MGT613- Production / Operations Management
FINALTERM EXAMINATION

2010 Paper-1

Total questions:53 **Subjective:5**
Time: 90 min **Objective:48**

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

- ► Control decision
- ► Non-operational decision
- ► **Strategic decision**
- ► Tactical decision

Strategic or institutional management is the conduct of drafting, implementing and evaluating cross-functional decisions that will enable an organization to achieve its long-term objectives

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

- ► Capital
- ► **Energy**
- ► Labor
- ► Machine

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Energy productivity: units of the output per kilowatt hour

Rupee value of output per kilowatt hour

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

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MAXIMAX

_ Maximax determines

_ The best possible outcome

_ Choose the Alternative with the best possible payoff.

_ It does not take into account any other alternative then the best payoff.

_ An optimistic approach

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

One disadvantage of using moving averages for forecasting is that in calculating the average all the observations are given equal weight (namely 1/L), whereas we would

expect the more recent observations to be a better indicator of the future (and accordingly ought to be given greater weight). Also in moving averages we only use recent observations, perhaps we should take into account all previous observations.
http://people.brunel.ac.uk/~mastjjb/jeb/or/forecast.html

Which of following statement is true about effective capacity?

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

Design capacity > effective capacity > acutal capacity

Design capacity is the max capacity which a firm can attain.
effective capacity is max capacity which a firm can produce.
Actual capacity is capacity which any firm actual produce.

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**

http://books.google.com.pk/books?id=EUzBj3wokl4C&pg=PA112&lpg=PA112&dq=correct+order+of+layout+types+from+low+volume/high+variety+to+high+volume/low+variety&source=bl&ots=-vbfOoCH6x&sig=zV0nHaaR43M4HQqHbDiVCutCCBY&hl=en&ei=hZ3vTMnELcrCccrwxIEK&sa=X&oi=book_result&ct=result&resnum=8&ved=0CE8Q6AEwBw#v=onepage&q&f=false

Which one of the following designs resists modifications?

- ► **Frozen design** p 48
- ► 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** **mid file**

► The level of capacity for which average unit cost is maximized

► The level of capacity for which total cost is minimized

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

Ref: Cross-functional systems were designed to intergreate the activities of the entire business process, and are called so because they 'cross' departmental boundaries.

Who emphasized quality in terms of inspection and gauging?

- ► G.S. Radford
- ► W. Shewhart
- ► **F.W. Taylor**
- ► W.E. Demig

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Frederick Winslow Taylor the father of scientific management brought back the concept of quality by incorporating product inspection as well as focusing on theimportance of manufacturing management

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

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Dimensions of Quality:

1. Performance - main characteristics of the product/service

2. Aesthetics - appearance, feel, smell, taste

3. Special Features - extra characteristics

4. Conformance - how well product/service conforms to customer's expectations

5. Reliability - consistency of performance

6. Durability - useful life of the product/service

7. Perceived Quality - indirect evaluation of quality (e.g. reputation)

8. Serviceability - service after sale

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

Business Process Re engineering:

A discipline to measure and modify organizational effectiveness by documenting, analyzing, and comparing an existing **process** to "best-in-class" practice, and then implementing significant **process** improvements or installing a whole new **method.**

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

- ► **Kaizen**
- ► Poka-yoke

- ► Six sigma
- ► Inspection

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Kaizen: A Japanese word for continuous improvement.

Problem solving is an example of which of the following?

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

Ref: Prevention Costs include all TQM training, TQM planning, customer assessment, process control, and quality improvement costs to prevent defects from occurring.

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

- ► Juran’s cycle
- ► Crosby’s cycle
- ► Ishikawa’s cycle
- ► **Shewhart’s cycle**

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Deming referred to it as 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)

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Lot Tolerance percent Defective(LTPD): the upper limit on the percentage of defects that a consumer is willing to accept.

Aggregate planning usually covers time span of how many months?

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

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Aggregate planning: Intermediate range capacity planning, usually covering 2 to 12 months.

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

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Number of workers in a period equals Number of Workers at the end of the previous period PLUS Number of new Workers at the start of the current period - Number of laid off Workers at the start of the current period.

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**

http://www.slideshare.net/birubiru/pom-unit-ii-final
slide#32

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

Inventory : Carrying Cost per Unit X Average Inventory

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

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Cost for a (current) period equals Output Cost (Regular +OT+ Subcontract) + Hire/Layoff Cost+ Inventory Cost + Backorder Cost

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

► Ordering cost

► **Holding cost**

► Shortage cost

► Stock out cost

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Holding (carrying) costs: Cost to carry an item in inventory for a length of time, usually a year. Costs include Interest, insurance, taxes, depreciation, obsolescence, deterioration, pilferages, breakage, warehousing costs and Opportunity costs.

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

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Two bin system: Two containers of the inventory: reorder when the first is empty.

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

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Two bin system: Two containers of the inventory: reorder when the first is empty.

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

Planned-order receipts: The quantity expected to be received by the beginning of the period in which it is shown.

ERP stands for which of the following?

► **Enterprise Resource Planning**

► Enterprise Requirements Planning

► Equal Resource Planning

► Equal Requirements Planning

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Enterprise resource planning (ERP): often called the rightful next step in an evolution that began with MRP and evolved into MRP 2.

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

► Intermittent processing

► Job shop processing

► **Repetitive processing**

► Batch processing

Reference:
http://books.google.com.pk/books?id=HH0vVv6dMb0C&pg=PA319&lpg=PA319&dq=repetitive+production+and+JIT&source=bl&ots=X5Y_Vh6M5W&sig=MF4SmXtQGK_f195NRsoMatDtLvc&hl=en&ei=pKkpTZexHYWq8QPOyJi9Ag&sa=X&oi=book_result&ct=result&resnum=3&ved=0CCUQ6AEwAg#v=onepage&q=repetitive%20production%20and%20JIT&f=false

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

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Kanban: a card or device that communicates demand for work or materials from the preceding station Kanban is the Japanese word meaning “signal” or “visible record”

DRP stands for which of the following?

- ► Demand Requirements Planning
- ► **Distribution Requirement Planning**
- ► Dividend Requirements Planning
- ► Data Resource Planning

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Distribution requirement planning (DRP) is a system for inventory management and distribution 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

Trust among partners is essential for a win-win relationship. But successful supply chain managers realize the need to invest time and ... sustainable win-win relationships among trading partners

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

The flow time of an order (a job) in a system is the difference between the release time of the job into the system and the departure time of the job from the system.

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

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

Preventive maintenance—
the prevention of equipment breakdowns before they happen. This includes inspections, adjustments, regular service and planned shutdowns.

