

*MGT613 – Production/Operation Management
Golden File*

For: Final Term Exam Preparation

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Remember us in your prayers

Quality of our File:

- All the papers are included in this file.
- 99% file is verified, but you also should read and verify.
- Repetitive MCQs are removed.
- Surely more than 90% MCQs in the exam are from this file. Sometime 99% MCQs.
- Extra lines, like Question #, and other things are also removed. The file is neat and clean. Just Question and their answers are included.
- The numbers of pages are very short.
- Just read this file, you will find very helpful during the exam.

As a project manager, your project has become lengthy enough and you have to spend more money to complete it quickly within time constraints, the activity is known as:

- ▶ Rectifying time estimation
- ▶ Project scope creeping
- ▶ **Project crashing**
- ▶ Project risk management

Which of the following refers to the inherent variability in a process?

- ▶ Control limits
- ▶ **Process capability**
- ▶ Chance causes of variation
- ▶ Assignable causes of variation

Which of the following are the priorities emphasized most often in JIT system?

- ▶ High quality and minimal wastage
- ▶ **Low cost and consistent quality**
- ▶ Low inventory and consistent material supply
- ▶ Low cost and low inventory

Identify the correct sequence of steps in Deming wheel.

- ▶ **Plan, Do, Check, Act**
- ▶ Plan, Check, Do, Act
- ▶ Plan, Do, Act, Check
- ▶ Plan, Act, Do, Check

Which of the following is a type of kanban that authorizes the production of goods?

- ▶ Supplier kanban
- ▶ Material kanban
- ▶ Withdrawal kanban
- ▶ **Production kanban**

Product life cycle is based on which of the following components?

- ▶ Price
- ▶ Place
- ▶ **Demand**
- ▶ Supply

What would be the productivity if a machine produced 50 units in 3 hours?

- ▶ 0.066 units per hr
- ▶ **16.66 units per hr**
- ▶ 6.766 units per hr
- ▶ 60.66 units per hr

Calculation: $Productivity = 50/3$
 $=16.66$

Which of the following defines inventory turnover?

- ▶ **A ratio of cost of goods sold to the average inventory**
- ▶ A ratio of work in process to the average inventory
- ▶ A ratio of cost of carrying cost to the average inventory
- ▶ A ratio of cost of assets to the average inventory

Which one the following is an assumption of center of gravity method?

- ▶ The quantity to be shipped is variable
- ▶ **The quantity to be shipped is fixed**

- ▶ The quantity carries no value
- ▶ The quantity to be shipped should be extraordinarily high

The quality guru Kaoru Ishikawa is famous for:

- ▶ Statistical quality control
- ▶ **Fishbone diagram**
- ▶ Zero defects
- ▶ Cost of quality

Identify the dimension of quality that relates to the expected operational life of a product.

- ▶ **Durability**
- ▶ Performance
- ▶ Serviceability
- ▶ Reliability

Which one of the following forecasting techniques is used to identify a trend when data is neither growing nor declining rapidly and has no seasonal characteristics?

- ▶ **Simple moving average**
- ▶ Delphi method
- ▶ Trend adjusted forecast
- ▶ Naïve forecast

Which of the following is the focus of statistical process control?

- ▶ Determining the efficiency of an operations system
- ▶ Measuring the amount of re-work required to rectify faulty goods
- ▶ Identifying the security needs of an operations system
- ▶ **Measuring and controlling process variations**

All of the following are the decision areas of an operations manager EXCEPT:

- ▶ Inventory management
- ▶ Scheduling tasks
- ▶ Supply chain management
- ▶ **Financial reporting**

Which of the following refers to the average of accepted lots and rejected lots?

- ▶ Acceptable Quality Level (AQL)
- ▶ Lot Tolerance Percent Defective (LTPD)
- ▶ **Average Outgoing Quality (AOQ)**
- ▶ Average Outgoing Quality Limit (AOQL)

Identify the set of factors that affect the choice of a strategy for aggregate planning.

- ▶ **Cost and corporate policy**
- ▶ Cost and location analysis
- ▶ Cost and capacity constraints
- ▶ Cost and training of employees

Which one of the following location strategies is favored by automobile manufacturers?

- ▶ Product plant strategy
- ▶ **Process plant strategy**
- ▶ Market area plant strategy
- ▶ Cost conservation strategy

For which of the following purpose master schedule determines quantities?

- ▶ Capacity
- ▶ **Demand**
- ▶ Resources
- ▶ Production requirements

Which of the following contains a listing of all the assemblies, sub-assemblies, parts and raw materials needed to produce one unit of a finished product?

- ▶ Master schedule
- ▶ **Bill of materials file**
- ▶ Inventory records file
- ▶ Rough – cut capacity plan

Which of the following reports compares known and expected future capacity requirements with projected capacity availability?

- ▶ Performance control report
- ▶ Exception report
- ▶ **Load report**
- ▶ Planned order report

Which of the following is the output of capacity requirement planning process?

- ▶ Planned order releases
- ▶ Job times
- ▶ Resource requirements
- ▶ **Load reports**

Given the table:

Alternatives	Possible future demand	
	Low (Rs.)	High (Rs.)
Small facility	10,000	8,000
Medium facility	12,000	20,000
Large facility	18,000	15,000

Which one of the following is the correct payoff under LAPLACE approach?

- ▶ Rs. 9,000
- ▶ Rs. 16,000
- ▶ Rs. 33,000
- ▶ **Rs. 16,500**

Which one of the following refers to the assignment of jobs to process centers?

- ▶ Sequencing
- ▶ **Loading**
- ▶ Scheduling
- ▶ Budgeting

Which of the following charts shows management of flow of work and waiting lines at work stations?

- ▶ Gantt charts
- ▶ Load charts
- ▶ Schedule charts
- ▶ **Input/output charts**

Which one of the following is TRUE about work sampling?

- ▶ It describes individual human motions that are used in a job task
- ▶ It involves determining the length of time it will take to undertake a particular task

▶ **It involves determining the amount of time a worker spends on various activities**

- ▶ It provides standard times for micro motions such as reach, move and release

The Strategies which are more focused on maintaining or improving the quality of an organization's products or services are known as:

- ▶ Quality at the source
- ▶ Time based strategies
- ▶ Cost leadership strategies
- ▶ **Quality-based strategies**

Which of the following is a technique that averages a number of recent actual values that are updated as new values become available?

- ▶ **Simple moving average**
- ▶ Weighted moving average
- ▶ Linear trend equation
- ▶ Exponential smoothing

Which one of the following refers to translating the voice of the customer into technical design requirements?

- ▶ Concurrent design
- ▶ Design for manufacture
- ▶ Robust design
- ▶ **Quality function deployment**

Training program and quality audits come under which type of costs that an organization has to bear as cost of service quality?

- ▶ Internal failure cost

- ▶ Recovery cost
- ▶ **Prevention cost**
- ▶ Detection cost

Which of the following describes the people who have sufficient experience of working with six sigma methodology?

- ▶ Black belts (**Doubt in Question**)
- ▶ Green belts
- ▶ Top management
- ▶ **Master black belts**

Which of the following is the characteristic of an effective design?

- ▶ It facilitates manufacturing of the product
- ▶ It satisfies customer requirements
- ▶ It sells in the marketplace
- ▶ **All of the given options**

The operating characteristic (OC) curve shows the probability of which of the following?

- ▶ **Acceptance for every possible true percentage of defectives**
- ▶ Rejection for every possible true percentage of defectives
- ▶ Making type I error for various percentages of defectives
- ▶ None of the given options

Which of the following defines the orders which have been placed but not yet completed?

- ▶ Order releases
- ▶ Planned receipts
- ▶ **Scheduled receipts or open orders**
- ▶ Planned order releases

Select the appropriate term for the total demand derived from all parent production plans from the following options.

- ▶ Inventory record
- ▶ Load reports
- ▶ Projected on-hand inventory
- ▶ **Gross requirement**

An automatic car wash is an example of which of the following?

- ▶ Customized service
- ▶ Batch processing
- ▶ Intermittent processing (not sure)
- ▶ **Standardized service**

If $\alpha = 0$, how many containers are needed with the given data?

$$K = \frac{1500 (0.8 + 0.2) (1 + 0)}{270}$$

- ▶ 6.5 Containers
- ▶ 7 Containers
- ▶ **6 Containers**
- ▶ 9 Containers

In supply chain management event-management capability enables organization in which of the following ways?

- ▶ To achieve quick response
- ▶ To create trust among trading partners
- ▶ To increase productivity
- ▶ **To detect and respond to unplanned events**

Which of the following statement is FALSE regarding Supply Chain Management?

- ▶ **Supply Chain Management issues are insignificant in service organizations**
- ▶ For effective supply chain management, “long-term partnerships” with key suppliers is much important
- ▶ Ideas from suppliers can lead to improved competitiveness by increasing revenues
- ▶ Supply chain management creates value though changes in time, location and quantity

An operations manager of an airline industry schedules the arrival and departure of flights by working ahead form some point in time is following which type of scheduling?

- ▶ Backward scheduling
- ▶ **Forward scheduling**
- ▶ Vertical scheduling
- ▶ Horizontal scheduling

Tasks are easily scheduled in which of the following production environments?

- ▶ Intermediate-volume-systems
- ▶ Low-to-medium volume production (Job shop)
- ▶ **Medium-to-high volume production (Flow shop)**
- ▶ Optimal production mixes

In multiple workstations scheduling, the priority rule is applied to which kind of given jobs?

- ▶ **The jobs waiting for the operations**
- ▶ The jobs of the least critical ratio (CR)
- ▶ The jobs arrived at workstation first
- ▶ The jobs with earliest due date

Difference between length of a path and critical path gives which of the following values?

- ▶ Critical activities

▶ **Slack activities**

- ▶ Activity on node
- ▶ Activity on arrow

When timing of activities is fairly well established in management of projects, which of the following time estimations approach is useful?

▶ **Deterministic approach**

- ▶ Probabilistic approach
- ▶ Optimistic time approach
- ▶ Pessimistic time approach

Which one of the following is the goal of method analysis?

▶ **Dividing and analyzing a job**

- ▶ Check individual human motions used to perform an operation
- ▶ Determining the length of time it will take to undertake a particular task
- ▶ Determining the amount of time a worker spends on various activities

Managers should greatly focus on which of the following demand options in aggregate planning process?

▶ **Back orders**

- ▶ Promotion
- ▶ Pricing
- ▶ New demand

In production planning, future requirement for finished goods can be derived from all of the following EXCEPT:

- ▶ **Stock out**
- ▶ Backlogs
- ▶ Demand from distributors or dealers
- ▶ Forecasts for product families

Chase demand strategy is an example of which of the following?

- ▶ Proactive strategy
- ▶ **Reactive strategy**
- ▶ Mixed or hybrid strategy
- ▶ Active strategy

Mr. Ali purchased a TV set. After a period of a year, the picture quality started deteriorating. He went to the company and complained and the company responded subsequently. Which of the following dimensions of quality would come into play?

- ▶ Reliability
- ▶ Conformance
- ▶ **Serviceability**
- ▶ Aesthetics

If holding cost of an item is 70,000 per year,

Time savings = 2 days using 1 day alternative

What is the incremental holding cost for additional 2 days?

- ▶ Rs.350
- ▶ Rs.380
- ▶ **Rs.384**
- ▶ Rs.375

Calculation: Incremental Holding Cost= $H (d/365)$

Where H=Annual Holding cost for the item.

d = Time savings in days and d/365 is fraction of year saved.

Incremental Holding Cost= $70,000 (2/365)$
=383.56 or 384

Which of the following is NOT mark of a good layout in manufacturing?

- ▶ **Bottleneck operations**
- ▶ Straight line flow pattern (or adaption)
- ▶ Work stations close together
- ▶ Open plant floors (high visibility)

Which one of the following correctly explains the elements of a good forecast?

- ▶ Timely, having a purpose, accurate, written, reliable, meaningful
- ▶ Timely, accurate, judgmental, correctness, verbal, simple to use
- ▶ **Timely, accurate, reliable, meaningful, written, simple to use**
- ▶ Timely, accurate, reliable, consistent, meaningful, written, simple to use

CBR stands for which one of the following?

- ▶ Commercial board of revenue
- ▶ Central board of recycling
- ▶ Central board of renovation
- ▶ **Central board of revenue**

What would be the availability if a carpenter is expected to be able to operate for 300 hours between repairs, and the mean repair time is expected to be 2 hours?

- ▶ 6.02
- ▶ 2.0
- ▶ **0.99**
- ▶ 0.006

Calculation: Availability = $(MTBF)/(MTBF + MTR)$

Where,

MTBF = Mean time between factor =300

MTR = Mean repair time =2 hours

Availability = $(300)/(300+2)$
 $=300/302$
= 0.99

Technology has impacted the work place by:

- ▶ Adding to the existing geographical barriers for recruiting

- ▶ Increasing the cost of telecommuting
- ▶ Increasing the amount required to be spent on training
- ▶ **Unifying the workforce to a common skill level**

Which one of the following is an example of site related factors that affect location decision?

- ▶ **Transportation**
- ▶ Quality of life
- ▶ Location of new markets
- ▶ Location of raw materials

Which of the following statements corresponds to an order-winning characteristic?

- ▶ A factor which may be significant in other parts of the organization
- ▶ **A factor which gives an organization a competitive edge**
- ▶ A factor which serves as a minimum standard for purchase
- ▶ A factor which increases the profitability of the organization

Which of the following is NOT true about TQM?

