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MGT613 15 Midterm Papers with Ref...
Solved By
Honey G & Maha Shah..

Paper No. 01

FINAL TERM EXAMINATION

Fall 2008

MGT613- Production / Operations Management (Session - 1)

Solved By Honey G <abdulhaiee2004@gmail.com>

Question No: 1 VU-ASKARI - Please choose one

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

- ▶ Capital
- ▶ Energy
- ▶ Labour
- ▶ Machine

Ref: Capital Productivity

Units of output per Rs. input

Dollar value of output per Rs. Input

(Handouts Page No. 19)

Question No: 2 VU-ASKARI - Please choose one

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

Ref: Service Organizations are no exceptions and work diligently to identify, nurture and protect their distinctive competencies. Service Organizations are busy carrying out detailed environmental scanning and also periodically carryout SWOT Analysis (Handouts Page No. 15)

Question No: 3 VU-ASKARI - Please choose one

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.

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- It consists mainly of analyzing objective and hard data and resist human factor, opinion.

Ref: Quantitative research focuses on numbers or quantities. Quantitative studies have results that are based on numeric analysis and statistics. Often, these studies have many participants. It is not unusual for there to be over a thousand people in a quantitative research study. It is ideal to have a large number of participants because this gives analysis more statistical power.

http://www.associatedcontent.com/article/1622269/what_is_the_difference_between_qualitative.html

Question No: 4 VU-ASKARI - Please choose one

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

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

Ref: 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 (Handouts Page No. 34)

Question No: 5 VU-ASKARI - Please choose one

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

Ref:

Alternatives	Regrets (in Rupees)	
	Possible Future Demand Worst	
	Low	Moderate
Small Facility	$18000 - 10000 = 8000$	$20000 - 8000 = 12000$
Medium	$18000 - 12000 = 6000$	$20000 - 20000 = 0$
Large	$18000 - 18000 = 0$	$20000 - 15000 = 5000$

Now choose the Highest Value from Small, Medium and Large Row. Which are Small = 12000

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Medium = 6000

Large = 5000

Now choose the minimum amount from the above figures which is Rs. 5000

Question No: 6 VU-ASKARI - Please choose one

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

▶ $Q = VC / (R - VC)$

▶ $Q = FC / (R - VC)$

▶ $Q = VC / (R + FC)$

▶ $Q = FC / (R + VC)$

Ref: So QBEP = $FC / R - VC$ (Handouts Page No. 74)

Question No: 7 VU-ASKARI - Please choose one

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

▶ Job Shop

▶ Batch processing

▶ Assembly line

▶ Continuous processing

Ref: http://highered.mcgraw-hill.com/sites/0073403296/student_view0/chapter7/multiple_choice_quiz.html (See the Question No. 02)

Question No: 8 VU-ASKARI - Please choose one

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

Question No: 9 VU-ASKARI - Please choose one

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

▶ Place

▶ **Demand**

▶ Supply

▶ Price

Ref: Life Cycle Strategies are based on Demand http://www.hammertap.com/nl_0050/

Question No: 10 VU-ASKARI - Please choose one

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

▶ Individual human motions that are used in a job task

▶ Determining the length of time it will take to undertake a particular task

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- ▶ Determining the amount of time a worker spends on various activities
- ▶ Specifying the content and methods to perform a job

Ref:

http://books.google.com.pk/books?id=B5j4D0U6QA0C&pg=PA127&lpg=PA127&dq=Determining+the+amount+of+time+a+worker+spends+on+various+activities&source=bl&ots=geHI2-3mR0&sig=eqWNikcpWGAHCSZtR7taWats1Dc&hl=en&ei=tvb-S8S2DpSh_Abt1pimCw&sa=X&oi=book_result&ct=result&resnum=10&ved=0CEQQ6AEwCQ#v=onepage&q&f=false (See the Activity Sampling Second Paragraph)

Question No: 11 VU-ASKARI - Please choose one

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 behaviour
- ▶ Forecasting errors among items in a group have a cancelling effect
- ▶ A group behaviour is relatively less uncertain

Ref: Forecasts more accurate for groups vs. individuals naturally because forecasting errors in a group tend to cancel out forecasting errors for individuals. (Handouts page No. 33)

Question No: 12 VU-ASKARI - Please choose one

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 (Handouts Page No. 96)

Question No: 13 VU-ASKARI - Please choose one

Who emphasized quality in terms of inspection and gauging?

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

Ref: Frederick Winslow Taylor the father of scientific management brought back the concept of quality by incorporating product inspection as well as focusing on the importance of manufacturing management. (Handouts Page No. 101)

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Question No: 14 VU-ASKARI - Please choose one

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

- ▶ **Mistake proof**
- ▶ Low quality
- ▶ Defective
- ▶ Expensive

Ref: Poka-Yoke: Poka Yoke (pronounced POH-kah YOH-kay) is the Japanese word for mistake proof. In services, a simple mistake can have dire consequences, think of a hair dresser or stylist giving you a wrong haircut. His mistake cannot be rectified because service again is an entity which is based on transaction between the service provider and service receiver. (Handouts Page No. 107)

Question No: 15 VU-ASKARI - Please choose one

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**

Ref: Redesign the process: takes a fresh approach to solve an issue on hand. (Handouts Page No. 116)

Question No: 16 VU-ASKARI - Please choose one

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

Ref: Analyze the process: Ask questions about the process including process flow being logical, any activities or steps being missing or identification of duplication activities (Handouts Page No. 116)

Question No: 17 VU-ASKARI - Please choose one

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

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

Ref: The concept of the PDCA Cycle was first introduced by Walter Shewhart, the leading statistician, who also developed statistical process control in the Bell

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Laboratories in the US during the 1930's. It is often referred to as 'the Shewhart Cycle'. (Handouts Page No. 116)

Question No: 18 VU-ASKARI - Please choose one

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

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

Ref:

http://wps.prenhall.com/bp_levine_statsexcel_5/65/16646/4261523.cw/content/index.html
(See the Question No. 10)

Question No: 19 VU-ASKARI - Please choose one

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

- ▶ Random variation
- ▶ Regular variation
- ▶ Irregular variation
- ▶ **Assignable variation**

Ref: Assignable variation: A variation whose source can be identified (Handouts Page No. 121)

Question No: 20 VU-ASKARI - Please choose one

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)

Ref: Average Outgoing Quality (AOQ): Average of rejected lots and accepted lots (Handouts Page No. 130)

Question No: 21 VU-ASKARI - Please choose one

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

- ▶ Random
- ▶ Single
- ▶ Double
- ▶ **Multiple**

Ref: 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. (Handouts Page No. 128)

Question No: 22 VU-ASKARI - Please choose one

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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 (Handouts Page No. 135)

Question No: 23 VU-ASKARI - Please choose one

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

- ▶ Backorder cost per unit + number of backordered units
- ▶ Backorder cost per unit - number of backordered units
- ▶ Backorder cost per unit ÷ number of backordered units
- ▶ Backorder cost per unit × number of backordered units

Ref: Back Order: Back Order Cost per Unit X Number of Backorder Units (Handouts Page No. 137)

Question No: 24 VU-ASKARI - Please choose one

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

Ref: Total inventory cost = Carrying Cost per Unit X Average Inventory
Total inventory cost = 3 X 600 = 1800 (Handouts Page No. 137)

Question No: 25 VU-ASKARI - Please choose one

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

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

Ref: Back Order = Back Order Cost per Unit X Number of Backorder Units
Back Order = 4 X 400 = 1600

Question No: 26 VU-ASKARI - Please choose one

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

- ▶ Periodic review of inventory
- ▶ Economies in shipping orders

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- ▶ Fixed order quantity
- ▶ Low cost of record keeping

Ref: In a continuous inventory system (also referred to as a *perpetual system* and a fixed-order-quantity system)

<http://www.prenhall.com/divisions/bp/app/russelcd/PROTECT/CHAPTERS/CHAP12/H EAD02.HTM>

Question No: 27 VU-ASKARI - Please choose one

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

Ref: Setup cost is the cost incurred to get equipment ready to process a different batch of goods. Hence, setup cost is regarded as a batch-level cost in activity based costing.

