, LCL = 0
- ☐ UCL = 0.05, LCL = 0.01
- ☐ UCL = 0.04, LCL = 0
- ☒ UCL = 0.05, LCL = 0

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QUESTION 53 of 70 1.00 Marks

Kanban systems are primarily used for:

- ☒ Controlling inventory and production flow in a pull-based system
- ☐ Reducing machine downtime in a production system
- ☐ Implementing statistical process control (SPC)
- ☐ Scheduling large batch production runs
- ☐ Managing supplier relationships in a lean supply chain

QUESTION 54 of 70 1.00 Marks

A company follows a chase demand strategy. If demand is forecasted to increase by 1,000 units in the next month, and each worker produces 100 units per month, how many additional workers must be hired to meet the increased demand?

- ☐ 5 workers
- ☒ 10 workers
- ☐ 11 workers
- ☐ 15 workers
- ☐ 20 workers

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QUESTION 55 of 70 1.00 Marks

In a single-machine scheduling problem, which rule will generally result in the lowest average flow time?

- ☒ Shortest Processing Time (SPT)
- ☐ First Come, First Served (FCFS)
- ☐ Longest Processing Time (LPT)
- ☐ Earliest Due Date (EDD)
- ☐ Critical Ratio (CR)

QUESTION 56 of 70 1.00 Marks

The management of a company would like to add a new line of product, which will require leasing new equipments for a monthly payment of \$4200. Variable costs would be \$ 13 per product, and one product will be sold for \$ 20. How many units of product must be sold per month in order to achieve break even.

- ☐ 500 units
- ☒ 600 units
- ☐ 420 units
- ☐ 1300 units
- ☐ 2000 units

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QUESTION 57 of 70 1.00 Marks

The Delphi method of forecasting involves:

- ☐ Using past sales data to predict future outcomes
- ☒ Using expert opinions to reach a consensus on future events
- ☐ Collecting survey data from customers
- ☐ Developing algorithms for data analysis
- ☐ Running simulations to determine possible outcomes

QUESTION 58 of 70 1.00 Marks

Which strategy represents the highest level of international involvement in procurement?

- ☐ Local procurement from local buyers
- ☐ Imports via agents
- ☐ Imports through subsidiaries
- ☒ International Procurement Organization (IPO)
- ☐ Integrated global sourcing

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QUESTION 59 of 70 1.00 Marks

Which logistics challenge is exacerbated by increasing product line diversity and rapid innovation?

- ☒ Increased need for flexible and agile suppliers
- ☐ Decreased demand for logistics experts
- ☐ Lower costs for transporting raw materials
- ☐ Standardized transportation systems
- ☐ Simplified supply chain management

QUESTION 60 of 70 1.00 Marks

A company operates on a level production strategy and produces 12,000 units annually. If demand fluctuates between 1,200 units per month in low-demand periods and 1,800 units per month in high-demand periods, what is the average inventory the company will hold by the end of the year?

- ☐ 100 units
- ☐ 200 units
- ☐ 300 units
- ☐ 400 units
- ☒ 500 units

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QUESTION 61 of 70 1.00 Marks

If Rajeshri produces 4,000 handbags with a design capacity of 5,600 handbags and an effective capacity of 4,800 handbags, what is the efficiency?

- ☐ 0.667
- ☐ 0.5
- ☐ 0.8
- ☒ 0.833
- ☐ 0.9

QUESTION 62 of 70 1.00 Marks

Which emerging technology is increasingly used for supply chain transparency and traceability?

- ☒ Blockchain
- ☐ Cloud Computing
- ☐ Internet of Things (IoT)
- ☐ Artificial Intelligence (AI)
- ☐ Machine Learning (ML)

QUESTION 63 of 70 1.00 Marks

The management of a company would like to add a new line of product, which will require leasing new equipments for a monthly payment of \$3500. Variable costs would be \$ 13 per product, and one product will be sold for \$ 20.What would the profit (loss) be if 1000 units of the product are made and sold in a month.

- ☐ \$1000 profit
- ☐ \$2000 loss
- ☐ \$ 2500 profit
- ☐ \$2500 loss
- ☒ \$3500 profit

QUESTION 64 of 70 1.00 Marks

The Critical Path Method (CPM) is typically used for:

- ☐ Assigning resources to jobs on the production floor
- ☐ Sequencing jobs in a multi-machine environment
- ☐ Allocating machine hours to maximize utilization
- ☐ Minimizing setup times in a production process
- ☒ Determining the longest path in a project network

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QUESTION 65 of 70 **1.00 Marks**

Which procurement strategy is likely to be used when a company prioritizes quick delivery of critical commodities?

- ☐ Imports via agents
- ☐ Imports through subsidiaries
- ☐ International Procurement Organization (IPO)
- ☐ Integrated global sourcing
- ☒ Local procurement from local buyers

QUESTION 66 of 70 **1.00 Marks**

The Dulac Box plant produces 500 cypress packing boxes in two 8-hour shifts. The use of new technology has enabled them to increase productivity by 30%. Productivity is now approximately

- ☐ 32.5 boxes/hr
- ☒ 40.6 boxes/hr
- ☐ 62.5 boxes/hr
- ☐ 81.25 boxes/hr
- ☐ 44.3boxes/hr