- ▶ **Focused on worker's activity rather than management**
- ▶ Meeting the needs and expectations of customers
- ▶ Inclusion of every person in the organization
- ▶ Covering all the functional areas of the organization

Identify the stage of the DMAIC (Define, Measure, Analyze, Improve and Control) methodology which involves eliminating the root causes of non-random variation.

- ▶ Define
- ▶ Measure
- ▶ Analyze
- ▶ **Improve (sure)**

Which of the following stage of Deming's wheel involves evaluating the improvement plan?

- ▶ Plan
- ▶ Do
- ▶ **Check**
- ▶ Act

Which of the following statement defines process analysis?

- ▶ It is collecting information, identifying each step and finding inputs and outputs of process
- ▶ It is collecting information about cost reduction and improving the defects
- ▶ **It relates to asking questions about process flow and identifying missing or duplicating activities**
- ▶ It relates with taking a fresh approach to solve an issue on hand

Identify the correct sequence of steps in the control process.

(a) Define(b) Measure(c) Compare
(d) Evaluate(e) Corrective action(f) Monitor results

- ▶ a, b, d, c, f, e
- ▶ **a, b, c, d, e, f**
- ▶ a, b, c, f, e, d
- ▶ a, b, d, e, f, c

Which one of the following formula can be used to compute break even point?

- ▶ $Q = VC / (R - VC)$
- ▶ **$Q = FC / (R - VC)$**
- ▶ $Q = VC / (R + FC)$
- ▶ $Q = FC / (R + VC)$

Which of the following defines the purpose of acceptance sampling?

- ▶ **Deciding whether a lot satisfies pre-determined standards**
- ▶ Determining the lot size for sampling process
- ▶ Evaluating the process of inspection for sampling
- ▶ Implementing quality control policies for the process

Which one of the following is an example of a long range plan?

- ▶ **Location layout**
- ▶ Work schedule
- ▶ Machine loading
- ▶ Backorder

Aggregate planning usually covers time span of how many months?

- ▶ **2 – 12 months**
- ▶ 2– 15 months
- ▶ 2 – 16 months
- ▶ 2 – 17 months

Which of the following costs is inversely related with order size?

- ▶ **Annual ordering cost**
- ▶ Annual carrying cost
- ▶ Annual shortage cost
- ▶ Annual stockout cost

Which of the following refers to the actual amount of an item needed in each time period?

- ▶ Gross requirements
- ▶ **Net requirements**
- ▶ Planned-order receipts
- ▶ Planned-order releases

Which of the following is a benefit of an MRP (Material Requirements Planning) system to an organization?

- ▶ Increased sales price
- ▶ Increased inventory
- ▶ Reduced customer service
- ▶ **Ability to track material requirements**

Which of the following statements is TRUE about Just-in-Time?

- ▶ It is essential for a project organization
- ▶ It pushes inventory through the operations process
- ▶ It is only useful in a high product variety environment
- ▶ **It seeks to reduce inventory in an effort to reduce waste**

Which one of the following is NOT a characteristic of Just-in-time (JIT) production system?

- ▶ Flexible workforce
- ▶ Pull methods of materials flow
- ▶ **Large lot size**
- ▶ Close supplier ties

Which of the following is NOT a benefit of supply chain management?

- ▶ Lower inventory
- ▶ Higher productivity
- ▶ **Less variety**
- ▶ Greater agility

Scheduling is a function of which of the following?

- ▶ **Volume of systems' output (sure)**
- ▶ Nature of systems' output
- ▶ Timing of systems' output
- ▶ Value of systems' output

Which one of the following is a type of Gantt chart that shows the loading and idle time for a group of machines?

- ▶ **Load chart**
- ▶ Schedule chart
- ▶ Input/output control chart
- ▶ Sequence chart

Which one of the following is a type of Gantt chart that shows the order of jobs in progress and whether they are on schedule or not?

- ▶ Load chart
- ▶ **Schedule chart**
- ▶ Input/output control chart
- ▶ Sequence chart

Which of the following refers to the length of time, a job is in the shop at a particular workstation?

- ▶ Slack time
- ▶ Lead time
- ▶ **Job flow time**
- ▶ Make-span

Which one of the following is focused to reduce the incidence of failures in the plant or equipment to avoid the associated costs?

- ▶ **Preventive maintenance**
- ▶ Predictive maintenance
- ▶ Reactive maintenance
- ▶ Total productive maintenance

Which of the following is NOT a key decision in project management?

- ▶ Selecting the project manager
- ▶ Selecting the project team
- ▶ **Deciding the inventory levels**
- ▶ Planning and designing the project

Which of the following is required to describe project scope?

- ▶ Program Evaluation and Review Technique
- ▶ Gantt chart
- ▶ **Work breakdown structure**
- ▶ Critical path method

Which one of the following is TRUE about the importance of capacity planning?

- ▶ It is profitable
- ▶ It increase the capacity of productive unit
- ▶ **It helps managers quantify production capability (sure)**
- ▶ It establishes good relationship with the customer

Which of the following is NOT an attribute to classify services?

- ▶ **Tangibility**
- ▶ Perishability
- ▶ Simultaneity
- ▶ Courtesy

Which of the following determinants of effective capacity is taken into account by operations manager at macro level?

- ▶ **Supply chain**
- ▶ Process factors
- ▶ Product and service factors
- ▶ Operational factors

Which of the following refers to the way an organization chooses to produce its goods or services?

- ▶ **Process selection**

- ▶ Process reengineering
- ▶ Process redesign
- ▶ Process design

In a computer education institution at the beginning of each module many students do not get proper instructions and get enrolled in the modules they are not intended to be. Therefore, management has to bear the cost of *rework* and *extra time* in shifting students to their relevant modules. What type of service gap it represents?

- ▶ Service design gap (Doubt)
- ▶ **Communication gap**
- ▶ Service quality gap
- ▶ Service delivery gap

For an item, the on-hand inventory is only 20 units and the reorder point R is 100 units. There are no backorders, but there is one open order for 90 units. Which one of the following statements is TRUE?

- ▶ An order should be placed now for 20 units
- ▶ The current inventory position is 100 units
- ▶ An order should be placed now for 10 units
- ▶ **There is no need to order at the present (sure)**

Which of the following is re-ordering point inventory model?

- ▶ Economic production model (EPQ)
- ▶ The ABC model
- ▶ **Economic order quantity model (EOQ)**
- ▶ Cycle counting model

Most inventory models aim at minimizing which of the following?

- ▶ **Total cost of inventory**
- ▶ The number of orders placed
- ▶ The safety stock
- ▶ The risk of being stock out

In a factory systems has 20 containers for holding an item, each container holds 350 units. Which of the following is the exact amount of total planned inventory?

- ▶ 6000 Units
- ▶ 3500 Units
- ▶ 6999 Units
- ▶ **7000 Units**

Calculation: $350 \times 20 = 7000$

Which of the following provides the best solution for the problem of "too much scrap" in Just-In-Time philosophy?

- ▶ Better Inventory management
- ▶ Effective Material requirement planning MRP

▶ **Improving work methods (sure)**

- ▶ Master production schedule

Given the table:

Alternatives	Possible future demand	
	Low (Rs.)	High (Rs.)
Small facility	10,000	8,000
Medium facility	12,000	20,000
Large facility	18,000	15,000

Which one of the following is the correct payoff under MAXIMIN approach?

- ▶ Rs. 8,000
- ▶ Rs. 12,000
- ▶ **Rs. 18,000**
- ▶ Rs. 20,000

In labor-limited environment, in which resource constraint is the amount of worker available, which of the following is the best option for effective scheduling in a manufacturing firm?

- ▶ Hire more skilled labor for the job to be completed
- ▶ **Workers should be trained to work on a variety of machines (sure)**
- ▶ Assign labor to the next workstation irrespective of their skills
- ▶ More machines should be installed for flexibility of operations

Which of the following is a cause of development of waiting lines?

- ▶ Customer arrival rate varies through out the day
- ▶ Time required to process a customer may vary
- ▶ Some transactions are complicated and require above average process time
- ▶ **All of the given options (sure)**

Scheduling of materials is the primary focus of which of the following systems?

- ▶ Inventory management
- ▶ Supply chain management
- ▶ Big Just-In-Time
- ▶ **Little Just-In-Time**

Which of the following accounts for loss of good will of an organization?

- ▶ Hiring and layoff costs
- ▶ Over-time costs and regular time costs
- ▶ **Backlogs and stock outs (sure)**
- ▶ Backorders and stock outs

Which one of the following is a measure of productivity that involves measuring inputs and outputs using a common unit of measurement?

- ▶ **Multifactor**

- ▶ Partial
- ▶ Single
- ▶ Total

Which of the following is NOT usually considered a general characteristic of a service?

- ▶ Production and sales cannot easily be separated functionally
- ▶ Many services involve both tangible and intangible outputs
- ▶ **Production and consumption can always be separated**
- ▶ Degree of customer contact is high

Which one of the following factors provides a basis for comparing alternative forecasting techniques?

- ▶ Time dimension
- ▶ Reliability factor
- ▶ **Degree of accuracy**
- ▶ Measuring units

Which one of the following is an outcome of MINIMAX regret?

- ▶ The best of the worst possible payoff
- ▶ The best possible payoff
- ▶ The best average payoff
- ▶ **The least of the worst regret**

Which one of the following is NOT a step of decision making process?

- ▶ Develop alternatives
- ▶ Monitor results
- ▶ **Consider risk averseness strategies**
- ▶ Specify criteria for decision

Effective capacity is influenced by all of the following factors EXCEPT:

- ▶ Facilities
- ▶ **Product mix**
- ▶ Processes
- ▶ Operations

Which one of the following defines the range of the smoothing constant (Alpha)?

- ▶ 2 and -2
- ▶ 1 and -1
- ▶ 0 and -1
- ▶ **0 and 1**

In exponential smoothing model, α denotes:

- ▶ **Smoothing constant**
- ▶ Actual forecast
- ▶ Forecast error

- ▶ Previous forecast

Which one of the following refers to using some of the components of old products in the manufacturing of new products?

- ▶ Manufacturability
- ▶ **Remanufacturing**
- ▶ Robust design
- ▶ Automation

Which one of the following refers to a team having representatives from different functional areas of the organization?

- ▶ Traditional work group
- ▶ Self-directed team
- ▶ **Cross-functional team**
- ▶ Self motivated team

Who introduced the use of statistical control charts to Japanese manufacturers?

- ▶ **Edwards Deming**
- ▶ Joseph Juran
- ▶ Kaoru Ishikawa
- ▶ Philip Crosby

Who proposed the concept of “total quality control” in the mid 1950s?

- ▶ **Armand Feigenbaum (sure)**
- ▶ G.S Radford
- ▶ W. Shewhart
- ▶ David Gravin

Which of the following is a pair of service quality dimensions?

- ▶ **Reliability and Responsiveness**
- ▶ Uniqueness and Universality
- ▶ Specification and Security
- ▶ Reliability and Reputation

Which of the following best describes the ISO?

- ▶ International Organization for Statements
- ▶ International Operations for Statements
- ▶ **International Organization for Standardization**
- ▶ International Operations for Statements

What would be the total cost of inventory, if a firm holds 1000 units of a product ‘A’, where the carrying cost is Rs. 5 per unit?

- ▶ Rs. 995
- ▶ **Rs. 5000**
- ▶ Rs. 1050
- ▶ Rs. 200

REFERENCE: Total cost of inventory = total units * carrying cost per unit =
 $1000 * 5 = 5000$

The optimal order quantity shows a trade-off between which one of the following sets of costs?

- ▶ Carrying costs and shortage costs
- ▶ **Carrying costs and ordering costs**
- ▶ Carrying costs and stockout costs
- ▶ Carrying costs and setup costs

Which one of the following mathematical expressions can be employed to compute annual carrying cost?

- ▶ $(Q-2)H$
- ▶ $(Q+2)H$
- ▶ **$(Q/2)H$**
- ▶ $(Q \times 2)/H$

Which of the following is used to store information about the status of each item with respect to time period?

- ▶ Master schedule
- ▶ Bill of materials file
- ▶ **Inventory records file**
- ▶ Rough – cut capacity plan

Which of the following compares the known and estimated future capacity requirements?

- ▶ Capacity reports
- ▶ Operations reports
- ▶ **Load reports**
- ▶ Inventory records

Which of the following is the first step of Capacity planning?

- ▶ Initial feasibility report is prepared
- ▶ **Master schedule is tested for feasibility**
- ▶ Adjustments are made in master schedule before it finalizes
- ▶ Material requirements are ascertained

Just in Time system maintains inventory with which of the following lot size/sizes?

- ▶ **Small**
- ▶ Medium
- ▶ Large
- ▶ Can be small and medium both

Which of the following statements is **TRUE** about a Gantt chart?

- ▶ It represents an important event in the completion of a project
- ▶ **It relates interdependent activities to their completion time**

- ▶ It arranges events in order of importance
- ▶ It is used to schedule independent activities

Network activities are used to determine all of the following **EXCEPT**:

- ▶ Critical path
- ▶ **Budgeted cost**
- ▶ Slack time
- ▶ Expected project duration

With reference to Network activities, what does the term 'EF' stand for?

- ▶ Equal Finish
- ▶ Economic Finish
- ▶ **Early Finish**
- ▶ Easy Finish

REFERENCE: Network activities

1. ES: early start
2. EF: early finish
3. LS: late start
4. LF: late finish

Which one of the following is NOT an element of a queuing system?

- ▶ Population source
- ▶ Waiting line
- ▶ Order processing
- ▶ **Logistics**

Which one of the following is the goal of work sampling?