Successful project management includes all of the following factors <u>EXCEPT</u>:

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

http://books.google.com.pk/books?id=xCj6Md3eVsYC&pg=PT360&lpg=PT360&dq=successful+project+management+and+Interchangeable+staff&source=bl&ots=Ik-9i-XiGg&sig=EGXpHLK4WwOOOiukNB1pmFGXD0s&hl=en&ei=YphLTcO9JsSWOsS7rEQ&sa=X&oi=book_result&ct=result&resnum=1&sqi=2&ved=

0CBcQ6AEwAA#v=onepage&q=successful%20project%20management%20and%20Interchangeable%20staff&f=false

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

http://books.google.com.pk/books?id=F1c3wHNDF-wC&pg=PA168&lpg=PA168&dq=delegation+of+responsibility+to+an+organizational+department+for+a+project%3F&source=bl&ots=n24C0U0-DR&sig=HYJBJSnN2980CTqN6vNsN2yk1eI&hl=en&ei=QB8xTZXTLsWz4gbD2JyMCg&sa=X&oi=book_result&ct=result&resnum=2&ved=0CBsQ6AEwAQ#v=onepage&q=delegation%20of%20responsibility%20to%20an%20organizational%20department%20for%20a%20project%3F&f=false
and
http://www.buzzle.com/articles/organizational-structure-examples.html

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

- ► Sensitive path
- ► Coverage path
- ► **Critical path**
- ► Permanent path

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Critical path: The longest path; determines expected project duration.

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

Ref: Serviceability refers to services after sale.

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

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

Reference

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)

Ref: Bottleneck is one process in a chain of processes, such that its limited capacity (increased time of completion, or increased labour requirement) reduces the capacity of

the whole chain.

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**

Page#46
CBR denotes Center Board of Revenue, which monitors the organizations taxable income.

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**

http://highered.mcgraw-hill.com/novella/QuizProcessingServlet

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

Ref: Site Related Factors

•Land
•Transportation
•Environmental
•Legal

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

Ref: It is that common viewpoint as well as attitude shared by the whole organization. (Page no.111)

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**

http://www.tutorialspoint.com/six_sigma/six_sigma_glossary.htm

Improve Phase (DMAIC)

The goal of improve phase is to pilot and implement solutions that address root causes. This step helps to eliminate any errors/false starts when the team finally implements the solution.

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

- ► Plan
- ► Do
- ► **Check**
- ► Act

Ref: CHECK

· Evaluate the data collection during this phase.
· Check how closely the results match the original goals of the plan phase.(Page no.116)

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

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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

Ref: The Control Process consists of the following important stages.
1. Define
2. Measure
3. Compare
4. Evaluate
5. Correct
6. Monitor results

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

Ref: Acceptance sampling is an important form of inspection applied to lots or batches of items before or after a process, to judge conformance with predetermined standards.(Page no.128)

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

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

Ref: Long-range plans
1. Long term capacity
2. Location / layout (Page no.133)

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

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

B. Ordering costs are inversely and nonlinearly related to order size
http://www.scribd.com/doc/42106516/Inventory-Management

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**

Ref: Low levels of in-process inventories
Ability to track material requirements
Ability to evaluate capacity requirements
Means of allocating production time

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

Ref:JIT system requires small lot size.(Page no.166)

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

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

Ref: Benefits of Supply Chain Management

1. Lower inventories
2. Higher productivity
3. Greater agility
4. Shorter lead times
5. Higher profits
6. Greater customer loyalty

Scheduling is a function of which of the following?

- ► Volume of systems' output
- ► Nature of systems' output
- ► **Timing of systems' output**
- ► Value of systems' output

Ref: Scheduling is the timing and coordination of Operations.(Page no.184)

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

Ref: ***Load chart*** – A type of Gantt Chart that shows the loading and idle times for a group of machines or list of departments.(Page no.181)

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 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

Ref: Project Management has certain major administrative issues, such as
1. Executive responsibilities
2. Project selection
3. Project manager selection
4. Organizational structure
5. Organizational alternatives
6. Manage within functional unit
7. Assign a coordinator
8. Use a matrix organization with a project leader

Which of the following is required to describe project scope?

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

Ref: The primary tool required to describe Project Scope is the Work Breakdown Structure.

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
- ► **It establishes good relationship with the customer**

(not sure but most appropriate)

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

Ref:The Moving Average model takes the average of several periods of data; the result is a dampened or smoothed data set; use this model when demand is stable and there is no evidence of a trend or seasonal pattern.

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

- ► **Tangibility**
- ► Perishability
- ► Simultaneity
- ► Courtesy

Ref:A service is a time-perishable, intangible experience performed for a customer acting in the role of a co-producer.

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

Ref: At the macro levels the managers look for Supply chain and External factors, while at the **micro level** they look for operational factors including facilities and man and machine resources.

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

Ref: It takes into account selection of technology, capacity planning, layout of facilities, and design of work systems. Process selection is a natural extension after selection of new products and services.

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
- ► **Communication gap**
- ► Service quality gap
- ► Service delivery gap

Reference

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

Reference

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*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
- 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

Ref: Determine the worst possible payoff for each alternative, and choose the alternative that has the "best worst." Which is 18000 in this table.

Small facility	10,000
Medium facility	12,000
Large facility	18,000

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**
- Assign labor to the next workstation irrespective of their skills
- More machines should be installed for flexibility of operations

Reference :

1st. you can not hire more skilled labor as market is short and its already pointed as constraint in the question.

2nd.When worker are not available, We have to trained our present work force in such a way that they can work on different machine when its required.

3rd can not be correct as without any proper training you can not move worker to handle the machine which might be fatal for the whole system.

4th. More machine is not going to solve the problem, as its the problem of labor shortage.

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
- ► Backorders and stock outs

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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

http://www.globalguideline.com/interview_questions/Answer.php?a=Which_of_the_following_would_not_normally_be_considered_a_general_characteristic_of_a_service

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

REFRENCE: An order winner is a criterion that differentiates the products or services of one firm from another. It can be the product's price, quality, technology, speed, or any other product mix or characteristics. (Order Qualifiers would meet customer requirements and Order Winners would satisfy customers)

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

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

REFRENCE: Accuracy. Forecasts should be accurate. In fact it should carry the degree of accuracy, so the users are aware of the limitations of the forecast. This will also help the end users to plan for possible errors and **provide a basis for comparing the forecast with other alternative forecasts.**

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**

REFRENCE: This approach seeks to minimize the difference between payoff that is realized and best payoff for each state of nature

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

REFRENCE:
1. Specify Objectives and the Criteria for decision making
2. Develop Alternatives
3. Analyze and compare alternatives.
4. Select the best alternative.
5. Implement the chosen Alternative
6. Monitor the results to ensure the desired results are achieved

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

- ► Facilities
- ► **Product mix**
- ► Processes
- ► Operations

REFERENCE:
There are 7 determinants of effective capacity
1 **Facility**. The design of facilities includes the size as well as the provision of expansion.
2 **Product and service factors** can have a tremendous influence on capacity.
3 **Process factors** refer to the quantity and quality requirements of a process. Quantity always Refers to capacity.
4 **Human factors** include skill, craftsmanship, training and qualification
5 **Operational factors** with respect to effective capacity always refer to scheduling
6 **Supply chain factors** relate to any short coming to suppliers, warehouse processing, operational hick up.
7 **External factors** include product standards, safety regulations, unions and pollution control
Standards.

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

REFRENCE:**Alpha smoothing constant**

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

REFRENCE: Design for Remanufacturing: Using some of the components of the old products in the manufacture of new products. Remanufactured products are sold at 30 to 50% of the price of new product .