<http://blog.accountingcoach.com/what-is-setup-cost/>

Question No: 28 VU-ASKARI - Please choose one

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

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

Ref: $TC = \text{Carrying costs} + \text{Ordering Costs}$

$TC = Q0/2 (H) + D/Q0 (S)$ (Handouts Page No. 148)

Question No: 29 VU-ASKARI - Please choose one

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

- ▶ Group A
- ▶ Group B
- ▶ Group C
- ▶ Group X

Ref: Group A consists of High Rupee (Monetary) Value, which account for a small portion about 10% of the total inventory usage. (Handouts Page No. 144)

Question No: 30 VU-ASKARI - Please choose one

All of the following are common types of inventories except:

- ▶ Raw material
- ▶ Work in transit
- ▶ Work in progress

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► Scrapped work

Ref: 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. (Handouts Page No. 142)

Question No: 31 VU-ASKARI - Please choose one
EPP stands for which of the following?

► Economic Part Period

- Economic Production Period
- Equal Production Period
- Equal Part Period

Ref: Economic Part Period (EPP) is the ratio of setup costs to the cost of hold a unit for one period. (Handouts Page No. 158)

Question No: 32 VU-ASKARI - Please choose one
ERP stands for which of the following?

► Enterprise Resource Planning

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

Ref: Enterprise resource planning (ERP): often called the rightful next step in an evolution that began with MPR and evolved into MRPII. Integration of financial, manufacturing, and human resources on a single computer system (Handouts Page No. 162)

Question No: 33 VU-ASKARI - Please choose one
JIT stands for which of the following?

► Just In Time

- Just In Test
- Job In Time
- Job Inventory Time

Ref: Just-In-Time (JIT): JIT can be defined as an integrated set of activities designed to achieve high-volume production using minimal inventories (raw materials, work in process, and finished goods). (Handouts Page No. 170)

Question No: 34 VU-ASKARI - Please choose one
Which of the following is widely accepted as an effective planning method of all resources of a manufacturing firm?

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- ▶ Enterprise Resource Planning
- ▶ Material Requirements Planning
- ▶ **Material Requirements Planning II**
- ▶ Master Production Schedule

Ref: 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. (Handouts Page No 162)

Question No: 35 VU-ASKARI - Please choose one
Which of the following formula is correct for Kanban system?

- ▶ $\frac{DX(1+T)}{C} = N$
- ▶ $\frac{DC(1+X)}{T} = N$
- ▶ **$\frac{DT(1+X)}{C} = N$**
- ▶ $\frac{DT(1+C)}{X} = N$

Ref: $N = \frac{DT(1+X)}{C}$ (Handouts Page No. 167)

Question No: 36 VU-ASKARI - Please choose one
EDI stands for which of the following?

- ▶ Enterprise Data Interchange
- ▶ Economic Data Interchange
- ▶ Equal Data Interchange
- ▶ **Electronic Data Interchange**

Ref: EDI (Electronic Data Interchange) (Handouts Page No. 175)

Question No: 37 VU-ASKARI - Please choose one
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)

Ref: Distribution requirements planning (DRP) is a system for inventory management and distribution planning. Extends the concepts of MRPII (Handouts Page No. 175)

Question No: 38 VU-ASKARI - Please choose one
Which of the following refers to an area where a person works with special equipment on a specialized job?

- ▶ Workshop

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- ▶ Work area
- ▶ Workplace
- ▶ Workstation

Ref: Workstation: An area where one person works, usually with special equipment, on a specialized job. (Handouts Page No. 184)

Question No: 39 VU-ASKARI - Please choose one
Which of the following is TRUE about a project activity?

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

Ref: Projects are unique, one-time (temporary) operations designed to accomplish a specific set of objectives in a limited time frame. (Handouts Page No. 192)

Question No: 40 VU-ASKARI - Please choose one
Successful project management includes all of the following factors EXCEPT:

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

Ref: What are the Key Success Factors?

1. Top-down commitment
2. Having a capable project manager
3. Having time to plan
4. Careful tracking and control
5. Good communications (Handouts Page No. 192)

Question No: 41 VU-ASKARI - Please choose one
Network activities are used to determine all of the following EXCEPT:

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

Ref: Used to determine

1. Expected project duration
2. Slack time
3. Critical path (Handouts Page No. 198)

Question No: 42 VU-ASKARI - Please choose one
Which of the following is a descriptive technique that is used by a decision maker to evaluate the behaviour of a model under various conditions?

- ▶ Linear programming

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► **Simulation**

- Critical path method
- Program evaluation and review technique

Ref: Simulation: a descriptive technique that enables a decision maker to evaluate the behaviour of a model under various conditions. (Handouts Page No. 215)

Paper No. 02

FINAL TERM EXAMINATION

Fall 2008

MGT613- Production / Operations Management (Session - 2)

Solved By Honey G <abdulhaiee2004@gmail.com>

Question No: 1 VU-ASKARI - Please choose one

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?

Ref:

http://wps.pearsoned.co.uk/ema_uk_he_slack_opsman_4/17/4471/1144826.cw/index.htm
(See the Question No. 08)

Question No: 2 VU-ASKARI - Please choose one

All of the following are examples of transformation process EXCEPT:

- **Facilitating**
- Labelling
- Cutting
- Packing

Ref: Examples of Transforming process and input in Food Processor:

Inputs

Raw vegetables
Metal sheets
Water
Energy
Labor
Building
Equipment

Process

cleaning
Making cans
Making cans
Cutting
Cooking
Packing
Labeling

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http://docs.google.com/viewer?a=v&q=cache:27Zjwa-o6_kJ:highered.mcgraw-hill.com/sites/dl/free/0070951675/436573/samplech01.pdf+examples+of+the+transformation+process+are+Cutting+%E2%96%BA+Packing+%E2%96%BA+Facilitating+%E2%96%BA+Labeling&hl=en&pid=bl&srcid=ADGEESi98aGPPXv5w0w-VBGRprednU-ENzzYtfDBdUfcf5sT5vBu0th2m1I74tG1Qt4oZOOb-Fa69OEDb-QWocDFhQvspN6W9p8LqyxNvDaLoKOWUVy-rmCYeoSCBOUcIepGwcQPLn7s&sig=AHIEtbQ8kba9NbTRC4loArQHIWN-H50AoQ

Question No: 3 VU-ASKARI - Please choose one

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

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

Ref: Quality based strategies: focuses on maintaining or improving the quality of an organization's products or services. (Handouts Page No. 18)

Question No: 4 VU-ASKARI - Please choose one

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**

Ref: Minimax Regret: Determines the worst regret for each alternative (Handouts Page No. 27)

Question No: 5 VU-ASKARI - Please choose one

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

- ▶ A variety of processing requirements doubted
- ▶ Use of individual incentive system
- ▶ **Minimizing material handling costs**
- ▶ Equipment utilization rate is high