- ▶ Studying Individual human motions that are used in a job task
- ▶ Determining the length of time it will take to undertake a particular task
- ▶ **Determining the amount of time a worker spends on various activities**
- ▶ Specifying the content and methods to perform a job

Which one of the following is the most important criteria in selecting winners for a quality award?

- ▶ Strong motivation
- ▶ **Quality management practices**
- ▶ Employee empowerment
- ▶ Business performance results

Which of the following is NOT a disadvantage of excessive overtime?

- ▶ Decline quality of work
- ▶ **Work schedules become well-defined**
- ▶ 150 percent expensive of the regular time-pay rate
- ▶ Low Productivity

A company mostly involved in transportation and shipping costs than construction and land costs is probably part of which of the following industries?

- ▶ Heavy manufacturing
- ▶ Retail and service
- ▶ **Warehouse and distribution**
- ▶ Light industry

A company is operating under a continuous review system. It has an average demand of 50 units per week for the item it produces. The lead time for the item is 6 weeks, and it costs the company \$30 to process each order. The holding cost for each unit is \$10 per year. The company operates 52 weeks per year. What is the economic order quantity (EOQ) for this item?

- ▶ Greater than 175 units but less than or equal to 200 units
- ▶ **Less than 175 units**
- ▶ Greater than 200 units but less than or equal to 230 units
- ▶ Greater than 230 units

REFERENCE: $Q_{OPT} = \sqrt{2DS/H}$ whole square = $\sqrt{2*2600*30 / 10} = 124.89$

Annual demand = $50 * 52 = 2600$

Cost per order = 30

Holding cost = 10

Perpetual system of inventory management is also known as which of the following?

- ▶ First-in-first-out
- ▶ Probability model
- ▶ **Fixed-order quantity (sure)**
- ▶ Periodic review

If a manager wants to see the effect of change in Master Production Schedule (MPS) on purchasing requirements for certain suppliers, which of the following system would help in this regard?

- ▶ **Material Resource Planning system (MRP)**
- ▶ Enterprise Resource Planning system (ERP)
- ▶ Capacity Requirement Planning system (CRP)
- ▶ Manufacturing Resource Planning system (MRPII)

Eliminating disruptions and excess inventory are _____ in Just-In-Time production systems.

- ▶ Tactical goals
- ▶ Strategic goals
- ▶ **Secondary goals**
- ▶ Primary goals

In supply chain management Electronic Data Interchange (EDI) and Bar coding is a characteristic of which of the following?

- ▶ **Logistics (sure)**
- ▶ Technology

- ▶ Autonomation
- ▶ Just-In-Time System

Which of the following is the necessary qualification for a project manager?

- ▶ **PMP certification**
- ▶ PMD certification
- ▶ FMA certification
- ▶ CMP certification

Queuing analysis aims to minimize which of the given costs?

- ▶ **Both customer waiting cost and service capacity cost**
- ▶ None of the given options
- ▶ Customer waiting cost
- ▶ Service capacity cost

During the period of high unemployment or when low-skilled labor is acceptable, which of the following strategy would be cost effective?

- ▶ **Chase demand strategy**
- ▶ Level capacity strategy
- ▶ Proactive strategy
- ▶ Mixed or hybrid strategies

The major business function consisting of research and development, product design, manufacturing, marketing, distribution, and customer service is refers to:

Value chain

The transformation process

Quality control

Life cycle

Which of the following refers to the essential elements of operations strategy?

Policies, tactics and objectives

Plans, strategies and vision

Mission, goals and plans

Mission, policies and distinctive competencies

Which one of the following involves completing a series of questionnaires each developed from the previous one, to achieve a consensus forecast?

Consumer surveys

Executive opinion

Time series forecast

Delphi method

Which one of the following is a limitation of a moving average having a trend?

The forecast lags behind the actual

The forecast represents demand more accurately

The forecast will not be accurate

The forecast will not be reliable

Which one of the following mathematical expressions is used to compute utilization?

Actual output / effective capacity

Actual output / design capacity

Actual output + effective capacity

Actual output - design capacity

Which of the following terms of financial analysis are important for the organization to proceed with a capacity alternative decision?

Cash flow and fixed cost

Present value and fixed cost

Cash flow and present value

Cash flow and profit

Which method of forecasting is most widely used?

Regression analysis

Adaptive forecasting

Weighted moving average

Exponential smoothing (sure)

Which one of the following is a curve showing failure rate over time?

Cost curve

Bath tub curve

Fish bone diagram

Reliability curve

Which one of the following refers to the length of time needed to complete a job?

Work sampling methods

Work measurement

Job design

Methods analysis

Which one of the following factors makes a forecast LESS perfect?

Randomness

Non serious attitude

Non availability of data

Un qualified personnel

In which of the following approaches location decision is based on personal opinions and quantitative information?

Factor rating

Market area plant strategy

Currency fluctuations

Product plant strategy

Suppose customers hold negative perception about service provided by XYZ organization. According to SERVQUAL model; which of the following can be the reason for this negative perception?

Differences between Expected and Perceived Quality

Difference between service delivery and external communication with customers

Difference between customer's expectations and management's perception about their expectations

Difference between manager's expectations of service quality and specifications of service quality of customers

Which of the following depicts the overall goal of total quality management?

Achieve customer satisfaction

Earn high profit

Enhance organization's productivity

Achieve cost efficiency

Which of the following involves incremental changes within the organization whose cumulative effect is to deliver an increased rate of performance enhancement?

Continuous improvement

Competitive benchmarking

Business process re-engineering

Statistical process control

Which of the following cost is expected to be borne due to defective products?

Failure cost

Prevention cost

Appraisal cost

Marketing cost

Which of the following is an example of appraisal cost?

Re-work cost

Warranty cost

Testing cost

Monitoring cost

Which of the following is an example of prevention cost?

Re-work cost

Warranty cost

Testing cost

Monitoring cost

Which of the following cost is associated with the quality of the product?

Stockholding cost

Distribution cost

Marketing cost

Failure cost

Which of the following statement defines process re-design?

It is collecting information, identifying each step and finding inputs and outputs of process

It is collecting information about cost reduction and improving the defects

It relates to asking questions about process flow and identifying missing or duplicating activities

It relates with taking a fresh approach to solve an issue on hand

Which of the following represents a specified range of values in which individual units of output must fall in order to be acceptable?

Tolerance

Run test

Process capability

Process variability

What would be the total cost of inventory, if a firm holds 800 units of a product A , with the carrying cost of Rs. 4 per unit?

Rs. 796

Rs. 804

Rs. 3200

Rs. 200

$$\begin{aligned}\text{Total cost} &= \text{Number of units} * \text{carrying cost} \\ &= 800 * 4 \\ &= \underline{3200}\end{aligned}$$

MPS stands for which of the following?

Material Production Schedule

Master Planning Schedule

Material Planning Schedule

Master Production Schedule

Which of the following is the cost of carrying an item in inventory for a specific period of time?

Ordering cost

Holding cost

Shortage cost

Stock out cost

Which one of the following mathematical expressions can be used to compute annual ordering cost?

$(D+Q)S$

$(D/Q)S$

$D+Q+S$

$(D/S)Q$

There is no inventory buildup when:

Usage rate exceeds production rate

Usage and production rates are equal

Production rate exceeds usage rate

Orders are frequently placed

Master schedule interfaces with all of the following Except:

Capacity planning

Resource planning

Production planning

Distribution planning

Which of the following statements defines the purpose of MRP (Material Requirements Planning) system?

It is appropriate for all end items in the product line

It can be used for independent demand items

It reduces inventory requirements, lead times, and delivery times (Doubt)

It determines an appropriate master production schedule

Capacity requirements planning determines _____ range capacity requirements

Short (sure)

Intermediate

Long

Both short and long

Which of the following formula is correct for Kanban system?

$DX(1T)=N$

C

$DC(1X)=N$

T

$DT(1+X)=N$

C

$DT(1C)=N$

X

Big JIT includes all of the following EXCEPT:

Vendor relations

Scheduling materials

Human relations

Technology management

Which of the following reasons do NOT account for the importance of supply chain Management?

Increasing competitive pressures

Decreasing globalization (it will be also)

Decreasing levels of outsourcing

Increasing transportation costs

Which of the following is a system for inventory management and distribution planning?

Electronic Data Interchange (EDI)

Enterprise Resource Planning (ERP)

Distribution Resource Planning (DRP)

Materials Resource Planning (MRP)

Which one of the following is a type of Gantt chart that shows management of work flow and queues at the work centers?

Load chart

Schedule chart

Input/output control chart

None of the given options

Which of the following relates to an organizational structure based on teams formed specifically for projects?

Project structure

Functional structure

Balanced matrix structure

Project matrix structure

Which one of the following decision is NOT made by operations managers?

How much capacity is required to balance demand?

What should be the location and layout of a facility?

How to improve operational efficiency?

Which market areas to manufacture the products for?

All of the following are examples of transformation process EXCEPT:

Facilitating

Labeling

Cutting

Packing

The Strategies that are more focus on maintaining or improving the quality of an Organization's products or services is known as:

Quality at the source

Time Based strategies

Cost leadership strategies

Quality-based strategies

Which one of the following is a disadvantage of a process layout?

A variety of processing requirements

Use of individual incentive system

Minimizing material handling costs

Equipment utilization rate is high

What would be the required cycle time for a process that operates 9 hours daily with a desired output of 300 units per day?

0.03 minutes

1.8 minutes

2700 minutes

291 minutes

Reference:

OT is the operating Time

D represents the desired output

CT represents cycle time

Cycle Time = OT/D

$$= 9*60 / 300$$

$$= 1.8$$

Which one of the following types of manufacturing layout is considered a hybrid?

Process layout

Product layout

Fixed-position layout

All of the given options

Which of the following is a characteristic of linear regression?

It is superior to a moving average

It is a causal forecasting model

It compensates for both trend and seasonal variations in demand

It is superior to a exponential smoothing

Which one of the following is responsible for administering environmental issues about product and service design?

Central Board Revenue

Environmental Protection Agency

Federal Drug Agency

Occupational Safety Hygiene Administration

OSHA stands for which one of the following?

Occupational stock hygiene administration

Occupational safety hygiene administration

Occupational safety hygiene agency

Occupational science hygiene administration

The advantages of specialization to management include all of the following

EXCEPT:

Rapid training of the workforce

Ease in recruiting new workers

Fewer turnovers

Less boredom for workers

Which of the following refers to service recovery?

Satisfying the customers needs at the first instance

Providing the customer with extra benefits along with the desired service

Satisfying a previously dissatisfied customer and making him loyal

Providing the desired service to the customer

Identify the dimensions of quality that a performance measure matrix (RATE) includes for a service firm.

(a) Reliability (b) Responsiveness (c) Awareness (d) Assurance

(e) Tangibility (f) Empathy (g) Ease

a, b, c, e, f

a, b, d, e, f

a, b, d, e, g

a, b, c, e, g

The employees responsible to assure quality of service delivery are known as:

Contact personnel

Finance personnel

Operational personnel

Research personnel

Which of the following is the origin of the word Poka Yoke?

America

China

Spain

Japan

Which of the following terms reflects Japanese view of continuous improvement?

Kaizen

Poka-yoke

Six sigma

Inspection

Problem solving is an example of which of the following?

Internal failure cost

External failure cost

Prevention cost

Appraisal cost

Which of the following statement defines process mapping?

It is collecting information, identifying each step and finding inputs and outputs of process

It is collecting information about cost reduction and improving the defects

It relates to asking questions about process flow and identifying missing or duplicating activities

It relates with taking a fresh approach to solve an issue on hand

Which of the following refers to the percentage level of defects at which consumers are willing to accept lots as good?

Acceptable Quality Level (AQL) (Doubt)

Lot Tolerance Percent Defective (LTPD)

Average Outgoing Quality (AOQ)

Average Outgoing Quality Limit (AOQL)

In _____ sampling, one random sample is drawn from each batch.

Single

Double

Multiple

None of the given options

If the costs of inspection are higher than costs of obtaining the sample _____ sampling should be used.

Random

Single

Double

Multiple

Identify the time span covered by the aggregate planning.

3-7 months

2-10 months

2-12 months

4-8 months

Which of the following refers to the costs incurred to get the equipment ready for the next job?

Accepting cost

Holding cost

Shortage cost

Setup cost

Which one of the following concepts refers to achieve the lowest average total cost per unit when a large quantity is ordered?

Economies of scale

Material requirements planning

Master production schedule

Economic order quantity

According to ABC classification system for inventory management, which of the following groups of items represents low value inventory items?

- Group A
- Group B
- Group C**
- Group D

All of the following are common types of inventories Except:

- Raw material
- Work in transit
- Work in progress
- Scrapped work**

Which of the following is known as a visual representation of the requirements in a bill of materials having all the components listed in levels?

- Master production schedule
- Material requirements planning
- Product structure tree**
- Inventory status record

Which of the following refers to the planned amount to order in each time period?

- Gross requirements
- Net requirements
- Planned-order receipts
- Planned-order releases**

MRP secondary reports include all of the following EXCEPT:

- Performance control reports
- Planning reports
- Exception reports
- Planned order reports**

ERP stands for which of the following?

- Enterprise Resource Planning**
- Enterprise Requirements Planning
- Equal Resource Planning
- Equal Requirements Planning

Which kind of production system is undertaken by JIT (Just In Time) production?

- Intermittent processing
- Job shop processing
- Repetitive processing**
- Batch processing

Which of the following factors does NOT impact the supply chain?

- Increased competition
- Reduced number of suppliers
- Technology improvement

Aging of the population

Which of the following refers to time needed for setup and processing of a job?