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

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

REFERENCE: The PDSA Cycle (shewhart Cycle/Deming Wheel) **(** The concept of the PDCA Cycle was first introduced by Walter Shewhart, the leading statistician, who also developed statistical process control)

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

- Armand Feigenbaum
- G.S Radford
- **W. Shewhart**
- David Gravin

REFERENCE: Walter Shewhart is also known as "Father of statistical quality control"

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

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

REFERENCE: Both are term are used for services in quality dimensions, *Reliability*: Perform promised service dependably and accurately.
Responsiveness: Willingness to help customers promptly.

Which of the following best describes the ISO?

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

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

- ► Plan
- ► Do
- ► **Check/Study stage**
- ► Act

STUDY Evaluate the data collection during this phase. Check how closely the results match the original goals of the plan phase.

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

REFERECNE: Optimal order quantity a point where carrying cost and ordering cost intersects.

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×2)/H

REFERECNE: Total cost = Annual carrying cost + Annual ordering cost

$$TC = (Q/2)\,H + (D / Q)\,S$$

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

REFERENCE: Inventory Records
One of the three primary inputs in MRP
Includes information on the status of each item by time period
Gross requirements
Scheduled receipts
Amount on hand
Lead times
Lot sizes
And more Assembly Time Chart

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

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

REFERENCE: Load reports: Department or work center reports that compare known and expected future capacity requirements with projected capacity availability.

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**

REFERENCE:
Steps in Capacity Planning
.Estimate future capacity requirements
Evaluate existing capacity
Identify alternatives
Conduct financial analysis
.Assess key qualitative issues
.Select one alternative
.Implement alternative chosen
.Monitor results

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

REFERENCE: JIT/Lean Production Features by eliminating waste (muda), quality is improved, production time is reduced and cost is reduced.

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

► **Small**
► Medium
► Large
► Can be small and medium both

REFERENCE: JIT systems are a pull method to manage material flow, consistently high quantity, small lot sizes, uniform work station loads.

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**

Developed by Henry Gantt in 1916, a Gantt chart is used to determine the timing of individual activities in aproject.
A Gantt chart can be used to schedule a periodic or repetitive project, because the sequence ofactivities is well understood and past experience has determined how long each activity takes.

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

► Critical path
► **Budgeted cost**
► Slack time
► Expected project duration

REFERENCE:
Used to determine

1. Expected project duration
2. Slack time
3. Critical path

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**

REFERENCE: Elements of Queuing System
Population Source, Arrivals, **Waiting Lines, Processing Order**, Service, System and Exit are the common identifiable elements of a Queuing System.

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**

REFERENCE: Quality Function Deployment is. Two common answers being that it is the **voice of the customer** (which always sets a standard for the service organization to follow) and the second one being that it should be in the form of a house of quality

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

Reference: Work Sampling is a method in which the job is sampled at random intervals to determine the proportion of total time spent on a particular task.[20] It provides insight into how often workers are performing tasks which might cause strain on their bodies.

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

REFERENCE: Prevention costs Quality planning, Training program, Quality audits, Data acquisition and analysis, Recruitment and selection, Supplier evaluation

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

REFERENCE: Manufacturing
Favorable Labor Climate
Proximity to markets.
Quality of Life
Proximity of Suppliers and Resources.
Proximity to the Parent Company's facilities.
Utilities, Taxes and Real estate costs.
Other factors (expansion, construction costs, and location near the highway or main railways)

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} = 2DS/H whole square = 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
- ► Periodic review

REFERENCE: Perpetual Inventory System(CONTINUAL)
System that keeps track of removals from inventory continuously, thus monitoring current levels of each item

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

REFERENCE:
Secondary Goals
1. Eliminate disruptions
2. Make system flexible
3. Eliminate waste, especially excess inventory

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

- Logistics
- Technology
- **Autonomation**
- Just-In-Time System

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

High volum system are often referred as flow systems. scheduling of in these systems are often called flow shop.
due to nature of repetitive work its easy to schedule. TV, Radio, Cars, sugar refining etc fall in this class.

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

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

REFERENCE:
Project Manager is normally considered to have qualification such as
PMP certification
CFM, CFA and CFP 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

Page#210

1. Goal of queuing analysis is to minimize the sum of two costs Customer waiting costs and Service capacity costs.

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**

REFERENCE:

1 Average number of customers waiting
2 Average time customers wait
3 System utilization
4 Implied cost
5 Probability that an arrival will have to wait

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

Chase Demand Strategy

• Cost of strategy – hiring and firing workers
• This strategy would not be feasible for industries which require highly skilled labor or where competition for labor is fierce.
• **This strategy would be cost effective** during periods of high unemployment or when low-skilled labor is acceptable.
http://docs.google.com/viewer?a=v&q=cache:mGfT07t_oXYJ:www.freequality.org/documents/Training/Classes%2520Spring%25202002/Chase%2520Method%2520of%2520Aggregate%2520Planning.ppt+Chase+demand+strategy+is+cost+effective&hl=en&gl=pk&pid=bl&srcid=ADGEEShkJuaP6Dann0kfiPfQclaghPA3QemnIdPXmvCPq585H2azO3zMqqjaRJ63TiFx7XmLyD4Sc_gP2RAdgPkAYaynl0XKh2AUCZuVUsTfy-R4k3n9043Oev98X6vlioNo4KIR91X0&sig=AHIEtbRzYZ10X35C2M7MAAXzRu2DdOyvEw&pli=1

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

Ref: Crashing a project involves paying more money to complete a project more quickly.

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

Page#116

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

- ► Supplier kanban
- ► Material kanban
- ► Withdrawal kanban
- ► **Production kanban**

Reference

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

Reference

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

- ► **Durability**
- ► Performance
- ► Serviceability
- ► Reliability

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**

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)

OC Curve Terms
Acceptable Quality Level (AQL): Percentage of defective items a customer is willing to accept from
you (a property of mfg. process)
Lot Tolerance Percent Defective (LTPD): Upper limit on the percentage of defects a customer is willing to accept (a property of the consumer)
Average Outgoing Quality (AOQ):Average of rejected lots and accepted lots
Average Outgoing Quality Limit (AOQL):Maximum AOQ for a range of fractions defective

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

Process plant strategy
Different plants focus on different aspects of a process
Automobile manufacturers – engine plant, body stamping plant, etc.
Coordination across the system becomes a significant issue

http://teach.maryville.edu/pdeng/courses/bus314_f01/slides/chapter08.ppt#275,14,Multiple Plant Strategies

For which of the following purpose master schedule determines quantities?

- ► Capacity
- ► **Demand**
- ► Resources
- ► Production requirements

Ref: Master schedule: Determines quantities needed to meet demand (Page 139)

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

Ref: *Bill of materials (BOM)*: One of the three primary inputs of MRP; a listing of all of the raw materials, parts, subassemblies, and assemblies needed to produce one unit of a product.(Page no.157)

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

Ref: Load reports: Department or work center reports that compare known and expected future capacity requirements with projected capacity availability.(Page no.161)

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**

Ref: LAPLACE approach best average of alternatives.
Small facility = 18000/2 = 9000
Medium facility = 32000/2 = 16000
Large facility = 33000/2 = 16500 this is best average as it is highest.