Ref: 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. (Handouts Page No. 82)

Question No: 6 VU-ASKARI - Please choose one

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

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- ▶ 0.03 minutes
- ▶ **1.8 minutes**
- ▶ 2700 minutes
- ▶ 291 minutes

Ref: $CT = \text{Time Cycle} = \text{Operating Time} / \text{Desire Output}$
 $CT = \text{Time Cycle} = 9 * 60 / 300 = \mathbf{1.8 \text{ minutes}}$

Question No: 7 VU-ASKARI - Please choose one

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**

Ref: Hybrid/Combination: A Layout that makes use of the combination of Product, Process or Fixed Position Layout. (Handouts Page No. 80)

Question No: 8 VU-ASKARI - Please choose one

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

Ref: Linear regression is used both for time series forecasting and for casual relationship forecasting. When the dependent variable (usually the vertical axis on the graph) changes as a result of time (plotted on the horizontal axis), it is time series analysis. When the dependent variable changes because of the change in another variable, this is a casual relationship (such as the demand of cold drinks increasing with the temperature).

http://docs.google.com/viewer?a=v&q=cache:QTJvd6__zt8J:nsdl.niscair.res.in/bitstream/123456789/829/1/CHAPTER-6%2BFORECASTING%2BTECHNIQUES-%2BFormatted.pdf+linear+regression+compensates+for+both+trend+and+seasonal+variations+in+demand&hl=en&pid=bl&srcid=ADGEESg3c6cLEJGxFAeYDJmynagPFzwnMllzbF5wpI0nxIgJ8KnR5-4fdDQIvMBxXbViOzr6hLd0Xq3ud6w8Ed-BwMdhALCi9obVbWP0pS7MXJEau43xq_TfOulMECZdpwnV3g0TLOyY&sig=AHIEtbQweGQ9quetmEqfenwFdiUUE2eZeg

Question No: 9 VU-ASKARI - Please choose one

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

Ref: Environmental. Operations Manager should also work with in the same

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Environmental laws as his organization. EPA is active in all countries including Pakistan and even a CEO can be jailed if there is a failure to comply with the Environment laws. (HANDOUTS PAGE NO. 47)

Question No: 10 VU-ASKARI - Please choose one

OSHA stands for which one of the following?

- ▶ Occupational stock hygiene administration
- ▶ Occupational safety hygiene administration
- ▶ Occupational safety hygiene agency
- ▶ Occupational science hygiene administration

Ref: OSHA refers to Occupational Safety Hygiene Administration (Handouts Page No. 46)

Question No: 11 VU-ASKARI - Please choose one

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

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

Ref: Life Cycle Strategies are based on Demand. http://www.hammertap.com/nl_0050/

Question No: 12 VU-ASKARI - Please choose one

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

Ref: http://highered.mcgraw-hill.com/sites/0072402857/student_view0/chapter10/multiple_choice_quiz.html (See the Question No. 05)

Question No: 13 VU-ASKARI - Please choose one

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

Ref: A service recovery is satisfying a previously dissatisfied customer and making them a loyal customer. (Handouts Page No. 105)

Question No: 14 VU-ASKARI - Please choose one

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

Note: Solve these papers by yourself

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(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

Ref: Often organizations use a performance measure matrix using the same service dimensions and they often call it RATE based on the 5 dimensions described below.

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. (Handouts Page No. 105)

Question No: 15 VU-ASKARI - Please choose one

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

▶ Contact personnel

▶ Finance personnel

▶ Operational personnel

▶ Research personnel

Ref: 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
(Handouts Page No. 107)

Question No: 16 VU-ASKARI - Please choose one

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

▶ America

▶ China

▶ Spain

▶ Japan

Ref: Poka-Yoke: Poka Yoke (pronounced POH-kah YOH-kay) is the Japanese word for mistake proof. In services, a simple mistake can have dire consequences, think of a hair dresser or stylist giving you a wrong haircut. His mistake cannot be rectified because service again is an entity which is based on transaction between the service provider and service receiver. (Handouts Page No. 107)

Question No: 17 VU-ASKARI - Please choose one

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

▶ Kaizen

▶ Poka-yoke

▶ Six sigma

▶ Inspection

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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. (Handouts Page No. 112)

Question No: 18 VU-ASKARI - Please choose one

Problem solving is an example of which of the following?

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

Ref:

http://www.accountingformanagement.com/quality_costs.htm

Question No: 19 VU-ASKARI - Please choose one

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

- ▶ Stockholding cost
- ▶ Distribution cost
- ▶ Marketing cost
- ▶ **Failure cost**

Ref: The Cost of Quality (COQ) is the total cost to produce the product or service (deliverable) of the project based on the quality standards defined for the project. These costs include the corrective works done to meet the quality standards. Mainly three types of costs are associated with the cost of quality.

1. Prevention Cost
2. Appraisal Cost
3. Failure Cost
 - a. Internal Failure cost
 - b. External Failure cost <http://pmpractitioner.com/wp/?tag=external-failure-cost>

Question No: 20 VU-ASKARI - Please choose one

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

Ref: Process mapping consists mainly of collecting information about the process, identifying the process for each step and determining the inputs and outputs. (Handouts Page No. 116)

Question No: 21 VU-ASKARI - Please choose one

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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)

Ref: Lot Tolerance Percent Defective (LTPD): Upper limit on the percentage of defects a customer is willing to accept (a property of the consumer) (Handouts Page No. 130)

Question No: 22 VU-ASKARI - Please choose one

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

- ▶ Single
- ▶ Double
- ▶ Multiple
- ▶ None of the given options

Ref: 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 say c, then that lot is rejected (Handouts Page No. 128)

Question No: 23 VU-ASKARI - Please choose one

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

- ▶ Random
- ▶ Single
- ▶ Double
- ▶ Multiple

Ref: 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. (Handouts Page No. 128)

Question No: 24 VU-ASKARI - Please choose one

Identify the time span covered by the aggregate planning.

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

Ref: Aggregate planning: Intermediate-range capacity planning, usually covering 2 to 12 months. (Handouts Page No. 133)

Question No: 25 VU-ASKARI - Please choose one

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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**

Ref: Setup cost is the cost incurred to get equipment ready to process a different batch of goods. Hence, setup cost is regarded as a batch-level cost in activity based costing.
<http://blog.accountingcoach.com/what-is-setup-cost/>

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**

Ref: Shortage costs: Costs when demand exceeds supply (Handouts Page No. 144)

Question No: 27 VU-ASKARI - Please choose one

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 of quantity

Ref: Economies of Scale mean the increase in efficiency of production as the number of goods being produced increases. Typically, a company that achieves economies of scale lowers the average cost per unit through increased production since fixed costs are shared over an increased number of goods.

http://wiki.ubc.ca/Course:MATH110/003/Teams/Geneve/Homework_11

Question No: 28 VU-ASKARI - Please choose one

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

Ref: Group C consists of Low Rupee (Monetary) Value, which account for a large portion about 70% of the total inventory usage. (Handouts Page No. 144)

Question No: 29 VU-ASKARI - Please choose one

All of the following are common types of inventories except:

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

Ref: 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. (Handouts Page No. 142)

Question No: 30 VU-ASKARI - Please choose one

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 requirement planning
- ▶ Product structure tree
- ▶ Inventory status record

Ref: Product structure tree: Visual depiction of the requirements in a bill of materials, where all components are listed by levels. (Handouts Page No. 157)

Question No: 31 VU-ASKARI - Please choose one

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

Ref: Net requirements: Actual amount needed in each time period. (Handouts Page No. 160)

Question No: 32 VU-ASKARI - Please choose one

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

Ref: Planned-order releases: Planned amount to order in each time period. (Handouts Page No. 160)

Question No: 33 VU-ASKARI - Please choose one

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MRP secondary reports include all of the following EXCEPT:

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

Ref: MRP Secondary Report

1. Performance-control reports
2. Planning reports
3. Exception reports (Handouts Page No. 158)

Question No: 34 VU-ASKARI - Please choose one

ERP stands for which of the following?