Standard time

Job time

Setup time

Slack time

Which of the following relates to monitoring the objectives of cost, time and quality as the project progresses?

Project estimating

Project planning

Project control

Project crashing

Which of the following is NOT a limitation of PERT? Program Evaluation and Review Technique

Omission of critical activities

Correct precedence relationships

Sole reliance on critical path

Inclusion of a fudge factor

Which of the following refers to business scope creep?

Customer retention

Customer pleasing

Customer expectation

Customer needs

Within the operations function, which one of the following is a long-term management decision?

▶ Control decision

▶ Non-operational decision

▶ **Strategic decision**

▶ Tactical decision

Which one of the following forms of productivity is expressed as dollar value of output per kilowatt hour?

▶ Capital

▶ **Energy**

▶ Labor

▶ Machine

Which one of the following is an implication of laplace approach of decision making?

▶ The best of the worst possible payoff

▶ The best possible payoff

- ▶ **The best average payoff**
- ▶ The least of the worst regrets

Which one of the following is an outcome of Maximax?

- ▶ The best of the worst possible payoff
- ▶ **The best possible payoff**
- ▶ The best average payoff
- ▶ The least of the worst regrets

Which one of the following is a possible disadvantage of a moving average forecast?

- ▶ The method is unable to forecast the demand accurately
- ▶ The method is easy to compute and easy to understand
- ▶ **All the values in the average are weighted equally**
- ▶ The most recent values are given the more weighted

Which of following statement is true about effective capacity?

- ▶ It is the actual output achieved
- ▶ It is always less than actual output
- ▶ It is the maximum output that a firm can produce
- ▶ **It is always less than designed capacity**

Which one of the following is the correct order of layout types from low volume/high variety to high volume/low variety?

- ▶ **Fixed position, process, cell, product**
- ▶ Fixed position, cell, process, product
- ▶ Fixed position, process, product, cell
- ▶ Process, fixed position, cell, product

Which one of the following designs resists modifications?

- ▶ **Frozen design**
- ▶ Product design
- ▶ Service design
- ▶ Robust design

Which one of the following is correct about the range of availability on a measuring index?

- ▶ 0.1 to 1.0
- ▶ **0 to 1.0**
- ▶ 0.5 to 1.0
- ▶ 0.01 to 1.0

Which one of the following operating levels is best with respect to capacity?

- ▶ The maximum point of the cost curve
- ▶ **The level of capacity for which average unit cost is minimized**
- ▶ The level of capacity for which average unit cost is maximized
- ▶ The level of capacity for which total cost is minimized

Who emphasized quality in terms of inspection and gauging?

- ▶ G.S. Radford
- ▶ W. Shewhart
- ▶ **F.W. Taylor**
- ▶ W.E. Deming

If you go to dine out at McDonalds and you observe a very cool and pleasant atmosphere over there. It depicts which of the following dimensions of quality?

- ▶ Performance
- ▶ **Aesthetics**
- ▶ Reliability
- ▶ Conformance

The well-known Deming wheel is also referred to as:

- ▶ Juran's cycle
- ▶ Crosby's cycle
- ▶ Ishikawa's cycle
- ▶ **Shewhart's cycle**

Which of the following refers to the upper limit on the percentage of defects that a customer is willing to accept?

- ▶ Acceptable Quality Level (AQL)
- ▶ **Lot Tolerance Percent Defective (LTPD)**
- ▶ Average Outgoing Quality (AOQ)
- ▶ Average Outgoing Quality Limit (AOQL)

Identify the mathematical expression to determine the number of workers in a given period. Where a = Number of workers at the end of previous period, b = Number of new workers at the start of the period, c = Number of laid-off workers at the start of the period

- ▶ **$a + b - c$**
- ▶ $a + b + c$
- ▶ $a - b + c$
- ▶ $a - b - c$

What would be the total cost of inventory, if a firm holds 200 units of a product 'A', where the carrying cost is Rs. 2 per unit?

- ▶ Rs. 202
- ▶ Rs. 100
- ▶ Rs. 198
- ▶ **Rs. 400**

Total cost=holding units*cost per unit
 $200*2=400$

Which of the following time fences in a Master Production Schedule (MPS) allows many variations in products with multiple changes?

- ▶ Fixed time fence
- ▶ Moderately firm time fence
- ▶ Frozen time fence
- ▶ **Flexible time fence**

Which of the following mathematical expressions can be employed to compute inventory cost?

- ▶ Carrying cost per unit + average inventory cost
- ▶ **Carrying cost per unit × average inventory cost**
- ▶ Carrying cost per unit ÷ average inventory cost
- ▶ Carrying cost per unit – average inventory cost

The cost of a particular plan for a given period can be computed by using which one of the following expressions?

- ▶ Output cost + hire/layoff cost + inventory cost – backorder cost
- ▶ **Output cost + hire/layoff cost + inventory cost + backorder cost**
- ▶ Output cost - hire/layoff cost + inventory cost + backorder cost
- ▶ Output cost + hire/layoff cost - inventory cost + backorder cost

In which of the following systems an item's inventory is stored at two different locations?

- ▶ Optional replenishment system
- ▶ Base stock system
- ▶ **Two bin system**
- ▶ Universal bar code system method

Which of the following refers to the quantity expected to be received by the beginning of the period in which it is shown?

- ▶ Gross requirements
- ▶ Net requirements
- ▶ **Planned-order receipts**
- ▶ Planned-order releases

Which of the following refers to a card or device that communicates demand for work or materials from the preceding station?

- ▶ **Kanban**
- ▶ Kaizen
- ▶ Inventory file
- ▶ Master schedule

DRP stands for which of the following?

- ▶ Demand Requirements Planning
- ▶ **Distribution Requirement Planning**
- ▶ Dividend Requirements Planning

- ▶ Data Resource Planning

Which one of the following is a condition for a successful supply chain?

- ▶ A large number of suppliers
- ▶ Many short-term contracts
- ▶ **Trust among trading partners**
- ▶ Continuous competitive bidding

Successful project management includes all of the following factors EXCEPT:

- ▶ **Interchangeable staff**
- ▶ Competent team members
- ▶ Responsiveness to clients
- ▶ Control mechanisms

Which of the following relates to delegation of responsibility to an organizational department for a project?

- ▶ Project structure
- ▶ Functional structure
- ▶ **Balanced matrix structure**
- ▶ Project matrix structure

Which of the following refers to the longest path taken for the project to complete?

- ▶ Sensitive path
- ▶ Coverage path
- ▶ **Critical path**
- ▶ Permanent path

Which one of the following correctly explains the quantitative forecasting technique?

- ▶ **It consists mainly of numerical descriptions and resist subjective inputs of managers.**
- ▶ It consists mainly of subjective inputs and resist particular numerical descriptions.
- ▶ It consists mainly of subjective inputs and resist human factor, personal opinions.
- ▶ It consists mainly of analyzing objective and hard data and resist human factor, opinion.

Given the table:

Alternatives	Possible future demand	
	Low (Rs.)	High (Rs.)
Small facility	10,000	8,000
Medium facility	12,000	20,000
Large facility	18,000	15,000

Which one of the following is the correct payoff under MINIMAX regret approach?

- ▶ Rs. 12,000
- ▶ **Rs. 6,000**

- ▶ **Rs. 5,000**
- ▶ Rs. 16,000

Which one of the following refers to the volume of output at which total cost equals total revenue?

- ▶ Optimal operating rate
- ▶ **Break even point**
- ▶ Feasible volume
- ▶ Utilization

ABC Corporation has planned to purchase a new machine. Total annual fixed cost is Rs. 10,000, variable cost is Rs. 5 per unit and revenue is Rs. 7 per unit. What would be the break even point?

- ▶ 833 units
- ▶ 2000 units
- ▶ **5000 units**
- ▶ 1012 units

$$QBEP = FC / (R - VC)$$

$$QBEP = 10,000 / (7 - 5)$$

$$QBEP = 5,000$$

Which one of the following is the final stage of product life cycle?

- ▶ Growth
- ▶ **Decline**
- ▶ Maturity
- ▶ Planning

How many dimensions are used for determining service quality?

- ▶ Four
- ▶ **Five (Doubt)**
- ▶ Six
- ▶ Seven

Which of the following is NOT an element of TQM?

- ▶ Continuous improvement
- ▶ **Perceived quality**
- ▶ Employee empowerment
- ▶ Customer focus

Which of the following require intermediate plans?

- ▶ Job assignments
- ▶ Machine loading
- ▶ **Subcontracting**
- ▶ Layout design

Which of the following is a schedule that specifies the timing and size of production quantities for product in the product families?

- ▶ **Master production scheduling**
- ▶ Aggregate plan
- ▶ Inventory management scheduling
- ▶ Master rescheduling

Which of the following statements is CORRECT about master schedule?

- ▶ **It is visible to all levels of management**
- ▶ It include only demand from production areas
- ▶ It is not influenced by the aggregate plan
- ▶ It is not concerned with customer order processing

Which should be one of the selection criteria if two potential suppliers can deliver a part with the same quality and prices?

- ▶ Size of the firm
- ▶ A coin flip
- ▶ External evaluation
- ▶ **Flexibility of the firm**

Which of the following refers to an area where a person works with special equipment on a specialized job?

- ▶ Workshop
- ▶ Work area
- ▶ Workplace
- ▶ **Workstation**

Which of the following refers to the total time needed to complete a group of jobs from the beginning of the first job to the completion of the last job?

- ▶ Job lateness
- ▶ Job flow time
- ▶ **Makespan**
- ▶ Slack time

Which of the following is TRUE about a project activity?

- ▶ **It is a unique, one-time activity**
- ▶ It is static in nature
- ▶ It is often simple to outline
- ▶ It is a set of unrelated tasks

With reference to Network activities, what does the term 'LS' stand for?

- ▶ **Late Start**
- ▶ Long Start
- ▶ Lazy Start
- ▶ Low Start

With reference to Network activities, what does the term 'LF' stand for?

- ▶ **Late Finish**
- ▶ Long Finish
- ▶ Lazy Finish
- ▶ Low Finish

Forecasting for groups tend to be more accurate than forecasting for individual items because:

- ▶ A group is composed of a number of items
- ▶ A group exhibits a uniform behavior
- ▶ **A group cancels the forecasting errors among items**
- ▶ A group behavior is relatively less uncertain

Which of the following is true about the design process?

- ▶ **Concurrent design has proven to be the more effective method for design**
- ▶ The design process involves four basic steps, if followed in sequential order, ensure success
- ▶ Only representatives from design department should work together on the design
- ▶ It is better to separate marketing, engineering, and production personnel from each other in a design process

Which of the following initiated "Just-In-Time" inventory management system?

- ▶ Germany
- ▶ United States
- ▶ United Kingdom
- ▶ **Japan**

In the environment where material flow is complex and demand is highly variable, which of the following system will NOT be feasible?

- ▶ Material Requirement Planning (MRP)
- ▶ **Just-In-Time Production Systems**
- ▶ Manufacturing requirement planning (MRPII)
- ▶ Enterprise Resource planning (ERP)

Which of the following elements of supply chain prevent organization from bull-whip effect?

- ▶ **Predicting quantity and timing of demand**
- ▶ Incorporating customer's wants in manufacturing
- ▶ Controlling quality and scheduling work
- ▶ Determining what customers want

A business process is a logical set of tasks or activities that:

- ▶ Are specific to the operations function
- ▶ Are specific to the marketing function
- ▶ **Are interdependent with other processes**
- ▶ Have exactly the same performance measures for any process

Which one of the following is the most significant disadvantage of standardization?

- ▶ Reduced design costs
- ▶ Interchangeable parts
- ▶ **Reduced variety**
- ▶ Customized parts

CPFR stands for which of the following?

- ▶ Collaborative Promotion, Forecasting, and Replenishment
- ▶ Collaborative Planning, Forecasting, and Reactivity
- ▶ Co-operative Planning, Function, and Replenishment
- ▶ **Collaborative Planning, Forecasting, and Replenishment**

MTBF refers to which of the following?

- ▶ Measure time before failure
- ▶ **Mean time between failures**
- ▶ Mean time before failure
- ▶ Measure test before failure

Which of the following is NOT a dimension of quality that makes a company competitive?

- ▶ Performance
- ▶ Special features
- ▶ **Leadership**
- ▶ Reliability

A double sampling plan specifies all of the following EXCEPT:

- ▶ Size of the initial sample
- ▶ Size of second sample
- ▶ Lot size
- ▶ **Double acceptance number**

Which of the following formula is used to compute cycle time?

- ▶ **QO/u**
- ▶ QO/p
- ▶ p/QO
- ▶ u/QO

Which of the following report contains data for assessing future material requirements?

- ▶ Performance control report
- ▶ **Planning report**
- ▶ Exception report
- ▶ Planned order report

Which of the following refers to the movement of materials and information within a facility and outgoing shipments of goods and materials in a supply chain?

- ▶ **Logistics**
- ▶ Procurement
- ▶ Shipment
- ▶ Movement

Which of the following is NOT a supply chain performance driver?

- ▶ Quality
- ▶ **Demand**
- ▶ Cost
- ▶ Flexibility

Which of the following is the third step in Hungarian method of liner programming?

- ▶ Tabulation of cost information
- ▶ Obtaining row reduction
- ▶ **Obtaining column reduction**
- ▶ Modification of tabular sequence in case of difference between rows and columns

Which of the following is a mathematical approach used for analysis of waiting lines?

- ▶ **Queuing theory**
- ▶ Waiting theory
- ▶ Scheduling theory
- ▶ Sequencing theory

Which of the following is the primary input in capacity planning?