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

► Sequencing
► **Loading**
► Scheduling
► Budgeting

Loading - assignment of jobs to process centers

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

Ref: *Moving average* – A technique that averages a number of recent actual values, updated as new values become available.
· *Weighted moving average* – More recent values in a series are given more weight in computing the forecast.(Page no.37)

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

- ► Black belts
- ► Green belts
- ► Top management
- ► Master black belts

All of the above options are correct. All of above having experience of six sigma. I am confused about this question.
Ref: Six Sigma Teams are formed for implement of Six Sigma in true spirit keeping in mind both managerial as well as technical aspects.
1. Top management
2. Program champions
3. Master "black belts"
4. "Black belts"
5. "Green 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

Ref: The curve shows the probability that use of the sampling plan will result in lots with various fractions defective being accepted.(Page no.130)

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

Ref: A released order not yet shipped (customer order) or received into stock (production, purchase or replenishment order). OR Scheduled receipts: Open orders scheduled to arrive.

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**

Reference

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

- Customized service
- Batch processing
- Intermittent processing
- **Standardized service**

http://books.google.com.pk/books?id=4dC0WP0VrdcC&pg=PA398&lpg=PA398&dq=car+wash+is+the+example+of+Standardized+service&source=bl&ots=qlIIR3kpQV&sig=771YBzi3PRXOPLap7GP58ShHSYg&hl=en&ei=VirtTK-CCtDQcYfl_I4P&sa=X&oi=book_result&ct=result&resnum=2&ved=0CBsQ6AEwAQ#v=onepage&q=car%20wash%20is%20the%20example%20of%20Standardized%20service&f=false

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

Calculation: 1500/270 =5.6. After round off the value, it is 6 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**

Ref: Event-management capability
The ability to detect and respond to unplanned events.(Page no.176)

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

Ref: Forward scheduling may result in jobs being completed earlier then the requested due date because forward scheduling schedules the tasks as early as possible.

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

the priority rule is applied to the jobs waiting for that operation, and the job with the highest priority is selected.
When that operation is finished, the job is moved to the next operation in its routing, where it waits until it again has the highest priority.

http://www.flashcardmachine.com/operations-management-ch16.html

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

Ref: Slack: Allowable slippage for path; the difference the length of path and the length of critical path.(Page no.194)

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

Ref: A deterministic approach is useful for estimating the duration of the project, when activity times can be fairly well established.(Page no.209)

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

Ref: The operations manager should know all four demand options but should be more interested in back order option.(Page no.135)

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

http://docs.google.com/viewer?a=v&q=cache:2dnroCrBjEsJ:hkilter.com/courses/541/isl541_13.ppt+Chase+demand+strategy+is+an+example+of+Reactive+strategy&hl=en&gl=pk&pid=bl&srcid=ADGEESjGzBXwMDjmjnwD6j5QzcTipWg8AgliZOJJ2PvWcF_mbzo_kAbn-WGY7xhHu1tgkVv8eOU2ijEXFdzekT6taQSzyZPZmug2Gjz0MWC88JYw9mLtkKDLInocAkvcJfZ60gz0Hbvd&sig=AHIEtbRu2ttYos5klF1tx8HBslAJGvKWRw

2009 Paper-5

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**

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
- ► Six
- ► **Seven**

Which of the following is <u>NOT</u> an element of TQM?

- ► Continuous improvement
- ► **Perceived quality**
- ► Employee empowerment

► Customer focus

http://books.google.com.pk/books?id=Vc6YC7mM18UC&pg=PA3&dq=elements+of+total+quality+management+are+Continuous+improvement+,Employee+empowerment++a#v=onepage&q=elements%20of%20total%20quality%20management%20are%20Continuous%20improvement%20%2CEmployee%20empowerment%20%20a&f=false

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

Explanation: Tolerances or specifications is the range of acceptable values established by engineering design or customer requirements

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 notIt is notI influenced by the aggregate plan
► It is not concerned with customer order processing

Reference

Big JIT includes all of the following EXCEPT:

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

1. Big JIT – broad focus (Includes Internal as well as External)
a. Vendor relations
b. Human relations
c. Technology management
d. Materials and inventory management

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**

SequencingSequencing: Determine the order in which jobs at a work center will be processed.Workstation: An area where one person works, usually with special equipment, on a specialized job.

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 <u>TRUE</u> 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

Reference: This property of being a temporary and a one-time venture contrast with operations, which are permanent or semi-permanent ongoing functional work to create

the same product or service over-and-over again.

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

- ► **Project matrix structure**
- ► Project structure
- ► Functional structure
- ► Balanced matrix structure

REF:In the Product or Project structure, specialists from various disciplines, instead of being scattered across a number of separate and distinct functional offices are gathered into offices by logic of product lines, or customer type, or the very nature of the project. Sometimes a Project Office disbands when its mission achieved.

Which of the following is NOT a limitation of PERT?

- ► Omission of critical activities
- ► **Correct precedence relationships**
- ► Sole reliance on critical path
- ► Inclusion of a fudge factor

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
http://www.thefreelibrary.com/Just-in-time+purchasing+activities+in+the+beverage+bottling+industry.-a015543661

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)

http://docs.google.com/viewer?a=v&q=cache:XFjkocP8q8QJ:www.cengage.co.uk/waters/students/chapters/chapter%252014a.doc+JIT+and+material+flow+is+complex+and+demand+is+highly+variable&hl=en&gl=pk&pid=bl&srcid=ADGEESiJdtoSoc4qT8_kkwpjIP1rWkKFiXbaX9FsK61gQ-LYX5fWxBSR9mFY_gRlC9QmgCQXHuEG1CB_h9w6dFo56zxwPnbWvITRS43bT1CHIt3yWowlRg--tu3POIVWSMywb_Zt6HDX&sig=AHIEtbRdXV4Uf4-lkgbILw0y3zLYlmokdA&pli=1

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

Elements of Supply Chain Management Table 16.1 Deciding how to best move and store materials Logistics Determining location of facilities Location Monitoring supplier quality, delivery, and relations Suppliers Evaluating suppliers and supporting operations Purchasing Meeting demand while managing inventory costs Inventory Controlling quality, scheduling work Processing Incorporating customer wants, mfg., and time Design Predicting quantity and timing of demand Forecasting Determining what customers want

Customers Typical Issues Element

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

2009 Paper-6

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** MID File
- ► Have exactly the same performance measures for any process

http://www.martymodell.com/pgsa2/pgsa13.html

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

- ► Reduced design costs
- ► Interchangeable parts
- ► **Reduced variety** mid-file
- ► 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**

Collaborative Planning, Forecasting, and Replenishment (CPFR) a Web-based tool used to coordinate
demand forecasting, production and purchase planning, and inventory replenishment

between supply
chain trading partners.