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

Ref: Enterprise resource planning (ERP): often called the rightful next step in an evolution that began with MPR and evolved into MRPII. Integration of financial, manufacturing, and human resources on a single computer system (Handouts Page No. 162)

Question No: 35 VU-ASKARI - Please choose one

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

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

Ref: JIT applies primarily to *repetitive manufacturing* processes in which the same products and components are produced over and over again. The general idea is to establish flow processes (even when the facility uses a jobbing or batch process layout) by linking work centers so that there is an even, balanced flow of materials throughout the entire production process, similar to that found in an assembly line.
<http://personal.ashland.edu/~rjacobs/m503jit.html>

Question No: 36 VU-ASKARI - Please choose one

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

- ▶ Increased competition
- ▶ Reduced number of suppliers
- ▶ Technology improvement
- ▶ **Aging of the population**

Ref: Supply Chain: A sequence of activities and organizations involved in producing and delivering a good or service. Suppliers' Suppliers, Direct, Suppliers Producer,

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Distributor, Final Consumer are involved in Supply Chain. (Handouts Page No. 08)
Whereas aging of population have no concern with supply chain and direct links with the stages in economic development.

Question No: 37 VU-ASKARI - Please choose one

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: After completing the introductory discussion on Scheduling, the students would be able to understand what scheduling is and how important it is to high volume and intermediate volume systems (Handouts Page No. 180)

Question No: 38 VU-ASKARI - Please choose one

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

- ▶ Standard time
- ▶ Job time
- ▶ Setup time
- ▶ Slack time

Ref: Job time: Time needed for setup and processing of a job. (Handouts Page No. 185)

Question No: 39 VU-ASKARI - Please choose one

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

Ref: <http://books.google.com.pk/books?id=D0P0WX-nz6YC&pg=PA237&dq=Project+control+monitoring+objectives+of+cost#v=onepage&q=Project%20control%20monitoring%20objectives%20of%20cost&f=false>

Question No: 40 VU-ASKARI - Please choose one

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: a project-based organization incorporates the meaning of an organizational structure specially formed for a temporary period to enable a project-based organization execute a specific task

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http://webcache.googleusercontent.com/search?q=cache:EMAMM4phT8cJ:www.worldscibooks.com/etextbook/p469/p469_chap01.pdf+organizational+structure+based+on+teams+formed+specifically+for+projects&hl=en

Question No: 41 VU-ASKARI - Please choose one

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

Ref: 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 (Handouts Page No. 196)

Question No: 42 VU-ASKARI - Please choose one

Which of the following refers to business scope creep?

- ▶ Customer retention
- ▶ **Customer pleasing**
- ▶ Customer expectation
- ▶ Customer needs

Ref: Business Scope creep (often called customer pleasing) is the tendency of the business managers to over do the customer relationship with their customers. (Handouts Page No. 196)

Paper No. 03

FINAL TERM EXAMINATION

Fall 2008

MGT613- Production / Operations Management (Session - 3)

Solved By Honey G <abdulhaice2004@gmail.com>

Question No: 1 VU-ASKARI - Please choose one

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

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- ▶ 60.66 units per hr

Ref: Productivity is a measure of the effective use of resources, usually expressed as the ratio of output to input. Also called Efficiency at times

Productivity = Units Produced / Hours

Productivity = 50 / 3 = 16.66 per hour

Question No: 2 VU-ASKARI - Please choose one

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

Ref:

<http://books.google.com.pk/books?id=f5p17Sz5NLMC&pg=PA379&lpg=PA379&dq=of+research+and+development#v=onepage&q=of%20research%20and%20development&f=false>

Question No: 3 VU-ASKARI - Please choose one

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

Question No: 4 VU-ASKARI - Please choose one

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

Ref: Delphi method: Managers and staff complete a series of questionnaires, each developed from the previous one, to achieve a consensus forecast. (**Handouts Page No35**)

Question No: 5 VU-ASKARI - Please choose one

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

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- ▶ The forecast will not be reliable

Ref: If, over several periods, a time series shows a change in the average value which corresponds to the trend model, the forecast values always lag behind the actual values by one or several periods in the first-order exponential smoothing procedure.
http://help.sap.com/saphelp_45b/helpdata/en/a5/6320e843a211d189410000e829fbbd/content.htm

Question No: 6 VU-ASKARI - Please choose one

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

Ref: For example:

Actual Output = 36 units / day

Design Capacity = 50 units / day

Utilization = $36/50 * 100 = 72\%$ (Handouts Page No. 66)

Question No: 7 VU-ASKARI - Please choose one

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

Ref: 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. (Handouts Page No. 76)

Question No: 8 VU-ASKARI - Please choose one

Which method of forecasting is most widely used?

- ▶ Regression analysis
- ▶ Adaptive forecasting
- ▶ Weighted moving average
- ▶ Exponential smoothing

Ref: Exponential smoothing is a widely method used of forecasting based on the time series itself. Unlike regression models, exponential smoothing does not imposed any deterministic model to fit the series other than what is inherent in the time series itself.
<http://home.ubalt.edu/ntsbarsh/stat-data/forecast.htm>

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Question No: 9 VU-ASKARI - Please choose one

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

- ▶ Cost curve
- ▶ **Bath tub curve**
- ▶ Fish bone diagram
- ▶ Reliability curve

Ref: The figure above shows a bathtub shape and thus rightly is referred to as the Bath tub curve. On the Y axis we represent the Failure rate and on the X axis we represent the Time. (Handouts Page No. 60)

Question No: 10 VU-ASKARI - Please choose one

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

Ref: 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. (Handouts Page No. 93)

Question No: 11 VU-ASKARI - Please choose one

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. (Handouts Page No. 33)

Question No: 12 VU-ASKARI - Please choose one

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 enables decision makers to incorporate their personal opinions and quantitative information in the decision process.

<http://docs.google.com/viewer?a=v&q=cache:hle5jRN1lyUJ:farfromneutral.com/kaizen/wp->

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+incorporate+their+personal+opinions+and+quantitative+information&hl=en&pid=bl&s
rcid=ADGEESH4_F-
ZX_uWV4qLQb5LaqEt_hOyLPwunPeMA0DqFcHqiMAkZG5tmP74ZKXG2hqBvICBP
L8NehIKvFrgCCM5CtE1-
Q1Y8WVDtcLK_Zr8sWybaKr67vdl4ZTIj5rdMy4CyfGqEiYl&sig=AHIEtbR8oCpDNO
fTQM0UVhdYpJgMo34SgQ

Question No: 13 VU-ASKARI - Please choose one

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

Ref: Gap 4: Differences between service delivery and external communication with customer

- Customers are influenced by what they hear and see about a company's service
- Word-of-mouth publicity and advertising are main outlets which customers open their opinions to
- 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 (Handouts Page No. 107)

Question No: 14 VU-ASKARI - Please choose one

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

Ref: TQM is not called philosophy for nothing. It is that common viewpoint as well as attitude shared by the whole organization that helps the organization achieves its prime objective of increase in revenue as well as a continuous relationship with the customer, by providing a quality based service which fulfils the customer's needs and requirements. (Handouts Page No. 111)

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Question No: 15 VU-ASKARI - Please choose one

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: Although continuous improvement involves making incremental changes that may not be highly visible in the short term, they can lead to significant contributions in the long term. Organizational performance can improve from knowledge gained through experience. <http://www.enotes.com/management-encyclopedia/continuous-improvement>

Question No: 16 (Marks: 1) - Please choose one

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

- ▶ Failure cost
- ▶ Prevention cost
- ▶ Appraisal cost
- ▶ Marketing cost

Ref: Failure Costs - costs incurred by defective parts/products or faulty services. (Handouts Page No. 112)

Question No: 17 VU-ASKARI - Please choose one

Which of the following is an example of appraisal cost?