- ▶ Supply chain capabilities
- ▶ Competitors' strengths
- ▶ **Demand forecasts**
- ▶ Overall cost estimates

The type of processing structure that is used for producing discrete products at higher volume is:

- ▶ Continuous Flow
- ▶ **Assembly Line**
- ▶ Batch
- ▶ Job shop

Which one of the following best describes the cellular layout?

- ▶ It groups machines into departments to process items having similar processing requirements.
- ▶ **It groups machines into small assembly lines that produce families of parts.**
- ▶ It allows production of larger lots by reducing set-up time.
- ▶ It encourages the use of large, efficient machinery.

Which one of the following is a disadvantage of a process layout?

- ▶ It can handle variety of processing requirements
- ▶ Individual incentive system can possibly be used
- ▶ **Material handling cost is slow**
- ▶ Equipment utilization rate is less costly

Who are the leaders and guidance providers in a six sigma team?

- ▶ **Master black belts**
- ▶ Black belts
- ▶ Program champions
- ▶ Top management

The basic requirement of effective inventory control used by managers is:

- ▶ **How much and when to order?**
- ▶ Why and when to order?
- ▶ How much and why to order?
- ▶ Why and how much to order?

Which of the following is NOT a pre-requisite to implement a successful Material Requirement Planning (MRP) system?

- ▶ **Top management's commitment**
- ▶ Employee empowerment
- ▶ Accuracy of inputs
- ▶ Computer support

Which of the following enables managers to test 'what if' scenarios by simulation?

- ▶ Material Resource Planning system (MRP)
- ▶ **Manufacturing Resource Planning system (MRPII)**
- ▶ Enterprise Resource Planning system (ERP)
- ▶ Capacity Requirement Planning system (CRP)

Operational Efficiency is the key purpose of which of the following?

- ▶ Just-in time manufacturing
- ▶ Manufacturing resource planning (MRPII)
- ▶ Material requirements planning (MRP)
- ▶ **All of the given options**

Which of the following Just-In-Time strategy is useful for reducing the frequency of setups?

- ▶ **Line flow strategy**
- ▶ Automated production strategy
- ▶ Uniform workstation loads
- ▶ Maintenance

“Respect for worker” is the basic principle of which of the following management systems?

- ▶ American management system
- ▶ **Japanese management system**
- ▶ Asian management system
- ▶ European management system

A purchaser needs unique, low-money value part. This part is a critical component of a product manufactured by the purchaser. The part is patented and can only be obtained from two suppliers and is often on back order. The purchaser’s company does not have expertise in the manufacturing of this particular component. In this scenario what is the most appropriate action for the purchaser?

- ▶ To select a similar part from other reliable supplier and substitute the part
- ▶ **To set up a cross-functional team to make the part internally**
- ▶ To seek other suppliers through seeking a quotation or proposal
- ▶ To recommend a change in product design to remove the need for that unique part

For 10 numbers of jobs, cumulative flow time is 180. Under First Come First Served (FCFS) rule of sequencing which of the following is average flow time?

- ▶ **18 days**
- ▶ 13 days
- ▶ 15 days
- ▶ 10 days

Average Flow time= Total Flow Time/Number of Jobs

Average Flow time= 180/10

Average Flow time= 18

In a mail-order operation, customer population is large and small fraction of shoppers place order at anytime. In this case the customer population is _____.

- ▶ **Infinite-source population**
- ▶ Finite-source population
- ▶ Certain in terms of number
- ▶ Uncertain in terms of number

Which one of the following correctly explains the qualitative forecasting technique?

- ▶ It consists mainly of numerical descriptions and defies subjective inputs of managers.
- ▶ It consists mainly of subjective inputs and defies particular numerical descriptions.
- ▶ **It consists mainly of subjective inputs and defies human factor, personal opinions.**
- ▶ It consists mainly of analyzing objective and hard data and defies human factor, opinion.

Which of the following is an advantage of standardization?

- ▶ Frozen designs
- ▶ **Customized parts**

- ▶ **Interchangeable parts**
- ▶ Reduced variety

Which one of the following refers to a design that takes into account organization's operational capabilities, when designing a product?

- ▶ Design for assembly
- ▶ **Design for manufacturing**
- ▶ Design for recycling
- ▶ Design for disassembly

Identify a quality guru among the following:

- ▶ Frank Gilbreth
- ▶ Adam Smith
- ▶ Henri Gantt
- ▶ **Joseph Juran**

Which of the following terms reflects the notions of “do it right” and “if it does not right, fix it”?

- ▶ Competitive benchmarking
- ▶ **Quality at the source**
- ▶ Continuous improvement
- ▶ Customer focus

Which of the following is an example of external failure cost?

- ▶ Re-work cost
- ▶ **Warranty cost**
- ▶ Testing cost
- ▶ Monitoring cost

Which of the following word is used for the cards used to control the flow of production through a factory?

- ▶ Kaisan
- ▶ Kaizan
- ▶ Kaban
- ▶ **Kanban**

Which of the following is a technique for minimizing completion time for a group of jobs to be processed on two machines or at two work centers?

- ▶ **Johnson's rule**
- ▶ Linear programming
- ▶ Assignment method
- ▶ Linear decision rule

Which of the following approaches helps workers perform preventive maintenance on their machines?

- ▶ Sensitive maintenance

- ▶ Predictive maintenance
- ▶ Reactive maintenance
- ▶ **Total productive maintenance (sure p191)**

Which one of the following is NOT an advantage of project management software?

- ▶ Improvement in team communication
- ▶ **Generation of a single chart type**
- ▶ Multiple levels of reports
- ▶ Automatic report formats

Which one of the following describes the Naïve forecast?

- ▶ Attempts to predict the future value based on the past data.
- ▶ Determines long term upward or downward movement in data.
- ▶ **Forecasts for any period equals the previous period's actual value.**
- ▶ Collects outside opinion of consumer and potential customers.

A workers strike represents which of the following behaviors of a time series?

- ▶ Cyclical
- ▶ Trend
- ▶ Seasonal
- ▶ **Irregular variations**

Which of the following statements is a general characteristic of a manufacturing organization, as compared to a service organization?

- ▶ Outputs are more intangible
- ▶ **Operations are more capital intensive**
- ▶ Quality is more difficult to measure
- ▶ Short-term demand tends to be highly variable

The production schedules of components that are needed to support the master production schedule are determined through which of the following?

- ▶ Inventory transactions
- ▶ Capacity Requirement Planning reports
- ▶ **Material Requirement Planning explosion**
- ▶ Engineering and process designs

Which of the following is the other name of Bill of Materials (BOM)?

- ▶ **Product structure tree (sure)**
- ▶ Time bucket schedule
- ▶ Inventory usage record
- ▶ Production parts plan

The management of a firm while implementing Just-In-Time system joined hands together with labor and engineering to form a team to correct problems. It presents an example of which of the following?

- ▶ Continuous improvement

- ▶ Improving work methods
- ▶ **Quality at the source**
- ▶ Real employee empowerment

$$500 = 1500 (0.5 + 0.25) (1 + \alpha)$$

20

Choose the correct value of alpha by solving the Kanban formula.

- ▶ 7.88
- ▶ **8.88**
- ▶ 9.7
- ▶ 6.89

Calculation

$$= 10000 / 1125 = 8.88$$

The managers who primarily focus on product simplification, quality training to employees and maintenances are practicing which of the following?

- ▶ Romantic Just-In-Time System
- ▶ Big Just-In-Time System
- ▶ **Pragmatic Just-In-Time System**
- ▶ Little Just-In-Time System

Which of the following costs has to be incurred while using slower shipping alternative in Supply Chain Management?

- ▶ Setup cost
- ▶ Shipping cost
- ▶ **Incremental holding cost**
- ▶ Holding cost

In Supply chain Management, flexibility refers to all of the following EXCEPT:

- ▶ Upside production flexibility
- ▶ Agility to obtain competitiveness
- ▶ Supply chain response time
- ▶ **Value-added per employee**

For a job A and B, cumulative processing time is 14 and 24 respectively. Their respective due dates of processing is 4 and 18. Which of the following is average tardiness or job lateness?

- ▶ 7 days
- ▶ 5 days
- ▶ **8 days**
- ▶ 9 days

Average tardiness = process time – due date

$$\text{Average tardiness A job} = 14 - 4 = 10$$

$$\text{Average tardiness B job} = 24 - 18 = 6$$

$$\text{Average tardiness} = 16 / 2 = 8$$

In project network, which of the following denotes the steps which utilizes resources of time and budget?

- ▶ Events
- ▶ **Activities**
- ▶ Critical path
- ▶ Critical activities

Which of the following is NOT included in key metrics of project management?

- ▶ Performance objectives
- ▶ Cost factor
- ▶ Time factor
- ▶ **Organization structure**

Source of input to the service system in waiting line model is known as:

- ▶ Balking
- ▶ **Customer population**
- ▶ Reneging
- ▶ Waiting population

Which of the following strategy is NOT feasible for the industries where highly skilled labor is required and the competition for labor is intense?

- ▶ Level capacity strategy
- ▶ **Chase demand strategy**
- ▶ Proactive strategy
- ▶ Mixed or hybrid strategy

Which of the following is NOT a major factor due to which poor quality affects an organization?

- ▶ Reputation and image
- ▶ **Payroll taxes**
- ▶ Productivity
- ▶ Costs

What would be the productivity if 9 workers installed 650 square yards of carpeting in 6 hours?

12.03 square yards/hr

72.20 square yards/hr

108.30 square yards/hr

5850 square yards/hr

Productivity = Output Quantity / Input Quantity

Productivity = 650 / (9 * 6)

Productivity = 650/54 = 12.03

Which one of the following is an outcome of MAXIMIN criterion?

The best of the worst possible payoff

The best possible payoff

The best average payoff
The least of the worst regrets

What would be the utilization, if 40 cars are produced in a day with a design capacity of 60 cars per day?

67%

20%

100%

150%

Solution: Utilization = Actual out put/ Designed capacity
= 40 / 60
= **67%**

Which one of the following stages of product life cycle relates to more predictable behavior in terms of capacity requirements?

Introduction

Growth

Maturity

Decline

Which one of the following perspectives is the most obvious to be considered while evaluating alternatives for future capacity?

Social

Political

Economic

Legal

Which of the following refers the way an organization chooses to produce its good or services?

Process selection

Process reengineering

Process redesign

Process design

In which of the following layouts, work stations are arranged according to the general function they perform without regard to any particular product?

Product

Process (sure)

Fixed-position

Storage

Who proposed the concept of total quality control in the mid 1950s?

Armand Feigenbaum

G.S Radford

W. Shewhart

David Gravin

Which of the following word is the meaning of the term Poka Yoke?

Mistake proof

- Low quality
- Defective
- Expensive

Which of the following is NOT included in Juran's classification of costs of quality?

- Failure cost
- Prevention cost
- Appraisal cost

Management cost

Inspection equipment is an example of which of the following?

- Internal failure cost
- External failure cost
- Prevention cost
- Appraisal cost**

Quality improvement cost falls under which of the following categories of costs of quality?

- Internal failure cost
- External failure cost
- Prevention cost**
- Appraisal cost

ISO 9000 standards are based on:

Quality management and quality assurance

- Quality management and costs of quality
- Quality planning and quality assurance
- Quality planning and quality control

Which of the following refers to a control chart used to monitor the process dispersion?

- Mean control chart
- Range control chart**
- p-Chart
- c-Chart

Which of the following control charts is used to monitor the central tendency of a process?

- Mean control chart**
- Range control chart
- p-Chart
- c-Chart

Which one of the following mathematical expressions is used to compute the amount of inventory at the end of a given period? Where

a = Inventory at the end of previous period,

b = Production in the current period,

c = Amount of inventory used to satisfy demand in the current period

a + b - c

a + b + c

a - c + b

a - b + c

The ultimate goal of rough-cut capacity planning is:

Test the feasibility of a master schedule

Determining feasibility of a cost volume analysis

Achieving efficiency in the processes

Approximating inventory requirements

Which of the following refers to the cost associated with the order of inventory and its receipt?

Ordering cost

Holding cost

Shortage cost

Stock out cost

Which of the following is NOT an assumption of EOQ model?

Delivery lead time does not vary

Annual demand requirements are known

There are no quantity discounts

Variable ordering cost

Which one of the following models is used for optimal assignment of tasks and resources?

Assignment model

Hungarian model

Part per period method

Transportation model

All of the following cause difficulties in scheduling EXCEPT:

Variability in setup times

Variability in processing times

Variability in set of jobs

Variability in holding cost

Which of the following relates to estimating both the level and timing of resources needed over the project duration?

Project estimating

Project planning

Project control
Project crashing

PERT stands for which of the following?

Program Evaluation and Review Technique

Project Evaluation and Review Technique
Program Evaluation and Reactivity Technique
Program Economization and Review Technique

Which of the following is NOT a risk associated with project management?

Cost reduction

Time delays
Project termination
Inability to meet specifications



Which one of the following forms of productivity has units of output per dollar input?

Capital

Energy
Labor
Machine

An organization has describe its distinctive characteristic now what is the next step in strategy formulation process?

Competitor's distinctiveness
Selecting the market segment

Environmental scanning

Productivity Measures

Which one of the following is used to produce gasoline and petroleum products?

Job Shop
Batch processing
Assembly line

Continuous processing

Which of the following statements would generally be considered as correct job shop?

A continuous process has lower output volume as compared to job shop
Equipment flexibility is lower in job shop than that of a continuous process

Labour costs are higher in a Job Shop operation than in most other processes

Batch processing produces a more standard range of products than continuous flow processes

Forecasting for groups tend to be more accurate than forecasting for individual items because:

A group is compose of a number of items

A group exhibits a uniform behavior

Forecasting errors among items in a group have a canceling effect

A group behavior is relatively less uncertain

Which of the following refers to a variation resulted from an identifiable cause?