Which of the following is NOT a dimension of quality that makes a company competitive?
► Performance
► Special features
► **Leadership**
► Reliability

1. *Performance* - main characteristics of the product/service
2. *Aesthetics* - appearance, feel, smell, taste
3. *Special Features* - extra characteristics
4. *Conformance* - how well product/service conforms to customer's expectations
5. *Reliability* - consistency of performance
6. *Durability* - useful life of the product/service
7. *Perceived Quality* - indirect evaluation of quality (e.g. reputation)
8. Serviceability - service after sale

A double sampling plan specifies all of the following EXCEPT:
► Size of the initial sample
► Size of second sample
► Lot size
► **Double acceptance number**

A double sampling plan specifies the lot size, the size of the initial sample, accept/reject criteria
for the initial sample, the size of the second sample and a single acceptance number.

Which one of the following is an example of a short range plan?
► **Machine loading**
► Backorder
► Facilities layout
► Product design

Short-range plans (Detailed plans)
1. Machine loading
2. Job assignments

Which of the following formula is used to compute cycle time?
► **QO/u**
► QO/p
► p/QO
► u/QO

Cycle time for the Optimal Run Size
Q0/U=

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

► Performance control report
► **Planning report**
► Exception report
► Planned order report

http://www.scribd.com/doc/45318323/Cheat-Sheet

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

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

The necessary inputs are:
1. Planned order releases for MRP
2. The current shop load
3. Routing information
4. Job times

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

It also refers to the movement of materials and information within a facility and to incoming and
outgoing shipments of goods and materials in a supply chain.

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

► Quality
► **Demand**
► Cost
► Flexibility

Supply Chain Performance Drivers
1. Quality
2. Cost
3. Flexibility

4. Velocity
5. Customer service

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

► Tabulation of cost information
► Obtaining raw reduction
► **Obtaining column reduction**
► Modification of tabular sequence in case of difference between rows and columns

Hungarian Method
➢ First of all, acquire the relevant cost information and arrange it in tabular form
➢ Second, obtain the Row Reduction; this is obtained by subtracting the smallest number in each row from every number in the row. Enter the results in a new table.
➢ **Third, Obtain the Column Reduction by subtracting the smallest number in each column of the new table from every number in the column.**

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

► Supply chain capabilities
► Competitors' strengths
► **Demand forecasts** mid file
► 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

Ref: http://highered.mcgraw-hill.com/sites/0073403296/student_view0/chapter7/multiple_choice_quiz.html

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.

Ref:

The grouping into part families of items with similar design or manufacturing characteristics. Cellular production always would represent the layout of machines while group technology would reflect the collection of items or products which need the same manufacturing requirements

Who are the leaders and guidance providers in a six sigma team?
► **Master black belts**
► Black belts
► Program champions
► Top management

Six Sigma Team
Six Sigma Teams are formed for implement of Six Sigma in true spirit keeping in mind both managerial as well as technical aspects.
1. Top management
2. Program champions
3. Master “black belts”
4. “Black belts”
5. “Green belts”

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

► **How much and when to order?** (I think so.. :-p)
► 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

Not exactly the answer but after research I conclude
This is not exclusively a software function, but a merger of people skills, dedication to data base
accuracy, and **computer resources**. It is a total company management concept for using **human resources more productively.**

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)

Manufacturing Resource Planning (**MRP II**) is defined and accepted by professionals as a method for the effective planning of all resources of a manufacturing company. Ideally, it should answer operational planning in units, financial planning in rupees, **and has a simulation capability to answer "what-if" questions and extension of closed-loop MRP**.

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

Line flow strategy is to reduce frequency of setups (product layout, one worker, multiple machines)
http://www.business.umt.edu/faculty/jones/BADM341/PowerPt%20Download/BADM%20341%20Chapter%2016.PPT#260,6,Slide 6

"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

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

http://books.google.com.pk/books?id=oMjLPc6LwbwC&pg=PA295&lpg=PA295&dq=In+a+mailorder+operation,+customer+population&source=bl&ots=x6cJasRmKp&sig=hz5UUkS4A7hz5Nl4gLl5kFHi55c&hl=en&ei=ChNATdWCL96W4ga22_CTAw&sa=X&oi=book_result&ct=result&resnum=1&ved=0CBgQ6AEwAA#v=onepage&q=In%20a%20mail-order%20operation%2C%20customer%20population&f=false

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.

·**Qualitative Techniques** which use subjective inputs and no numerical data. It relies solely on soft information like human factors, personal opinion, hunches. Thus Qualitative Forecasts are often biased and tilted towards what the management wants to predict.

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

Laplace
➢ **Determines the Average payoff for each alternative**
➢ **And chooses the alternative with the best average.**
➢ This is a cautious approach
➢ Laplace approach treats the states of nature as equally likely.

Which of the following is an advantage of standardization?

► **Frozen designs** mid file
► 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

1. Design for Manufacturing (DFM)**: The designers' consideration of the organization's**
manufacturing capabilities when designing a product. The more general term design for
operations encompasses services as well as manufacturing.

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

And last but not the least work measurements dealt specifically with the length of time needed to
complete a job and was linked with Personnel Planning, Cost Estimation, Budgeting, Scheduling and Worker Compensation.

Identify a quality guru among the following:

► Frank Gilbreth
► Adam Smith
► Henri Gantt
► **Joseph Juran**

Quality Guru
The Quality Gurus are given more respect and recognized as Key Contributors to Quality Management.
Presented below is their contributions in a nut shell, students should learn to recognize these

1. **Walter Shewhart** is also known as "Father of statistical quality control"
2. **W. Edwards Deming** presented 14 points for quality management which focused primarily on
common cause of variation.
3. **Joseph M.** Juran is famous for his concept of "Quality is the fitness for use".
4. **Armand Feigenbaum** said, "Quality is a total field or total function".

5. **Philip B. Crosby** is famous for his philosophy that "Quality is free".
6. **Kaoru Ishikawa-** presented the "fish bone diagram" or "cause effect diagram".
7. **Genichi Taguchi** –robust design for designing products insensitive to change in environment.
Taguchi's contribution was, "Taguchi loss function".

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

Examples of external failure costs include customer returns and exchanges, repairs under **warranties**, product recalls, and lost sales due to a reputation for selling defective products.

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

► Kaisan
► Kaizan
► Kaban
► **Kanban**

http://books.google.com.pk/books?id=s2ugfZEUS4EC&pg=PA460&lpg=PA460&dq=Which+of+the+following+word+is+used+for+the+cards+used+to+control+the+flow+of+production+through+a+factory?&source=bl&ots=C9YBsDj0M1&sig=FaewzWVMPDAljZhBtt9YYQaI7f0&hl=en&ei=

7C1BTdOzM87p4AbXhPEk&sa=X&oi=book_result&ct=result&resnum=3&ved=0CCIQ6AEwAg#v=onepage&q&f=false

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

***Johnson's Rule*: technique for minimizing completion time for a group of jobs to be processed on two machines or at two work centers.**
1. Minimizes total idle time
2. Several conditions must be satisfied

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

► Sensitive maintenance
► **Predictive maintenance**
► Reactive maintenance
► Total productive maintenance

Predictive Maintenance
Predictive maintenance: An attempt to determine when best to perform preventive maintenance
activities Total productive maintenance: JIT approach where workers perform preventive maintenance on the machines they operate

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

Advantages of PM Software
1. Imposes a methodology
2. Provides logical planning structure
3. Enhances team communication
4. Flag constraint violations
5. Automatic report formats

6. Multiple levels of reports
7. Enables what-if scenarios
8. **Generates various chart types**

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.** **Mid file**

► 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**

·***Irregular variations*** **-** caused by unusual circumstances such as severe weathers, earthquakes, **worker strikes,** or major change in product or service. They do not capture or reflect the true behavior of a variable and can distort the overall picture. These should be identified and removed from the data.