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

Ref: Appraisal Costs are quality cost that determines the quality of a product. These costs are normally associated with inspection. This includes inspection on receipt, inspection at the source, or by surveillance:

Examples include:

- Incoming inspection and test
- In-process inspection and test
- In-process evaluation of conformance to requirements.
- Final inspection and test <http://www.bexcellence.org/Appraisal-Costs.html>

Question No: 18 VU-ASKARI - Please choose one

Which of the following is an example of prevention cost?

- ▶ Re-work cost
- ▶ Warranty cost
- ▶ Testing cost

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► **Monitoring cost**

Ref: http://books.google.com/books?id=10eIDgRH3EgC&pg=PA499&lpg=PA499&dq=example+of+prevention+cost&source=bl&ots=KLOL50-Xsp&sig=e8ncXJxxkMG1oi8dzACxUqn9Q3o&hl=en&ei=GL7_TYecJYaXhQeepdybCw&sa=X&oi=book_result&ct=result&resnum=5&ved=0CDIQ6AEwBDgK#v=onepage&q=example%20of%20prevention%20cost&f=false.

Question No: 19 VU-ASKARI - Please choose one

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

- Stockholding cost
- Distribution cost
- Marketing cost
- **Failure cost**

Ref: The Cost of Quality (COQ) is the total cost to produce the product or service (deliverable) of the project based on the quality standards defined for the project.

These costs include the corrective works done to meet the quality standards. Mainly three types of costs are associated with the cost of quality.

4. Prevention Cost
5. Appraisal Cost
6. Failure Cost
 - a. Internal Failure cost
 - b. External Failure cost <http://pmpractitioner.com/wp/?tag=external-failure-cost>

Question No: 20 VU-ASKARI - Please choose one

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**

Ref: IMPROVE the problem by selecting a solution. Based on the identified root cause(s) in the prior step, directly address the cause with an improvement.

[https://docs.google.com/viewer?a=v&q=cache:kPRYYBV-N9YJ:media.techtarget.com/searchSoftwareQuality/downloads/ect01TreasurechestSixSigma.pdf+Identify+the+stage+of+the+DMAIC+\(Define,+Measure,+Analyze,+Improve+and+Control\)+methodology+which+involves+eliminating+the+root+causes+of+non-random+variation&hl=en&pid=bl&srcid=ADGEEShPGymMpXmByr9bioIo8dp_HH30AOCeglqhqrTqxGOMeF6w17luGijS9wEE-I3TZxfRK-jx1uEyF4-NuV914Fn9DrmlwYqAIRh71bRW9evtv2iLpCNzZyPfd0GivNqkodCXcna0&sig=AHIEtbSBV40YaQ9bTqKSBUCI_1w245bdA](https://docs.google.com/viewer?a=v&q=cache:kPRYYBV-N9YJ:media.techtarget.com/searchSoftwareQuality/downloads/ect01TreasurechestSixSigma.pdf+Identify+the+stage+of+the+DMAIC+(Define,+Measure,+Analyze,+Improve+and+Control)+methodology+which+involves+eliminating+the+root+causes+of+non-random+variation&hl=en&pid=bl&srcid=ADGEEShPGymMpXmByr9bioIo8dp_HH30AOCeglqhqrTqxGOMeF6w17luGijS9wEE-I3TZxfRK-jx1uEyF4-NuV914Fn9DrmlwYqAIRh71bRW9evtv2iLpCNzZyPfd0GivNqkodCXcna0&sig=AHIEtbSBV40YaQ9bTqKSBUCI_1w245bdA)

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Question No: 21 VU-ASKARI - Please choose one

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

Ref: Redesign the process: takes a fresh approach to solve an issue on hand. (Handouts Page No. 116)

Question No: 22 VU-ASKARI - Please choose one

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

Ref: Tolerances or specifications is the range of acceptable values established by engineering design or customer requirements (Handouts Page No. 125)

Question No: 23 VU-ASKARI - Please choose one

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 (Handouts Page No. 133)

Question No: 24 VU-ASKARI - Please choose one

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 (Handouts Page No. 135)

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Question No: 25 VU-ASKARI - Please choose one

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

Ref: Total inventory cost = Carrying Cost per Unit X Average Inventory
Total inventory cost = 4 X 800 = 3200 (Handouts Page No. 137)

Question No: 26 VU-ASKARI - Please choose one

MPS stands for which of the following?

- ▶ Material Production Schedule
- ▶ Master Planning Schedule
- ▶ Material Planning Schedule
- ▶ **Master Production Schedule**

Ref:

http://wps.pearsoned.co.uk/ema_uk_he_slack_opsman_4/17/4472/1145062.cw/index.htm
(See the Question No. 02)

Question No: 27 VU-ASKARI - Please choose one

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

- ▶ Ordering cost
- ▶ **Holding cost**
- ▶ Shortage cost
- ▶ Stock out cost

Ref: 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. Holding (carrying) costs: Holding costs are stated in two ways

- a. Percentage of unit price or
- b. Rupee (Handouts Page No. 144)

Question No: 28 VU-ASKARI - Please choose one

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

- ▶ $(D+Q) S$
- ▶ **$(D/Q) S$**
- ▶ $D+Q+ S$
- ▶ $(D/S) Q$

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Ref: $TC = \text{Carrying costs} + \text{Ordering Costs}$
 $TC = Q0/2 (H) + D/Q0 (S)$ (Handouts Page No. 148)

Question No: 29 VU-ASKARI - Please choose one

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. (Handouts Page No. 149)

Question No: 30 VU-ASKARI - Please choose one

Master schedule interfaces with all of the following Except:

- ▶ Capacity planning
- ▶ Resource planning
- ▶ Production planning
- ▶ Distribution planning

Ref: Master schedule: Determines quantities needed to meet demand Interfaces with

1. Marketing
 2. Capacity planning
 3. Production planning
 4. Distribution planning
- (Handouts Page No. 139)

Question No: 31 VU-ASKARI - Please choose one

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: http://archivos4.movistar.cl/acani.iciii/Mis_archivos/CUADERNOS/09_NIVEL/GESTION_OPERACIONES/IP_GO/p1_CHASE.pdf (See the Page No. 14 Question No. 08)

Question No: 32 VU-ASKARI - Please choose one

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

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Ref: Just-In-Time (JIT): JIT can be defined as an integrated set of activities designed to achieve high-volume production using minimal inventories (raw materials, work in process, and finished goods), JIT also involves the elimination of waste in production effort. JIT also involves the timing of production resources (i.e., parts arrive at the next workstation “just in time”). (Handouts Page No. 170)

Question No: 33 VU-ASKARI - Please choose one

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 (Handouts Page No. 161)

Question No: 34 VU-ASKARI - Please choose one

Which of the following formula is correct for Kanban system?