Random variation

Regular variation

Irregular variation

Assignable variation

Which of the following mathematical expressions can be employed to compute backorder cost?

Backorder cost per unit + number of backordered units

Backorder cost per unit - number of backordered units

Backorder cost per unit ÷ number of backordered units

Backorder cost per unit × number of backordered units

What would be the total cost of inventory, if a firm holds 600 units of a product A , where the carrying cost is Rs. 3 per unit?

Rs. 200

Rs. 1800

Rs. 597

Rs. 603

Explanation:

$$\begin{aligned}\text{Total cost of inventory} &= \text{per unit carrying cost} * \text{Number of units hold} \\ &= 3 * 600 \\ &= 1800\end{aligned}$$

What would be the total backorder cost, if 400 units of a product A are ordered back .where the back order cost is Rs. 4 per unit?

Rs. 100

Rs. 396

Rs. 404

Rs. 1600

Explanation:

$$\begin{aligned}\text{Back Order} &= \text{Back Order Cost Per Unit} * \text{Number of Backorder Units} \\ &= 4 * 400 \\ &= 1600\end{aligned}$$

Which of the following is an advantage of perpetual inventory system?

Periodic review of inventory

Economies in shipping orders

Fixed order quantity

Low cost of record keeping

According to ABC classification system for inventory management, which of the following groups of items represents high value inventory items?

Group A

Group B

Group C

Group X

EPP stands for which of the following?

Economic Part Period

Economic Production Period

Equal Production Period

Equal Part Period

JIT stands for which of the following?

Just In Time

Just In Test

Job In Time

Job Inventory Time

Which of the following is widely accepted as an effective planning method of all resources of a manufacturing firm?

Enterprise_Resource Planning

Material Requirements Planning

Material Requirements Planning I I

Master Production Schedule

EDI stands for which of the following?

Enterprise_Data Interchange

Economic Data Interchange

Equal Data Interchange

Electronic Data Interchange

Which of the following is a descriptive technique that is used by a decision maker to evaluate the behavior of a model under various conditions?

Linear programming

Simulation

Critical path method

Program evaluation and review technique

Which one of the following manufacturing process is associated with high volume car manufacture?

Job shop

Assembly line

Batch

Automation

Which one of the following is a characteristic of continuous process?

High lead times

Short process times

The ability to handle high variety

The ability to handle high volumes

Which one of the following is the overall objective of product and service design?

Customer satisfaction and variety

Customer satisfaction and profitability

Reliability and variety

Quality and reliability

Who among the following is NOT regarded as a quality guru?

Armand Feigenbaum

Genichi Taguchi

Joseph Juran

Frank Gilbreth

Which of the following refers to a company wide initiative to reduce costs through process efficiency and increase revenues through process effectiveness?

Competitive benchmarking

Inspection

Six Sigma

Statistical process control

Which of the following describes the ability of a sampling plan to distinguish between a high quality and a low quality lot?

Control chart

Operating characteristic curve

Learning curve

X bar chart

What would be the total backorder cost, if 300 units of a product A are ordered back where the back order cost is Rs. 2 per unit?

Rs. 150

Rs. 302

Rs. 600

Rs. 298

P #137

Back Order= Back Order Cost Per Unit X Number of Backorder Units

Back Order= 2*300

Back Order= 600

EOQ stands for which of the following?

Economic Order Quantity

Equal Order Quantity

Economic Output Quantity
Equal Output Quantity

Which of the following is the variable cost of keeping items on hand?

Shortage cost
Carrying cost
Ordering cost
None of the above

Which of the following report contains data on any major discrepancy encountered?

Performance control report
Planning report
Exception report
Planned order report

EPP (Economic Part Period) is defined as a ratio of which of the following?

Setup cost to unit holding cost per period
Setup cost to unit stock out cost per period
Setup cost to unit shortage cost per period
Setup cost to annual ordering cost per period

With the help of which of the following an optimal feasible schedule is finalized?

Inventory record
Time fences
Load report
Capacity report

Which of the following best defines the Pull method of material flow?

A method in which the production of the items begins in advance of customer needs
A method in which customer demand activates the production of the item
A method in which the production of items begins in response to the competitor's needs
A method in which items are produced according to the resources available

All of the following are benefits of Just-in-Time production EXCEPT:

Reduction in inventory
Reduction in lead time
Reduction in set-up time
Reduction in productivity

Which one of the following refers to a sequence of suppliers, operations and retail outlets?

Value chain
Demand chain
Process chain
Supply chain

Which of the following determines the order in which jobs at a work center will be processed?

- Scheduling
- Sequencing**
- Loading
- Leading

With reference to Network activities, what does the term EF stand for?

- Equal Finish
- Economic Finish
- Early Finish**
- Easy Finish

The purpose of _____ is to avoid having one or a few employees stuck in monotonous jobs.

- ▶ Job enlargement
- ▶ **Job rotation**
- ▶ Job enrichment
- ▶ Job description

Which of the following factors should a company consider while deciding upon a certain process choice?

- ▶ Capital requirements, leadership skills, technology and labor
- ▶ Technology, capital requirements, leadership skills and market conditions
- ▶ Labor, raw materials, market conditions and capital requirements
- ▶ **Capital requirements, labor, technology and market conditions**

The focus of _____ is customer satisfaction by incorporating quality into all phases of the organization.

- ▶ SWOT analysis
- ▶ **Quality based strategies**
- ▶ Operations strategies
- ▶ Organizational strategies

A disadvantage of _____ forecasts is the induction of personal biases.

- ▶ **Qualitative**
- ▶ Quantitative
- ▶ Associative
- ▶ All of the given options

Applied research appeals to a wide spectrum of business organizations mainly because:

- ▶ **It deals with a huge number of variables**
- ▶ It has potential for achieving commercial applications
- ▶ It does not involve high costs
- ▶ It is relatively easy to conduct

Cycle time can be calculated as:

- ▶ D/OT
- ▶ **OT/D**
- ▶ D+OT
- ▶ D-OT

The four "costs of quality" include all of the following except:

- ▶ Internal failure costs
- ▶ External failure costs
- ▶ **Supply chain failure costs**
- ▶ Prevention costs

Numerous quality improvement strategies exist. Which of the following is not a strategy discussed by the author?

- ▶ ISO 9000
- ▶ **PPM Matrix approach**
- ▶ Statistical process control
- ▶ Six Sigma approach

The popular "seven tools of quality control" include all of the following except:

- ▶ Pareto chart
- ▶ Cause and effect (fishbone) diagram
- ▶ Scatter diagram
- ▶ **Brainstorming**

Operations manager is responsible for all of the following except:

- ▶ Forecasting
- ▶ Capacity planning
- ▶ Inventory management
- ▶ **Distributing organizations' goods**

The sources of competitive advantage include:

- ▶ Price
- ▶ Quality
- ▶ Location
- ▶ **All of the given options**

External factors include all of the following except:

- ▶ Economic conditions
- ▶ Political conditions
- ▶ Competitive forces
- ▶ **Human resources**

A 35% chance of demand of 3000 units, 40% chance of demand of 2000 units and 25% chance of demand of 1000 units represent a state of:

- ▶ Certainty
- ▶ Uncertainty
- ▶ **Risk**
- ▶ None of the given options

_____ is an optimistic approach.

- ▶ Maximin
- ▶ **Maximax**
- ▶ Laplace
- ▶ Minimax regret

Using a simple three-period moving average forecast model, what would the forecast of demand be for the upcoming week 6? The historical demands are shown below:

Week Demand

1 21

2 25

3 20

4 13

5 15

- ▶ 22 units
- ▶ 18.25 units
- ▶ **18.8 units**
- ▶ 16 units

Calculation

$$(21 + 25 + 20 + 13 + 15 / 5) = 94/5 = 18.8 \text{ Units}$$

Technique for fitting a line to a set of points is called _____.

- ▶ Least square line
- ▶ Mean Squared Error (MSE)
- ▶ Mean absolute Deviation (MAD)
- ▶ **Regression**

Availability can be calculated by the formula:

- ▶ **(MTBF) / (MTBF+MTR)**
- ▶ MTR / MTBF
- ▶ (MTBF) / (MTBF-MTR)
- ▶ (MTR) / (MTR-MTBF)

The formula to calculate breakeven quantity is:

- ▶ FC+ R+VC
- ▶ R / (FC-VC)
- ▶ **FC / (R-VC)**
- ▶ VC / (R-FC)

_____ is a user of resources to transform inputs into some desired outputs.

- ▶ **Productive system**

- ▶ Production system
- ▶ Supply chain management
- ▶ Lean production system

Which of the following statements is correct about capacity evaluating alternatives?

Minimum cost and optimal operating rate are functions of size of plant.

Minimum cost and optimal operating rate are functions of fixed cost.

Minimum cost and productivity are functions of size of plant.

Maximum cost and optimal operating rate are functions of size of plant.

Which one of the following is an example of a short range plan?

- ▶ **Machine loading**
- ▶ Backorder
- ▶ Facilities layout
- ▶ Product design

The inputs to capacity requirements include all of the following EXCEPT:

- ▶ Planned-order releases
- ▶ Routing information
- ▶ Job times information
- ▶ **Bill of materials**

Which of the following is referred to as plans for achieving goals?

- ▶ Rules
- ▶ **Strategies**
- ▶ Policies
- ▶ Mission

As a manager, you have defined the purpose of the forecasts. What should be the next step in forecasting process?

- ▶ Choose a forecasting technique.
- ▶ Determine the purpose of the forecast.
- ▶ **Set up a time horizon or a time limit.**
- ▶ Collect and analyze the appropriate data.

Which one of the following statements is NOT correct about cycle time?

- ▶ It represents daily operating time divided by desired production
- ▶ It is the maximum allowable time at each work station
- ▶ It determines the time often items take to roll off in assembly line
- ▶ **It is the time required to complete a product from start to finish**

Which of the following refers to changing the job role of one worker with another?

- ▶ **Job rotation**
- ▶ Job enlargement

- ▶ Job enrichment
- ▶ Job design

Which of the following control charts is used to monitor the central tendency of a process?

- ▶ **Mean control chart**
- ▶ Range control chart
- ▶ p-Chart
- ▶ c-Chart

Which of the following refers to unnecessary extension of the project scope that hinders in-time completion of the project?

- ▶ Work creep
- ▶ Plan creep
- ▶ **Scope creep**
- ▶ Budget creep

Which of the following is NOT included in the quality design process?

- ▶ **To be the first to the market, even though the design may not be perfect**
- ▶ To ensure that customer requirements are met
- ▶ To minimize the revisions necessary to make a workable design
- ▶ To reduce the time required to design a new product

A firm incurs carrying cost of large stocks of raw materials because of all of the following reasons *Except*:

- ▶ To take advantage of bulk buying reductions/quantity discount
- ▶ **Large quantities are available in the market**
- ▶ To avoid future shortage and rapid rise in price
- ▶ The seasonal supply of materials

Fixing a problem will often cost money; to minimize these costs it is best to find and fix the problem:

- ▶ **During the design phase**
- ▶ Immediately after we complete the last operation
- ▶ Just before shipping our product to the customer
- ▶ Just before we begin the first production operation

Which of the following includes facilities of a supply chain?

- ▶ Distribution centers
- ▶ Warehouses
- ▶ Production plants
- ▶ **All of the given options**

Impatient customers leaving the line refer to which of the following waiting line models?

- ▶ Patient

▶ **Reneging** (sure)

- ▶ Balking
- ▶ Jockeying

Sub-levels or group of similar activities in a project is called as which of the following?

- ▶ Work management structure
- ▶ **Work breakdown structure**
- ▶ Work load management structure
- ▶ Project management structure

Which of the following is NOT a benefit of small lot sizes in Lean manufacturing system?

- ▶ Uniform workstation loads
- ▶ **Increased setup frequency**
- ▶ Reduction in lead time
- ▶ Reduction in cycle inventory

Which of the following is a FALSE statement regarding ABC classification system?

- ▶ All items held in an inventory are not of equal monetary value
- ▶ Inventories should be grouped according to their monetary level
- ▶ Items are classified into three levels
- ▶ **It is necessary to control carefully all items to produce inventory savings**

In aggregate planning which of the following provides optimal solution in terms of cost minimization through allocation of resources?

- ▶ Simulation
- ▶ Linear decision rule
- ▶ Graphical/ charting technique
- ▶ **Linear programming**

Which of the following statements is TRUE for statistical process control (SPC)?

- ▶ SPC is an approach which directly conflicts with Total Quality Management (TQM)
- ▶ SPC has low acceptance in Japan than US
- ▶ **SPC is a tool used to prevent poor quality**
- ▶ SPC is more like the inspection of items on the last stages of production

In acceptance sampling, if an unacceptable level of defectives are found in a batch, then which of the following applies to that batch?

- ▶ **The entire batch is rejected**
- ▶ The price for the batch is lowered
- ▶ Reason for the defects is immediately determined
- ▶ Such defectives are ignored

Which of the following is NOT mark of a good layout in manufacturing?

- ▶ **Bottleneck operations**
- ▶ Straight line flow pattern (or adaption)
- ▶ Work stations close together
- ▶ Open plant floors (high visibility)

A retail store has spent a handsome amount on installation of "electronic article surveillance" systems to prevent theft or removal of different articles that have not been paid for. The company has incurred which type of cost?