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

Disadvantages of Process Layouts
1. In-process inventory costs can be high.
2. Challenging routing and scheduling.
3. Equipment utilization rates are low.
4**. Material handling slow and inefficient.**
5. Complexities often reduce span of supervision.

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

Purposes of the Master Production Schedule:

1 to set due dates for the availability of end items

2 to provide information regarding resources and materials required to support the aggregate plan

3 as an input to Materials Requirements Planning, which will set specific production schedules for parts and components used in end items

http://www.uoguelph.ca/~dsparlin/mrp.htm#MPS

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

► Product structure tree

► Time bucket schedule

► Inventory usage record

► **Production parts plan**

A bill of materials (BOM) is a multi-level document worked out by a company that represents a list of parts or a complete set of physical elements required to manufacture a product. In process industries you can find other names for a BOM such as the *formula*, *recipe*, or *ingredients list*.

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

see p#168

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

http://cbapp.csudh.edu/depts/finance/frezayat/qms322solutions/OMG322chapter_15.htm

Romantic JIT vs. Pragmatic JIT

Romantic JIT: Senior Management see JIT as a quick fix to many problems without

realizing that there are no quick and easy solutions. They use slogans to solve problems such as reduction of excess inventories without having a specific plan of action.

Pragmatic JIT: Senior management directs the organization in the application of techniques that may take years to perfect. A well executed JIT system requires successful implementation of techniques related to inventory, purchasing, machine changeovers, layout design, product simplification, quality training and preventive maintenance.

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

➢ The Incremental Holding cost incurred by using the slower alternative is computed as follows:
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.

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**

Flexibility
Supply chain response time
Upside production flexibility
Agility to obtain competitiveness

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

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

► Events

► **Activities**

► Critical path

► Critical activities

Activities: Project steps that consume or utilize resources (and or time).

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

► Performance objectives
► Cost factor
► Time factor
► **Organization structure**

Project Management has the following important key metrics
➢ Time
➢ Cost
➢ Performance objectives

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

► Balking
► **Customer population**
► Reneging
► Waiting population

1. Population Source
a. Infinite source: customer arrivals are unrestricted
b. Finite source: number of potential customers is limited

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

Chase Demand Strategy:

In this kind of strategy you normal keep workforce according to your demand. your main target will be to modify your operations to meet the demand.

Suppose you have lesser demand you lay-off few worker. Now you got bigger order then its hard to get labor at cheap rate.

Please do not be get confused with Level capacity planning

in Level capacity Planning we use old inventories , overtime by workers and sub contracting etc to meet the demand or orders in case of higher demand.

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

► Reputation and image
► **Payroll taxes**
► Productivity
► Costs

The common consequences of Poor Quality are:

1. Loss of business: Loss in sales, revenues and customer base.
2. Liability: A poor quality product or service comes with the danger of the organization being
taken to court by an unhappy or affected customer.
3. Productivity: Loss in productivity as more time is spend in rectifying the errors or short coming
then producing more.
4. Costs: Increase in costs as a poor quality product is repaired or replaced or made new.

2008 Paper-8

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

Reference: Six business functions of the Value Chain:

- Research and Development
- Design of Products, Services, or Processes
- Production
- Marketing & Sales
- Distribution
- Customer Service

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

4th option is more sure before other three options because competetion is the key point element of the Operation Strategy.

http://www.uoguelph.ca/~dsparlin/strategy.htm

page#17 emphasis on competencies
http://books.google.com.pk/books?id=W-0IOqX0Kc8C&pg=PA173&dq=essential+elements+of+operations+strategy&hl=en&ei=kJTmTIHZGIG44Aavr-34Ag&sa=X&oi=book_result&ct=result&resnum=4&ved=0CDQQ6AEwAw#v=onepage&q=competencies&f=false

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
Reference

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

Reference: Capacity alternatives are often evaluated with the aid of certain financial analyses. Operations manager along with managerial accountant often work to calculate what cash flow or present value in terms of rupees is available for the organization to proceed with a capacity alternative decision. It is important to understand what cash flow and present values are.

Which method of forecasting is most widely used?
Regression analysis
Adaptive forecasting
Weighted moving average
Exponential smoothing
Reference

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

Randomness
Non serious attitude
Non availability of data
Un qualified personnel

Ref: Forecasts rarely perfect because of RANDOMNESS (having no specific pattern). Allowances should be made for inaccuracies.

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

Ref:Factor Rating: Decision based on quantitative and qualitative inputs (page 98)

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

Explanation: The difference between what a customer hears about a company's service and what is actually delivered is represented by gap 4
This gap can lead to dangerously negative customer perceptions

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

Explanation: Total Quality Management is a philosophy that involves each and every individual in an organization in a continual effort to improve quality and achieve customer satisfaction.

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

Ref: **Continuous Improvement:** Philosophy that seeks to make never-ending improvements to the process of **converting inputs into outputs. The Japanese manufacturer as well as service providers have longed used** this concept. Kaizen is the Japanese word for continuous improvement.

(page 112)

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

Explanation: Appraisal Costs are the Costs of activities designed to ensure quality or uncover defects.

Which of the following is an example of prevention cost?

Re-work cost
Warranty cost
Testing cost
Monitoring cost
Ref: Prevention Costs include all TQM training, TQM planning, customer assessment, process control, and quality improvement costs to prevent defects from occurring.

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

http://www.health.vic.gov.au/managementinnovation/resources/what.htm

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
Explanation: Tolerances or specifications is the range of acceptable values established by engineering design or customer requirements

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
Total cost= Number of units *carrying cost
= 800*4
= 3200

MPS stands for which of the following?

Material Production Schedule
Master Planning Schedule
Material Planning Schedule
Master Production Schedule

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

Rationale: The number of orders is D/Q and the annual setup or ordering cost is equal to the number of orders per year times the cost per run (D/Q)S.

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

Ref: If usage and production (delivery) rates are equal, then there is no buildup of inventory.

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
It determines an appropriate master production schedule

Ref : Material requirements planning (MRP): Computer-based information system that translates master
schedule requirements for end items into time-phased requirements for subassemblies, components, and
raw materials. **(page 156)**

Capacity requirements planning determines _____ range capacity requirements

Short
Intermediate
Long
Both short and long

Ref : Capacity requirements planning: The process of determining short-range capacity requirements. (page 161)

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

Increasing competitive pressures
Decreasing globalization
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

2008 Paper-9

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?

Operations Managers job responsibility includes
Forecasting, Capacity planning, Scheduling Inventory Management, Quality Assurance and Control, Motivating employees, deciding where to locate facilities. It is not related to OM, it relates to marketing manager.