- ▶ $\frac{DX(1+T)}{C} = N$
- ▶ $\frac{DC(1+X)}{T} = N$
- ▶ **$\frac{DT(1+X)}{C} = N$**
- ▶ $\frac{DT(1+C)}{X} = N$

Ref: $N = \frac{DT(1+X)}{C}$ (Handouts Page No. 167)

Question No: 35 VU-ASKARI - Please choose one

Big JIT includes all of the following EXCEPT:

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

Ref: Big JIT – broad focus (Includes Internal as well as external)

- Vendor relations
- Human relations
- Technology management
- Materials and inventory management

Little JIT – narrow focus Internal to organization

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- Scheduling materials
- Scheduling services of production (Handouts Page No. 170 & 171)

Question No: 36 VU-ASKARI - Please choose one

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

Ref: Need for Supply Chain Management

1. Improve operations
2. Increasing levels of outsourcing
3. Increasing transportation costs
4. Competitive pressures
5. Increasing globalization
6. Increasing importance of e-commerce
7. Complexity of supply chains
8. Manage inventories (Handouts Page No. 174)

Question No: 37 VU-ASKARI - Please choose one

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

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

Ref: Benefits of Supply Chain Management

- Lower inventories
- Higher productivity
- Greater agility
- Shorter lead times
- Higher profits
- Greater customer loyalty (Handouts Page No. 174)

Question No: 38 VU-ASKARI - Please choose one

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)

Ref: Distribution requirements planning (DRP) is a system for inventory management and distribution planning. Extends the concepts of MRPII (Handouts Page No. 175)

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Question No: 39 VU-ASKARI - Please choose one

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

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

Ref: Loading - assignment of jobs to process centers (Handouts Page No. 181)

Question No: 40 VU-ASKARI - Please choose one

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

Ref: Input/Output Control Chart – A type of Control Chart that shows management of work flow and queues at the work centers (Handouts Page No. 182)

Question No: 41 VU-ASKARI - Please choose one

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

Ref: Preventive maintenance: goal is to reduce the incidence of breakdowns or failures in the plant or equipment to avoid the associated costs

1. Preventive maintenance is periodic
2. Result of planned inspections
3. According to calendar
4. After predetermined number of hours (Handouts Page No. 190)

Question No: 42 VU-ASKARI - Please choose one

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

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

Ref: a project-based organization incorporates the meaning of an organizational structure specially formed for a temporary period to enable a project-

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based organization execute a specific task

http://webcache.googleusercontent.com/search?q=cache:EMAMM4phT8cJ:www.worldscibooks.com/etextbook/p469/p469_chap01.pdf+organizational+structure+based+on+teams+formed+specifically+for+projects&hl=en

Paper No. 04

FINAL TERM EXAMINATION

Fall 2008

MGT613- Production / Operations Management (Session - 4)

Solved By Honey G <abdulhaiee2004@gmail.com>

Question No: 1 VU-ASKARI - Please choose one

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

Ref: Productivity = Output Quantity / Input Quantity

Productivity = $650 / (9 * 6)$

Productivity = $650/54 = 12.03$ Square yards

Question No: 2 VU-ASKARI - Please choose one

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

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

Ref: Major operations decisions areas include inventory, capacity, quality, scheduling, process type, technology, location, layout, and supply chain management.

<http://en.allexperts.com/q/Management-Consulting-2802/2011/2/Production-Operations-Management-1.htm>

Question No: 3 VU-ASKARI - Please choose one

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

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

Ref: Maximin determines the worst payoff for each alternative; the operations manager chooses the best worst alternative. Meaning the least (best) of the worst. (Handouts Page No. 26)

Question No: 4 VU-ASKARI - Please choose one

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

Ref: Moving average – A technique that averages a number of recent actual values, updated as new values become available. (Handouts Page No. 37)

Question No: 5 VU-ASKARI - Please choose one

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%

Ref: Utilization = Actual output / design capacity
Utilization = $40/60 * 100 = 67\%$

Question No: 6 VU-ASKARI - Please choose one

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

- ▶ Introduction
- ▶ Growth
- ▶ Maturity
- ▶ Decline

Ref: Maturity Stage. As the products of firms move into the maturity stage, attracting highly skilled individuals is no longer as high a priority. Firms in the mature stage have an extensive internal labour market and extensive training and development programs. Firms in this stage may pay high wages to retain skilled talent. Economic downturns are handled by employee layoffs. Conflict resolutions and due process under collective bargaining are the grievance procedures with third party arbitration (Kochan &

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Chalykoff, 1985). The environment (customer demand and competitors) becomes more stable and predictable (but as competitive) in comparison with the growth stage.

[http://docs.google.com/viewer?a=v&q=cache:jQVb4SnKAYsJ:www.rci.rutgers.edu/~sjacksox/PDF/DeterminantsofHRMPrioritiesandImplications.pdf+stages+of+product+life+cycle+relates+to+more+predictable+behavior+in+terms+of+capacity+requirements&hl=en&gl=pk&pid=bl&srcid=ADGEESigJYxwqHconGqfCMjw0LjJ83rXBJuDpDj9ii07-2VUwmVTBF6K-](http://docs.google.com/viewer?a=v&q=cache:jQVb4SnKAYsJ:www.rci.rutgers.edu/~sjacksox/PDF/DeterminantsofHRMPrioritiesandImplications.pdf+stages+of+product+life+cycle+relates+to+more+predictable+behavior+in+terms+of+capacity+requirements&hl=en&gl=pk&pid=bl&srcid=ADGEESigJYxwqHconGqfCMjw0LjJ83rXBJuDpDj9ii07-2VUwmVTBF6K-Xm7xu1THfTijPxrqbqKJD0KKZziOIaotlvC4pPqcwxZ2J3KdX3QIQo8iw3VCTRAsXg2Pk69UvRqQsYng7dB&sig=AHIEtbS89CgRHNC6-p0WknAgth-vMIRvbg)

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Question No: 7 VU-ASKARI - Please choose one

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

- ▶ Social
- ▶ Political
- ▶ **Economic**
- ▶ Legal

Ref:

http://books.google.com.pk/books?id=tqVIT0xE4NAC&pg=PA192&dq=Economic+perspectives+evaluating+alternatives+for+future+capacity&hl=en&ei=1o13TfntLoKCOsY1McB&sa=X&oi=book_result&ct=result&resnum=1&ved=0CCcQ6AEwAA#v=onepage&q=Economic%20perspectives%20evaluating%20alternatives%20for%20future%20capacity&f=false

Question No: 8 VU-ASKARI - Please choose one

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

- ▶ **Process selection**
- ▶ Process reengineering
- ▶ Process redesign
- ▶ Process design

Ref: Process Selection refers to the way an organization chooses to produce its good or services. (Handouts Page No. 77)

Question No: 9 VU-ASKARI - Please choose one

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

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► Storage

Ref: In a Process layout, work stations are arranged according to the general function they perform without regard to any particular product.