- ▶ Appraisal cost
- ▶ Internal failure cost
- ▶ **Prevention cost**
- ▶ Detection cost

With reference to Network activities, what does the term 'ES' stand for?

- ▶ Equal Start
- ▶ Economic Start
- ▶ **Early Start**
- ▶ Easy Start

Which one of the following is an example of little JIT?

- ▶ Vendor relations
- ▶ **Scheduling materials**
- ▶ Human relations
- ▶ Technology management

Which of the following refers to scheduling for low volume flow system?

- ▶ Floor scheduling
- ▶ Batch scheduling
- ▶ Flow shop scheduling
- ▶ **Job shop scheduling**

Which of the following is NOT an example of appraisal cost?

- ▶ **The cost of testing and inspecting products**
- ▶ The cost of quality improvement of products
- ▶ The cost of maintaining testing equipment
- ▶ The time spent in gathering data for testing

Which one of the following management functions is based on forecasting?

- ▶ **Planning**
- ▶ Organizing
- ▶ Leading
- ▶ Controlling

Which one of the following is NOT a business application of forecasting?

- ▶ Budgeting
- ▶ Capacity planning

- ▶ Inventory management
- ▶ **Quality control**

Which of the following management level is responsible for long-range capacity planning?

- ▶ Lower management
- ▶ Middle management
- ▶ **Top management**
- ▶ Non managerial employees

Which one of the following is a type of layout where equipment, machinery and people are moved as required?

- ▶ Product layout
- ▶ **Fixed position layout**
- ▶ Process layout
- ▶ Hybrid layout

Who developed the use of standardization in large-scale mass production using a moving assembly line?

- ▶ Frederick Winslow Taylor
- ▶ Frank Gilbreth
- ▶ Adam Smith
- ▶ **Henry Ford**

Which one of the following forecasting techniques uses explanatory variables to predict future demand?

- ▶ **Associative forecast**
- ▶ Time series forecast
- ▶ Consumer survey
- ▶ Executive opinion

G.S.Radford demonstrated the connections between:

- ▶ High quality, decreased productivity and higher cost
- ▶ High quality, increased productivity and higher cost
- ▶ High quality, decreased productivity and lower cost
- ▶ **High quality, increased productivity and lower cost**

Six sigma quality programs make use of:

- ▶ **Statistical models**
- ▶ Scientific models
- ▶ Mathematical models
- ▶ Physical models
-

Which of the following is a measure of how closely a product or service meets the specifications?

- ▶ Quality of conformance

- ▶ Continuous improvement
- ▶ Competitive benchmarking
- ▶ Statistical process control

Which of the following is a technique for minimizing completion time for a group of jobs to be processed on two machines or at two work centers?

- ▶ **Johnson's rule**
- ▶ Linear programming
- ▶ Assignment method
- ▶ Linear decision rule

If the gross requirement is 5,000 and the inventory on hand is 1,500, which of the following is the planned amount to order for next time period?

- ▶ **3,500 Units**
- ▶ 5,000 Units
- ▶ 1,500 Units
- ▶ 3,800 Units

ATM facility in bank services is an example of which of the following strategies of Just-In-Time systems?

- ▶ Prevention maintenance
- ▶ Uniform facility load
- ▶ Pull method of material flow
- ▶ **Automated services**

Which of the following is NOT a decision to be made by operations managers?

- ▶ How much capacity is required to balance demand?
- ▶ What should be the location and layout of a facility?
- ▶ How to improve operational efficiency?
- ▶ **Which market areas to manufacture the products for?**

All of the following are examples of quantitative forecasting EXCEPT:

- ▶ **Delphi method**
- ▶ Time series analysis
- ▶ Associative models
- ▶ Naïve forecasting

Which one of the following is an example of business that uses job shop process structure?

- ▶ **French restaurants**
- ▶ Heavy equipment
- ▶ Sugar refinery
- ▶ Automobile assembly

Which of the following statement defines quality?

▶ **The ability of a product or service to consistently meet or exceed customer's expectations**

- ▶ The ability of a product or service to outperform than those of competitors'
- ▶ The ability of a product or service to retain customers
- ▶ The ability of a product or service to attract a large number of customers

Which of the following is the origin of the word “Poka –Yoke”?

- ▶ America
- ▶ China
- ▶ Spain
- ▶ **Japan**

Which of the following refers to the total expected demand for an item or raw material in a given time period?

- ▶ **Gross requirements**
- ▶ Net requirements
- ▶ Planned-order receipts
- ▶ Planned-order releases

Which one of the following is used to determine the order in which jobs will be processed?

- ▶ **Sequencing**
- ▶ Loading
- ▶ Scheduling
- ▶ Budgeting

Which of the following location alternative is suitable to attract more customers for retail business?

- ▶ To expand the existing facility
- ▶ **To add new locations while retaining the existing ones**
- ▶ To shift to a new location while shutting down the previous one
- ▶ To do nothing

Today the focus of Operations Management is NOT on functions but on which of the following options?

- ▶ Inspections
- ▶ **Processes**
- ▶ Organizations
- ▶ Resources

The graph which measures the probability of accepting a lot for different quality levels with a specific sampling plan is termed as which of the following?

- ▶ Average Outgoing Quality (AOQ)
- ▶ Lot Tolerance Percent Defective (LTPD)
- ▶ Acceptable Quality Level (AQL)
- ▶ **Operating Characteristic Curve (OC)**

Effective supply chain management enables organizations to have which of the following benefits?

- ▶ Customer's responsiveness
- ▶ Reduced inventory levels
- ▶ Improved customer services
- ▶ **All of the given options**

Which of the following is a system designed to coordinate all activities and information needed to complete business processes?

- ▶ **Enterprise resource planning**
- ▶ Supply chain management
- ▶ New product development
- ▶ Customer relationship management

Assembly lines relate most closely to a:

- ▶ Functional layout
- ▶ Product layout
- ▶ **Process layout**
- ▶ Departmental layout

What would be the total backorder cost, if 400 units of a product 'A' are ordered back where the back order cost is Rs. 4 per unit?

- ▶ Rs. 100
- ▶ Rs. 396
- ▶ Rs. 404
- ▶ **Rs. 1600**

In Total Quality Management (TQM):

- ▶ Suppliers are expected to deliver quality parts
- ▶ The focus is to make certain quality is achieved during the production process
- ▶ The operator identifies quality problems and makes the necessary corrections
- ▶ **All of the given options**

Recall the usage of ABC classification system for inventory and search out, which of the following is a true statement?

- ▶ You should allocate about 15 % of the inventory usage volume to "B" items
- ▶ **The "A" items are reviewed on regular basis**
- ▶ Inexpensive and low usage items are classified as "C" no matter how critical
- ▶ The "C" items are of moderate monetary value

In the pull method of Just In Time production system what do we want to determine?

- ▶ Production features
- ▶ **Customer's orders**
- ▶ Next stage of production

- ▶ Manufacturing schedule

A manufacturing plant produces assemblies for automobiles. The plant caught in danger of closing due to poor productivity. Employees complained of repetitive tasks of job and old method of mass-production. Which of the following would help management out of the situation under Lean manufacturing system?

- ▶ Maintaining a stable inventory and effective scheduling
- ▶ **Attaining workforce flexibility by reducing number of job classifications**
- ▶ Hiring required skilled workers
- ▶ Firing or laying off the low skilled workers

In supply chain management, bull-whip effect shows that while moving backward the magnitude or size of inventories _____.

- ▶ **Increases**
- ▶ Decreases
- ▶ Remains the same
- ▶ May increase or may decrease

In single machine case, Shortest Processing Time (SPT) rule always provides which of the given options?

- ▶ **Lowest mean flow time**
- ▶ Highest mean flow time
- ▶ Average job flow time
- ▶ None of the given options

Given the table:

Alternatives	Possible future demand	
	Low (Rs.)	High (Rs.)
Small facility	10,000	8,000
Medium facility	12,000	20,000
Large facility	18,000	15,000

Which one of the following is the correct payoff under MAXIMAX approach?

- ▶ Rs. 10,000
- ▶ Rs. 18,000
- ▶ **Rs. 20,000**
- ▶ Rs. 32,000

Which one of the following statements is TRUE about product life cycle?

- ▶ It depicts demand of a product at various price levels
- ▶ **It depicts demand of a product with respect to time**
- ▶ It relates demand of a product to quality
- ▶ It relates demand of a product to market share

Which of the following is NOT an emerging trend in the workplace?

- ▶ Increasing workplace diversity
- ▶ **Decreasing work schedule flexibility**
- ▶ Increasing number of part time jobs
- ▶ Increasing use of temporary labor

Which of the following defines the goal of six sigma approach?

- ▶ Cost reduction and training
- ▶ Cost reduction and quality planning
- ▶ **Cost reduction and defect minimization**
- ▶ Cost reduction and process inspection

Which of the following is known as averages of accepted and rejected batches in operating curve?

- ▶ Average outgoing quality limit
- ▶ Average acceptance quality level
- ▶ Average lot tolerance percent defective
- ▶ **Average outgoing quality**

Which of the following shows the quality and timing of specific end items for a scheduled horizon?

- ▶ Simulation model
- ▶ **Master schedule**
- ▶ Aggregate plan
- ▶ Critical path model

Run time for the economic run size is a function of which of the following?

- ▶ Run size and usage rate
- ▶ Cycle time and usage rate
- ▶ **Run size and production rate**
- ▶ Cycle time and usage rate

The major inputs to an MRP (Material Requirements Planning) system include all of the following EXCEPT:

- ▶ Master schedule
- ▶ Bill of materials
- ▶ Inventory status record
- ▶ **Reschedule notices**

Which of the following best describes efficient customer response (ECR)?

- ▶ **It leads to achieve quick response through EDI (Electronic Data Interchange)**
- ▶ It limits the interaction between distributors and suppliers
- ▶ It limits the access of vendors to POS (Point of Sale) data
- ▶ It does not allow suppliers to make their own decisions about customer purchases

Which one of the following is NOT a benefit of scheduling?

- ▶ **Reduced production efficiency**

- ▶ Inventory reduction
- ▶ Real time information
- ▶ Labor load leveling

The record of required materials, equipment time and staff to provide a service can be obtained from which of the following?

- ▶ Bill of materials
- ▶ Load reports
- ▶ Capacity reports
- ▶ **Bill of resources**

In which one of the following situations, the use of a decision tree is required instead of a payoff table?

- ▶ When there are more than three states of nature
- ▶ When there are more than three decision payoffs
- ▶ When the decision situation encompasses an extended time period
- ▶ **When a series of decisions is required (sure)**

Which one of the following is an index used to measure actual output relative to design capacity?

- ▶ Efficiency
- ▶ Effective capacity
- ▶ Effectiveness
- ▶ **Utilization**

What would be the total backorder cost, if 100 units of a product 'A' are ordered back where the back order cost is Rs. 2 per unit?

- ▶ Rs. 102
- ▶ Rs. 50
- ▶ Rs. 98
- ▶ **Rs. 200**

Which of the following is the correct term for price reductions offered for large orders?

- ▶ Quality discounts
- ▶ **Quantity discounts**
- ▶ Tax deduction
- ▶ Usage fee

Kanban is Japanese word which means which of the following?

- ▶ Waste
- ▶ **Signal**
- ▶ Stock
- ▶ Flexible

Identify the correct sequence of activities in project life cycle.

- (a) Concept (b) Termination (c) Planning
(d) Execution (e) Feasibility

- ▶ a, b, c, e, d
- ▶ **a, e, c, d, b**
- ▶ b, c, a, d, e
- ▶ d, a, b, c, e

A supply chain which is driven by customer's orders and purchases is known as_____.

- ▶ Push-based system
- ▶ **Pull-based system**
- ▶ Production planning system
- ▶ Inventory replenishment system

Workforce flexibility in Just-In-Time production systems can be achieved by which of the following ways?

- ▶ Shifting among workstations
- ▶ Assigning the tasks they do not usually perform
- ▶ Quality training to the workforce
- ▶ **All of the given options**

Forecasting helps managers by reducing the degree of:

- ▶ Accuracy
- ▶ Precision
- ▶ **Uncertainty**
- ▶ Reliability

A digital camera assured to work accurately up to the specified period of time is an example of which of the following?

- ▶ Reliability
- ▶ **Durability**
- ▶ Safety
- ▶ Aesthetics

Identify the percentage of items in group B of ABC classification system for inventory management.

- ▶ 10%
- ▶ **20%**
- ▶ 70%
- ▶ 30%

Which one of the following is an essential element of JIT system?

- ▶ Inventory management
- ▶ **Reduction of non value added activities**
- ▶ Non flexibility of the system
- ▶ Consistant production

Which of the following is NOT one of the strategies to achieve service quality?

- ▶ Unconditional Service Guarantee
- ▶ **Analytical Process Control**
- ▶ Service Process Control
- ▶ Cost of Quality

Which of the following provides a leverage to give credit and recognition to different organizations or departments?

- ▶ Quality Audit
- ▶ Quality Circle
- ▶ **Quality Award**
- ▶ Quality acceptance

The short-run for a company is:

- ▶ When it is working on a short-time basis
- ▶ The time it takes to terminate staff
- ▶ **The period where output can only be changed by altering the utilization of existing plant and equipment**
- ▶ One month, being the payment base for salaries

A firm is efficient in production, If _____.

- ▶ It is making what its customers want
- ▶ It has the highest labor productivity
- ▶ It is selling at the lowest possible price
- ▶ **It is producing its products or services at the lowest unit cost**

Which of the following is Not a lot sizing technique in Material Requirement Planning (MRP) systems?