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

Reference: Quality based strategies
focuses on maintaining or improving the quality of an organization's products or services Quality at the source.

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

Disadvantages of Process Layouts
1. In-process inventory costs can be high.
2. Challenging routing and scheduling.
3. Equipment utilization rates are low.
4. **Material handling slow and inefficient.**
5. Complexities often reduce span of supervision.

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
Solution: Cycle Time = OT/D
= 9 /300
= 0.03

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

Reference: Of the different types of product, process, fixed and hybrid types of configurations

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

If the goal is prediction, or forecasting, linear regression can be used to fit a predictive model to an observed data set of y and X values. After developing such a model, if an additional value of X is then given without its accompanying value of y, the fitted model

can be used to make a prediction of the value of y.

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

Reference: FDA, OSHA, CRS. There are legal issues in which even the CEO can be implicated if there are violations with respect to pollution which is environmental issue.

OSHA stands for which one of the following?

Occupational stock hygiene administration
Occupational safety hygiene administration
Occupational safety hygiene agency
Occupational science hygiene administration

Reference: OSHA refers to Occupational Safety 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
http://books.google.com.pk/books?id=kNRkTmMCXDsC&pg=PA194&lpg=PA194&dq=advantages+of+specialization+to+management&source=bl&ots=mpa6zs7BT6&sig=6BMseIWNywQEVkPbyCb4WXFhO5w&hl=en&ei=yEXtTPSkH8GqccCY8LgP&sa=X&oi=book_result&ct=result&resnum=2&ved=0CBsQ6AEwAQ#v=onepage&q=advantages%20of%20specialization%20to%20management&f=false

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

Reference: A *service recovery* is satisfying a previously dissatisfied customer and making them a loyal 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

Reference:
1. *Reliability*: Perform promised service dependably and accurately.
2. *Responsiveness*: Willingness to help customers promptly.
3. *Assurance*: Ability to convey trust and confidence.
4. *Tangibles*: Physical facilities and facilitating goods.
5. *Empathy*: Ability to be approachable.

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

Contact personnel
Finance personnel
Operational personnel
Research personnel

Explanation: Quality of delivery must be perfected during the interaction with the customer. The employees that are responsible for these actions are referred to as contact personnel

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

America

China

Spain

Japan

Reference: Poka-Yoke: Poka Yoke (pronounced POH-kah YOH-kay) is the Japanese word for mistake proof.
Poka yoke is a Japanese term that means mistake-proofing it helps an equipment operator avoid mistakes. Its purpose is to eliminate product defects by preventing,

correcting, or drawing attention to human errors as they occur.

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

Stockholding cost
Distribution cost
Marketing cost
Failure cost

Explanation: Failure Costs - costs incurred by defective parts/products or faulty services. Experts are of the opinion that on average an organization loses 20 to 30% of its revenue because of poor quality or costs associated with the failure of the product or service. Failure costs are of two types internal and external:

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

Reference: Process mapping consists mainly of collecting information about the process, identifying the process for each step and determining the inputs and outputs.

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)
Lot Tolerance Percent Defective (LTPD)
Average Outgoing Quality (AOQ)
Average Outgoing Quality Limit (AOQL)

Reference: Lot tolerance percent defective (LTPD): the upper limit on the percentage of defects that a consumer is willing to accept

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

Single
Double
Multiple
None of the given options

Reference:
Single Sampling Characteristics

One random is drawn from each lot.
Every item in the sample is examined
Each item after examination is classified good or defective.
If the sample contains more than a specified number of defectives,
rejected.

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

Random
Single
Double
Multiple

Reference: Where inspection costs are higher than costs of obtaining the sample, multiple samples are carried to ensure that a good or bad result can help terminate the sample testing thus ensuring savings in inspection cost.

Identify the time span covered by the aggregate planning.

3-7 months
2-10 months
2-12 months
4-8 months

Reference: *Aggregate planning*: Intermediate-range capacity planning, usually covering 2 to 12 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

Reference: Setup cost: Expenses incurred in setting up a machine, work center, or assembly line, to switch from one production job to the next.

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

Reference: Shortage costs: Costs when demand exceeds supply. Shortage cost is also known as stock out cost. So, both options are correct.

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

the basic EOQ Model minimizes the sum of carrying or holding costs as well as setup or ordering cost.

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

Reference: Group C consists of Low Rupee (Monetary) Value, Group C items are not reviewed and order is placed directly**.**

All of the following are common types of inventories Except:

Raw material
Work in transit
Work in progress
Scrapped work

Reference:
The five common types of inventories are:
1. Raw materials & purchased parts.
2. Partially completed goods called *work in progress.*
3. Finished-goods inventories:
a. (*manufacturing firms*) or
b. merchandise, (*retail stores*)
4. Goods-in-transit to warehouses or customers.
5. Replacement parts, tools, & supplies.

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

Reference: Net requirements
a. Actual amount needed in each time period.

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

Reference: Planned-order releases
a. Planned amount to order in each time period.

MRP secondary reports include all of the following EXCEPT:

Performance control reports
Planning reports
Exception reports
Planned order reports

Reference:
MRP Secondary Report
1. Performance-control reports
2. Planning reports
3. Exception reports

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

Supply Chain: A sequence of activities and organizations involved in producing and

delivering a good or service.

Reference:
Social Trends
Aging of the population
Increase in Life expectancy
Two-income families, both the males and females of the family are working
Growth in number of single people.

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

Standard time
Job time
Setup time
Slack time

REFRENCE: *Job time*: Time needed for setup and processing of a job.

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

Reference: Limitations of PERT
1. Important activities may be omitted
2. Precedence relationships may not be correct
3. Estimates may include a fudge factor
4. May focus solely on critical path

Which of the following refers to business scope creep?

Customer retention
Customer pleasing
Customer expectation
Customer needs

Reference: Business Scope creep (often called customer pleasing) is the tendency of the business managers to over do the customer relationship with their customers

2008 Paper-10

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

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

Financial reporting
Inventory management
Scheduling tasks
Supply chain management

Operations Managers job responsibility includes but is not limited to:
Forecasting
Capacity planning
Scheduling
Inventory Management
Quality Assurance and Control
Motivating employees
Deciding where to locate facilities

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

Maximin determines the worst payoff for each alternative; the operations manager chooses the best
worst alternative. Meaning the least (best) of the worst.
It is a pessimistic approach.

Ensures a guaranteed minimum.

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
Delphi method
Trend adjusted forecast
Naïve forecast

The simple moving average model assumes an average is a good estimator of future behavior

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 behaviour in terms of capacity requirements?

Introduction
Growth
Maturity
Decline

MATURITY PHASE: When the product reaches maturity stage its demand can only increase if design is refined or changed and some differentiation feature is added this may increase the demand but when it goes down

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

Process selection
Process reengineering
Process redesign
Process design
Process Selection refers to the way an organization chooses to produce its good or services. It takes into account selection of technology, capacity planning, layout of facilities, and design of work systems. Process selection is a natural extension after

selection of new products and services.