<http://www.scribd.com/doc/12630674/MBA-IIInd-SEM-POM-Chapter02-Layoutsimplified>

Question No: 10 VU-ASKARI - Please choose one

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

- Cost curve
- Bath tub curve
- Fish bone diagram
- Reliability curve

Ref: The figure above shows a bathtub shape and thus rightly is referred to as the Bathtub curve. On the Y axis we represent the Failure rate and on the X axis we represent the Time. (Handouts Page No. 60)

Question No: 11 VU-ASKARI - Please choose one

MTBF refers to which of the following?

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

Ref: We represent mean time between failures by MTBF (Handouts Page No. 63)

Question No: 12 VU-ASKARI - Please choose one

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: While having representatives from different functions as team members is predicted to facilitate communication with non-team members from those functions, this structure may also create internal conflicts.

<http://docs.google.com/viewer?a=v&q=cache:CpKetaj5A98J:dspace.mit.edu/bitstream/handle/1721.1/2310/SWP-3179-22870423.pdf%3Fsequence%3D1+team+having+representatives+from+different+functional+areas+of+the+organization&hl=en&gl=pk&pid=bl&srcid=ADGEESiZz0JtbazwsFj3WOxuhpTDJ3LMgStdq5o3KAjjil6->

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pEAOtjjM1eJkQDDCvaG0-
o0P0BC5&sig=AHIEtbQPVw7bHUJDdOn5ZCFS7AOy6L3gTA

Question No: 13 VU-ASKARI - Please choose one

The quality guru Kaoru Ishikawa is famous for:

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

Ref: Kaoru Ishikawa- presented the “fish bone diagram” or “cause effect diagram” (Handouts Page No. 102)

Question No: 14 VU-ASKARI - Please choose one

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

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

Ref: 1950's - Quality assurance/TQC (The era of Deming, Juran and Feigenbaum) which changed the concepts of quality for ever (Handouts Page No. 101)

Question No: 15 VU-ASKARI - Please choose one

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

- ▶ **Mistake proof**
- ▶ Low quality
- ▶ Defective
- ▶ Expensive

Ref: Poka-Yoke: Poka Yoke (pronounced POH-kah YOH-kay) is the Japanese word for mistake proof. In services, a simple mistake can have dire consequences, think of a hair dresser or stylist giving you a wrong haircut. His mistake cannot be rectified because service again is an entity which is based on transaction between the service provider and service receiver. (Handouts Page No. 107)

Question No: 16 VU-ASKARI - Please choose one

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**

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- ▶ 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

Ref: Gap 4: Differences between service delivery and external communication with customer

- Customers are influenced by what they hear and see about a company's service
- Word-of-mouth publicity and advertising are main outlets which customers open their opinions to
- 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 (**Handouts Page No. 107**)

Question No: 17 VU-ASKARI - Please choose one

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

- ▶ Failure cost
- ▶ Prevention cost
- ▶ Appraisal cost
- ▶ **Management cost**

Ref: Juran later highlighted the traditional tradeoffs that contrast prevention plus appraisal costs with failure costs (Juran, 1962).

https://docs.google.com/viewer?a=v&q=cache:LnNn6SzEF1QJ:citeseerx.ist.psu.edu/viewdoc/download%3Fdoi%3D10.1.1.84.7644%26rep%3Drep1%26type%3Dpdf+Which+of+the+following+is+NOT+included+in+Juran%2E20%99s+classification+of+costs+of+quality%3F+%E2%96%BA+Failure+cost+%E2%96%BA+Prevention+cost+%E2%96%BA+Appraisal+cost+%E2%96%BA+Management+cost&hl=en&pid=bl&srcid=ADGEEShZRQ4J2gt68pYjLG_H_huJ2MIHgapM12Wpq19s98DxA6E3fiZBIUb2cMXkimppUd8ixzXSiPyYmp914QJ0lLEhwaOPH1hJygxji6bt0mJoEq-gdeNeVsCtuP3h9T2urQbxc-M4&sig=AHIEtbTbMFMMVfx58oy-13Hngl30MSupFQ

Question No: 18 VU-ASKARI - Please choose one

Problem solving is an example of which of the following?

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

Ref:

http://www.accountingformanagement.com/quality_costs.htm

Question No: 19 VU-ASKARI - Please choose one

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Inspection equipment is an example of which of the following?

- ▶ Internal failure cost
- ▶ External failure cost
- ▶ Prevention cost
- ▶ Appraisal cost

Ref: Appraisal costs:

- Test and inspection of purchased materials
- Acceptance testing
- Inspection
- Testing
- Checking labor
- Setup for test or inspection
- Test and inspection equipment
- Quality audits
- Field testing http://en.wikipedia.org/wiki/Quality_costs

Question No: 20 VU-ASKARI - Please choose one

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. (Handouts Page No. 113)

Question No: 21 VU-ASKARI - Please choose one

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. (Handouts Page No. 114)

Question No: 22 VU-ASKARI - Please choose one

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

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► 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

Ref: Analyze the process: Ask questions about the process including process flow being logical, any activities or steps being missing or identification of duplication activities (Handouts Page No. 116)

Question No: 23 VU-ASKARI - Please choose one

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

Ref: The R or Range Chart monitors the process variation, or dispersion. The subgroup range (highest point minus the lowest point in the subgroup) is plotted on the R Chart.

http://www.chartitnow.com/X-Bar_and_R_Chart.html

Question No: 24 VU-ASKARI - Please choose one

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

Ref: Mean control charts

Used to monitor the central tendency of a process (Handouts Page No. 123)

Question No: 25 VU-ASKARI - Please choose one

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)

Ref: Average Outgoing Quality (AOQ): Average of rejected lots and accepted lots (Handouts Page No. 130)

Question No: 26 VU-ASKARI - Please choose one

Identify the time span covered by the aggregate planning.

► 3-7 months

► 2-10 months

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- ▶ 2-12 months
- ▶ 4-8 months

Ref: Aggregate planning: Intermediate-range capacity planning, usually covering 2 to 12 months. (Handouts Page No. 133)

Question No: 27 VU-ASKARI - Please choose one

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 (Handouts Page No. 135)

Question No: 28 VU-ASKARI - Please choose one

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

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

Ref: Inventory at the end of a (current) period equals Inventory at the end of the previous period PLUS Production in the current period – Amount used to satisfy the demand in the current period. (Handouts Page No. 137)

Question No: 29 VU-ASKARI - Please choose one

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

Ref: Rough-cut capacity planning : Approximate balancing of capacity and demand to test the feasibility of a master schedule. (Handouts Page No. 138)

Question No: 30 VU-ASKARI - Please choose one

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

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receipt?

- ▶ Ordering cost
- ▶ Holding cost
- ▶ Shortage cost
- ▶ Stock out cost

Ref: Ordering costs: Costs of ordering and receiving inventory (Handouts Page No. 144)

Question No: 31 VU-ASKARI - Please choose one

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

Ref: Assumptions of EOQ Model

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. (Handouts page No. 145)

Question No: 32 VU-ASKARI - Please choose one

Which of the following statements is CORRECT about master schedule?

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

Ref:

http://books.google.com/books?id=kNRkTmMCXDSC&pg=PA673&lpg=PA673&dq=master+schedule+is+visible+to+all+levels+of+management&source=bl&ots=mp98tz-HS7&sig=jf6lBNQN9TAn4YSIVGFg7eEFhdY&hl=en&ei=hwBrTPW6JZKqgPyhaDTDw&sa=X&oi=book_result&ct=result&resnum=1&ved=0CBIQ6AEwAA#v=onepage&q=master%20schedule%20is%20visible%20to%20all%20levels%20of%20management&f=false

Question No: 33 VU-ASKARI - Please choose one

Which of the following formula is correct for Kanban system?