- ▶ Periodic Order Quantity (POQ)
- ▶ Economic order quantity (EOQ)
- ▶ **Two-bin system**
- ▶ Lot-for-lot ordering

Which of the following is TRUE for the availability of required resources for a project?

- ▶ They should be available at least two weeks before you need
- ▶ Their cost should be less than the budgeted cost
- ▶ **They should be available exactly in required quantity at the right time**
- ▶ They should be made available from specified suppliers

Which of the following functions of an organization consists of all activities directly related to production of a good or service?

- ▶ **Operations**
- ▶ Marketing
- ▶ Accounting

- ▶ Finance

What would be the output capacity if an assembly line operates for 7 hours per day with a cycle time of 2.0 minutes?

- ▶ **210 units per day**
- ▶ 3.5 units per day
- ▶ 0.004 units per day
- ▶ 14 units per day

Forecasting accuracy has _____ relation with time horizon.

- ▶ **Inverse**
- ▶ Linear
- ▶ Direct
- ▶ Parallel

All of the following are determinants of quality EXCEPT:

- ▶ Quality of service after delivery
- ▶ **Quality of non-conformance**
- ▶ Quality of design
- ▶ Quality of ease of use

What kind of relationship exists between inspection and the cost of undetected defectives?

- ▶ Direct
- ▶ **Inverse**
- ▶ Curvilinear
- ▶ Parallel

Which of the following is the basic criterion of grouping inventories in ABC inventory management system?

- ▶ Profit potential
- ▶ Sale percentage
- ▶ **Monetary value**
- ▶ Usage volume

JIT production may also be called as:

- ▶ Deep manufacturing
- ▶ **Lean manufacturing**
- ▶ Keen manufacturing
- ▶ Theme manufacturing

Transportation method helps in solving which of the following problems?

- ▶ **Facility location problems**
- ▶ Allocation of cost problems
- ▶ Workforce management problems
- ▶ Unfamiliar laws and regulations problems

SIM cards are trimmed diagonally from upper left corner to guide the card correctly into its position. For what purpose this feature in consumer product design is incorporated?

- ▶ To make it durable
- ▶ To maintain perceived quality of the customer
- ▶ **To prevent mistakes**
- ▶ To make it aesthetic

Which of the following costs decreases when inventory increases?

- ▶ **Cost of missed sales**
- ▶ Cost of storage
- ▶ Quality costs
- ▶ Coordination costs

Tactical issues in supply chain management include which of the following?

- ▶ Production policies
- ▶ Inventory policies
- ▶ Transportation policies
- ▶ **All of the given options**

In project management, most probable length of required time for the completion of a project is known as:

- ▶ Optimistic time
- ▶ **Most likely time**
- ▶ Deterministic time
- ▶ Pessimistic time

For an activity A, $t_o = 35$, and $t_p = 70$ then choose the variance s^2 from the following options.

- ▶ 38 days
- ▶ 35 days
- ▶ **34 days**
- ▶ 25 days

In project management for an activity 2-4, Early start time (ES) and Late start (LS) time is 5.00 and 8.00 respectively. What would be the slack time?

- ▶ 3.55 days
- ▶ **3.00 days**
- ▶ 13.00 days
- ▶ 1.6 days

The management of systems or processes that creates goods and provides services is known as:

- ▶ Operation Management
- ▶ **Operation/production Management**

- ▶ Operation/Research Management
- ▶ Production/Research Management

Which one of the following is concerned with short term capacity needs?

- ▶ Cycle
- ▶ Trends
- ▶ **Seasonality**
- ▶ Average

Which of the following is a unit of measurement as specified in Six Sigma quality?

- ▶ Defects per hundred
- ▶ Defects per thousand
- ▶ Defects per hundred thousand
- ▶ **Defects per million**

Order-point or re-order level inventory control is used for:

- ▶ Quality control in inventory management
- ▶ **Control of independent demand inventory items**
- ▶ Control of dependent demand inventory items
- ▶ Production scheduling in inventory management

Which of the following best defines the “Pull method” of material flow?

- ▶ A method in which the production of the items begins in advance of customer needs
- ▶ **A method in which customer demand activates the production of the item**
- ▶ A method in which the production of items begins in response to the competitor's needs
- ▶ A method in which items are produced according to the resources available

Long term relationship with suppliers can be made through which of the following?

- ▶ Collaborative transportation
- ▶ **Cost sharing**
- ▶ Process sharing
- ▶ Flexibility in operations

Which one of the following is the operational benefit of JIT production system?

- ▶ Increased space requirement
- ▶ Reduced product quality
- ▶ **Simplicity of system**
- ▶ Increased inventory investment

Which of the following refers to scheduling for high volume flow system?

- ▶ Batch scheduling
- ▶ **Flow shop scheduling**
- ▶ Job shop scheduling
- ▶ Floor scheduling

Which one of the following represents the series of a time forecast?

- ▶ Averaging, cycle, seasonality, random variations
- ▶ Trend, seasonality, exponential smoothing
- ▶ Trend, cycle, seasonality, moving average
- ▶ **Trend, cycle, seasonality, random variations**

Organizations can gain a competitive edge by which of the following processes?

- ▶ Designing a product that is easy to manufacture
- ▶ Bringing new ideas to the market quickly
- ▶ Designing a product that satisfies customers
- ▶ **All of the given options**

What does a product structure tree denote?

- ▶ It locates raw material supplies
- ▶ It reduces regular time labor
- ▶ It reduces labor overtime
- ▶ **It helps to compute usage of component**

Which one of the following is TRUE about Taguchi approach?

- ▶ **To test the robustness of a design**
- ▶ To articulate the “voice of the customer”
- ▶ To reduce the degree of automation
- ▶ To create a concurrent design

Which one of the following mathematical expressions can be used to compute availability?

- ▶ **$(MTBF) / (MTBF + MTR)$**
- ▶ $(MTBF) / (MTBF - MTR)$
- ▶ $(MTR) / (MTBF + MTR)$
- ▶ $(MTR) / (MTBF - MTR)$

Which of the following refers to the cost born by a firm if demand exceeds the supply?

- ▶ Ordering cost
- ▶ Holding cost
- ▶ Stock out cost
- ▶ **Shortage cost**

All of the following are examples of time based strategies EXCEPT:

- ▶ Products /service design time
- ▶ Processing time
- ▶ Response time for complaints
- ▶ **Response time for innovation**

Which of the following provides reason to keep supplies of inventory on proposed lead times?

- ▶ **To meet variation in product demand**
- ▶ To hedge against wage increases
- ▶ In case the supplier changes the design
- ▶ To maintain dependence of operations

Which of the following is a FALSE statement regarding ABC classification system?

- ▶ All items held in an inventory are not of equal monetary value
- ▶ Inventories should be grouped according to their monetary level
- ▶ Items are classified into three levels
- ▶ **It is necessary to control carefully all items to produce inventory savings**

Transactions like canceling orders, rejecting shipments, stock returns and receiving scheduled receipts are sources of data for which of the following?

- ▶ Planning reports
- ▶ Exception reports
- ▶ Master Production Schedule
- ▶ **Inventory record**

Installation of robots on automobile manufacturing workstation to perform many operations on cars is an example of which of the following characteristics of Just-In-Time production systems?

- ▶ Standardized components and work methods
- ▶ Flexibility in workforce
- ▶ **Automated production**
- ▶ Preventive maintenance

In the lobby of a bank, each service channel has its own waiting line, customers wait until the server of their line serve them presents an example of which of the following?

- ▶ Single channel, single phase design
- ▶ **Multiple channels, single phase design**
- ▶ Multiple channels, multiple phase design
- ▶ Single-channel, multiple phase design

Which one of the following formulae can be used to compute value?

- ▶ $(\text{Quality} + \text{Speed} - \text{Flexibility}) / \text{Cost}$
- ▶ **$(\text{Quality} + \text{Speed} + \text{Flexibility}) / \text{Cost}$**
- ▶ $(\text{Quality} + \text{Speed} - \text{Cost}) / \text{Flexibility}$
- ▶ $(\text{Quality} + \text{Speed} + \text{Cost}) / \text{Flexibility}$

Which one of the following is a type of layout where equipment, machinery and people are moved as required?

- ▶ Product layout
- ▶ **Fixed position layout**

- ▶ Process layout
- ▶ Hybrid layout

Which of the following can be used to compute standard time?

- ▶ Dividing the average elemental time by the rating factor
- ▶ Multiplying the normal cycle time by the rating factor
- ▶ **Multiplying the normal cycle time by one plus the allowance factor**
- ▶ Multiplying the elemental average time by the rating factor

Which of the following defines process variability relative to specifications?

- ▶ **Process capability**
- ▶ Process control
- ▶ Process mapping
- ▶ Process selection

All of the following are determinants of re-order point EXCEPT:

- ▶ Rate of demand
- ▶ Lead time
- ▶ Stock out risk
- ▶ **Setup cost**

Fuel, paint and component parts are example of which of the following?

- ▶ Independent demand items
- ▶ Items of group B in ABC Classification
- ▶ Items for which demand is certain
- ▶ **Dependent demand items**

Reducing lot sizes and setup times in Just-In-Time systems will give which of the following results?

- ▶ Poor customer service
- ▶ Long lead-times
- ▶ Increase in investment
- ▶ **Decrease in investment**

Which one of the following forecast shows wavelike variations lasting more than one year that often related to political, economic and even agricultural conditions?

- ▶ Seasonal
- ▶ Trend
- ▶ Nonlinear trend
- ▶ **Cyclical**

With the increase of lot quality, the probability of acceptance of that lot_____.

- ▶ Remains the same
- ▶ Decreases
- ▶ **Increases**
- ▶ May increase or decrease

Which of the following is NOT one of the ways to manage risk in project management?

- Minimizing occurrences of risk factors
- Assessing the risk
- Creating multiple level of reports**
- Establishing contingency plans

A product 'A' is specified to work well up to 30 degree Celsius temperature and 30% humidity. What would these specifications represent?

- Reliability factor
- Standard conditions
- Normal operating conditions - CORRECT**
- Standard operating procedure

ABC bank wants to avoid any defects in the course of providing services to customers. If the bank wants to prevent any shortcomings in services provided, which of the following might be a cost for the bank?

- Customer comment cards costs
- Negative word of mouth costs
- Supervision costs
- Quality audit costs - CORRECT**

Which of the following refers to the time interval between order placement and its fulfillment?

- Lead time - CORRECT**
- Stock time
- Cycle time
- Setup time

Which of the following priority rules states that jobs with the shortest completion time or the shortest processing time are run first?

- First Come, First Served
- Shortest Processing Time - CORRECT**
- Shortest Due Date
- Critical Ratio

Which one of the following statements represents use of cost-volume analysis?

- It is a tool for reliability measurement
- It provides a base for marketing research
- It helps in comparing capacity alternatives - CORRECT**
- It is important in product design

Which one of the following manufacturing processes is associated with high volume car manufacture?

- Job shop

Random variation
Cycles
Trends

Parabolic, exponential and growth are element of:

Linear trends

Non linear Trends

Forecast accuracy

None of the above

Generally an Operations Manager should NOT inspect the process for defects .

Before the supply of finished goods

Before a costly operation

Before manufacturing high volume products

Before purchasing raw material

Which one of the following layout type is associated with a supermarket?

Fixed Position layout

Process layout

Product layout

Cellular layout

Which probability distribution is used most extensively in dealing with forecasting errors?

Normal

Exponential

Beta

Pareto

Which one of the following layout type is associated with a restaurant?

Fixed position layout

Process layout

Product layout

Hybrid layout

In time series forecast the population shifts, changing income and cultural changes refers to:

Trend

Seasonality

Cycle

Irregular Variations

Which one of the following mathematical expressions can be used to compute output capacity?

OT/CT

CT/OT

CT+OT
CT-OT

The disadvantages of specialization to management include all of the following EXCEPT:

More turnover

More difficult to teach the job

More absenteeism

Minimum responsibility

is central to the philosophy of continuous improvement:

Management involvement

Employee involvement

Organization's operations

Problem solving

If the products and services match up with the designer's specifications, then which quality perspective of TQM is met?

Quality of design

Quality of conformance

Quality of use

Quality of service after delivery

Which of the following is a difference of service organizations as compared to manufacturing organizations?

Manufacturing organization are more specialized then service organizations

Manufacturing firms have more variety then service organizations.

Service firms are more flexible then manufacturing organizations

Manufacturing decisions are made by maximizing the profit potential

Reliability and safety of service is ensured through which of the following?

Quality in design

Quality in system

Quality in equipment

Quality in training

The method that considers several variables related to the variable being predicted is:

Exponential smoothing

Weighted moving average

Multiple regressions

Moving average

Which of the following depicts the overall production rate and size of the workforce required to meet the demand?

Aggregate plan

Master production schedule
Master requirements plan
Capacity requirements plan

Productivity refers to the ratio of output to input, in your views what are the measures by which productivity can be increased?

Inputs increase while outputs remain the same

Outputs decrease while inputs remain the same

Inputs and outputs increase proportionately

Inputs decrease while outputs remain the same

Which of the following is a time ordered diagram that is used to determine whether observed variations are abnormal?

Control charts

Scatter diagram

Histograms

Pareto charts

Which one of the following is NOT a key internal factor in formulating operations strategy?

Competition

Financial resources

Human resources

Products and services

With regard to a regression-based forecast, the standard error of the estimate gives a measure of:

Required time to derive the forecast equation

Validation time period of the forecast

The maximum error of the forecast

Variability around the regression line

The total weight assigned to actual occurrences should be equal to:

0

1

2

3

Robustness of a product is _____ related with the probability of failure.

Directly

Inversely

Linearly

Positively