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
Fixed-position
Storage

The common Basic Layout Types are
1. Product/Service layout. A layout that uses standardized processing operations to achieve smooth, rapid, high-volume flow
2. Process layout. A Layout that can handle varied processing requirements
3. Fixed Position layout. A Layout in which the product or project remains stationary, and workers, materials, and equipment are moved as needed
4. Hybrid/Combination. A Layout that makes use of the combination of Product, Process or Fixed Position Layout.

Which one of the following is a curve showing failure rate over time?
Cost curve
Bath tub curve
Fish bone diagram
Reliability curve
On the Y axis we represent the Failure rate and on the X axis we represent the Time. A careful look at the graph would help us to identify the three phases
Phase I near the origin is called Infant Mortality.
Phase II in the middle refers to few random failures.
Phase III at the far end from the origin represent failures due to wear out.

MTBF refers to which of the following?
Measure time before failure
Mean time between failures
Mean time before failure
Measure test before failure

The fraction of time a piece of equipment is expected to be available for operation.
Mathematically, If we represent mean time between failures by MTBF and mean time to repair by MTR then Availability = (MTBF)/(MTBF + MTR)

Which one of the following refers to a team having representatives from different Functional area of the organization?

Traditional work group
Self-directed team
Cross-functional team

Self motivated team

The quality guru Kaoru Ishikawa is famous for:

Statistical quality control
Fishbone diagram
Zero defects
Cost of quality

The Quality Gurus are given more respect and recognized as Key Contributors to Quality Management. Presented below is their contributions in a nut shell, students should learn to recognize these
3. Joseph M. Juran is famous for his concept of "Quality is the fitness for use".

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

Armand Feigenbaum
G.S Radford
W. Shewhart
David Gravin

Ref: Armand Feigenbaum said, "Quality is a total field or total function".

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

Mistake proof
Low quality
Defective
Expensive

Poka-Yoke: Poka Yoke (pronounced POH-kah YOH-kay) is the Japanese word for mistake proof. These devices/strategies/mechanisms/methods are used either to prevent the special causes that result in defects, or to inexpensively inspect each item that is produced to determine whether it is acceptable or defective.

Suppose customers hold negative perception about service provided by XYZ organization According to
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 is NOT included in Juran's classification of costs of quality?

Failure cost
Prevention cost
Appraisal cost
Management cost

2. Appraisal Costs are the Costs of activities designed to ensure quality or uncover defects

Problem solving is an axample of which of the following?

Internal failure cost
External failure cost
Prevention cost
Appraisal cost

Internal Failure Costs are the Costs incurred to fix problems that are detected before the product/service is delivered to the customer.

Inspection equipment is an example of which of the following?
Internal failure cost
External failure cost
Prevention cost
Appraisal cost
http://www.accountingformanagement.com/quality_costs.htm

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

Internal failure cost
External failure cost
Prevention cost
Appraisal cost

Ref: Prevention Costs include all TQM training, TQM planning, customer assessment, process control, and quality improvement costs to prevent defects from occurring.

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

Ref: ISO 9000: Is a set of international standards on quality management and quality assurance, critical to international business.

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

Control Charts for Variables
Mean control charts
Used to monitor the central tendency of a process.
X bar charts
Range control charts
Used to monitor the process dispersion
R charts

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

Control Charts for Variables
Mean control charts
Used to monitor the central tendency of a process.

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

Explanation: With Rough cut capacity planning we can check capacities of production and warehouses constraints exist. This means checking capacities of production and warehouse facilities, labor and vendors to ensure that no gross deficiencies exist that will render master schedule unworkable.

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

Ordering costs: Cost of ordering and receiving inventory. These are the actual costs that vary with the actual placement of the order

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

1. Only one product is involved.
2. Annual demand requirements known.
3. Demand is even throughout the year.
4. Lead time does not vary.
5. Each order is received in a single delivery.
6. There are no quantity discounts.

Which of the following formula is correct for Kanban system?

DX (1 T)=N
C
DC(1 X)=N
T
DT(1 X)=N
C
DT(1 C)=N
X

We can mathematically construct the Kanban Formula, If we designate the following alphabets
N = Total number of containers (Or Kanban Cards)

D = Planned usage rate of using work center
T = Average waiting time for replenishment of parts
plus average production time for a
container of parts
X = Policy variable set by management
- possible inefficiency in the system often called Alpha
C = Capacity of a standard container

$$N = \frac{DT(1+X)}{C}$$

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

Ref: Assignment Model is a type of linear programming model for optimal assignment of tasks and resources.

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

Queuing theory
Waiting theory
Scheduling theory
Sequencing theory

Explanation: Goal of queuing analysis is to minimize the sum of two costs Customer waiting costs and Service capacity costs.

2008 Paper-11

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

http://www.referenceforbusiness.com/management/Sc-Str/Strategy-Formulation.html

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

Job Shop

Batch processing

Assembly line

Continuous processing

Continuous – Often, a physical system is represented through variables that are smooth and uninterrupted in time. The control of the water temperature in a heating jacket, for example, is an example of continuous process control. Some important continuous processes are the production of fuels, chemicals and plastics.

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

Reference

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

Reference

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 refers to a variation resulted from an identifiable cause?

Random variation

Regular variation

Irregular variation

Assignable variation

•*Assignable variation* : A variation whose source can be identified

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

Ref: The organization needs to consider two factors before choosing a strategy
1. Costs
2. Company/Corporate Policy

Which of the following mathimetical expressions can be employed to compute the 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:

Total cost of inventory = per unit carrying cost * Number of units hold

= 3*600

= 1800

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. 160

Explanation:

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

= 4 *400

= 160

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

http://books.google.com.pk/books?id=T1SLkJ5AH90C&pg=PA10&lpg=PA10&dq=an+advantage+of+perpetual+inventory+system+is+Fixed+order+quantity&source=bl&ots=qet2i9V5Jc&sig=w9jaO7iVIpWmdFahALnYiwIbk4c&hl=en&ei=7Io5TO64GsKwrAfa3_G2CA&sa=X&oi=book_result&ct=result&resnum=5&ved=0CCMQ6AEwBA#v=onepage&q=an%20advantage%20of%20perpetual%20inventory%20system%20is%20Fixed%20order%20quantity&f=false

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

Group A

Group B

Group C

Group X

Ref: Group A consists of High Rupee (Monetary) Value, which account for a small portion about 10% of the total inventory usage.

EPP stands for which of the following?

Economic Part Period

Economic Production Period

Equal Production Period

Equal Part Period

Economic Part Period (EPP) is the ratio of setup costs to the cost of hold a unit for one 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

Reference : Manufacturing Resource Planning (MRP II) is defined by APICS as a method for the effective planning of all resources of a manufacturing company. Ideally, it addresses operational planning in units, financial planning in dollars, and has a simulation capability to answer "what-if" questions and extension of closed-loop MRP.

EDI stands for which of the following?

Enterprise Data Interchange

Economic Data Interchange

Equal Data Interchange

Electronic Data Interchange

EDI (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

Simulation: a descriptive technique that enables a decision maker to evaluate the behavior of a model under various conditions.