- ▶ $\frac{DX(1-T)}{C} = N$
- ▶ $DC(1-X) = N$

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$$\begin{aligned} & T \\ \blacktriangleright & \frac{DT(1+X)}{C} = N \\ \blacktriangleright & \frac{DT(1+X)}{C} = N \end{aligned}$$

Ref: $N = \frac{DT(1+X)}{C}$ (Handouts Page No. 167)

Question No: 34 VU-ASKARI - Please choose one

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

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

Ref: Loading - assignment of jobs to process centers (Handouts Page No. 181)

Question No: 35 VU-ASKARI - Please choose one

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 (Handouts Page No. 181)

Question No: 36 VU-ASKARI - Please choose one

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 (Handouts Page No. 182)

Question No: 37 VU-ASKARI - Please choose one

All of the following cause difficulties in scheduling EXCEPT:

- ▶ Variability in setup times
- ▶ Variability in processing times

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- ▶ Variability in set of jobs
- ▶ Variability in holding cost

Ref: Scheduling Difficulties

1. Variability in

- a. Setup times
- b. Processing times
- c. Interruptions

d. Changes in the set of jobs

2. No method for identifying optimal schedule

3. Scheduling is not an exact science

4. Ongoing task for a manager (Handouts Page No. 188)

Question No: 38 VU-ASKARI - Please choose one

This 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

Ref: Once the effort estimate is complete (regardless of the type), I can start thinking about how much time and how many resources are needed to complete the project.
<http://blogs.capttechconsulting.com/blog/ben-harden/estimating-extract-transform-and-load-etl-projects>

Question No: 39 VU-ASKARI - Please choose one

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

Ref: PERT: Program Evaluation and Review Technique (Handouts Page No. 196)

Question No: 40 VU-ASKARI - Please choose one

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

- ▶ Cost reduction
- ▶ Time delays
- ▶ Project termination
- ▶ Inability to meet specifications

Ref: Project Risk Management

Risk: occurrence of events that have undesirable consequences

1. Delays

2. Increased costs

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3. Inability to meet specifications

4. Project termination (Handouts Page No. 208)

Question No: 41 VU-ASKARI - Please choose one

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

▶ **Queuing theory**

▶ Waiting theory

▶ Scheduling theory

▶ Sequencing theory

Ref: Queuing theory: Mathematical approach to the analysis of waiting lines. (Handouts Page No. 210)

Question No: 42 VU-ASKARI - Please choose one

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**

Ref: Input/Output Control Chart – A type of Control Chart that shows management of work flow and queues at the work centres. (Handouts Page No. 182)

Paper No. 05

FINAL TERM EXAMINATION

Fall 2009

MGT613- Production / Operations Management (Session - 4)

Solved By Honey G <abdulhaiee2004@gmail.com>

Time: 120 min

Marks: 79

Question No: 1 VU-ASKARI - Please choose one

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.

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- ▶ It consists mainly of subjective inputs and resist human factor, personal opinions.
- ▶ It consists mainly of analyzing objectives and hard data and resist human factor, opinion.

Ref: Quantitative research focuses on numbers or quantities. Quantitative studies have results that are based on numeric analysis and statistics. Often, these studies have many participants. It is not unusual for there to be over a thousand people in a quantitative research study. It is ideal to have a large number of participants because this gives analysis more statistical power.

http://www.associatedcontent.com/article/1622269/what_is_the_difference_between_qualitative.html

Question No: 2 VU-ASKARI - Please choose one

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

Ref: Minimax Regret: Determines the worst regret for each alternative (Handouts Page No. 27)

Question No: 3 VU-ASKARI - Please choose one

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

Ref:

Alternatives	Regrets (in Rupees)	
	Possible Future Demand Worst	
	Low	Moderate
Small Facility	$18000 - 10000 = 8000$	$20000 - 8000 = 12000$
Medium	$18000 - 12000 = 6000$	$20000 - 20000 = 0$
Large	$18000 - 18000 = 0$	$20000 - 15000 = 5000$

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Now choose the Highest Value from Small, Medium and Large Row. Which are

Small = 12000

Medium = 6000

Large = 5000

Now choose the minimum amount from the above figures which is Rs. 5000

Question No: 4 VU-ASKARI - Please choose one

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

Question No: 5 VU-ASKARI - Please choose one

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

Ref: $QBEP = FC / (R - VC)$
 $QBEP = 10000 / (7-5)$
 $QBEP = 10000/2$
QBEP = 5000 Units

Question No: 6 VU-ASKARI - Please choose one

Which one of the following designs resists modifications?

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

Ref: Another disadvantage is that a manufacturer may freeze (standardize) a **design** prematurely and, once the **design is frozen**, it may find compelling reasons to resist modification.

http://webcache.googleusercontent.com/search?q=cache:ASewL4qNRRkJ:highered.mcgraw-hill.com/sites/dl/free/0073041912/354902/ste41912_ch04.pdf+Frozen+design+%E2%96%BA+Product+design+%E2%96%BA+Service+design+%E2%96%BA+Robust+design+resists+modifications&cd=3&hl=en&ct=clnk&gl=pk&source=www.google.com.pk

Question No: 7 VU-ASKARI - Please choose one

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

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

Ref: The final stage in the life cycle is the decline.

<http://www.davetalks.com/articles/who-wants-live-forever.html>

Question No: 8 VU-ASKARI - Please choose one

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: While having representatives from different functions as team members is predicted to facilitate communication with non-team members from those functions, this structure may also create internal conflicts.

<http://docs.google.com/viewer?a=v&q=cache:CpKetaj5A98J:dspace.mit.edu/bitstream/handle/1721.1/2310/SWP-3179-22870423.pdf%3Fsequence%3D1+team+having+representatives+from+different+functional+areas+of+the+organization&hl=en&gl=pk&pid=bl&srcid=ADGEESiZz0JtbazwsFj3WOxuhpTDJ3LMgStdq5o3KAjjil6-ogLEsA07go0PRGGxnd9tFSN1EyQmfkxsF36ST6PakVPq8W0sFVgyN0kKutPRmM5vpEAOtjjM1eJkQDDCvaG0-o0P0BC5&sig=AHIEtbQPVw7bHUJDdOn5ZCFS7AOy6L3gTA>

Question No: 9 VU-ASKARI - Please choose one

How many dimensions are used for determining service quality?

- ▶ Four
- ▶ **Five**
- ▶ Six
- ▶ Seven

Ref: Often organizations use a performance measure matrix using the same service dimensions and they often call it RATE based on the 5 dimensions described below.

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. (Handouts Page No. 105)

Question No: 10 VU-ASKARI - Please choose one

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Which of the following is NOT an element of TQM?

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

Ref: TQM

Open communications

Empowerment

Prevention

External focus on customer

Continuous improvement

Co-operative relations

Solving problems at their roots (See the Slide No. 11)

https://docs.google.com/viewer?a=v&q=cache:PJz-c_0nmPUJ:www.bsieducation.org/Education/downloads/ijqs/teaching-materials/stand-alone/Total-Quality-Management-TQM.ppt+Which+of+the+following+is+NOT+an+element+of+TQM%3F+%E2%96%BA+Continuous+improvement+%E2%96%BA+Perceived+quality+%E2%96%BA+Employee+empowerment+%E2%96%BA+Customer+focus&hl=en&pid=bl&srcid=ADGEESiW0giXxuzjczvvFz9Mmc9JqL_ba5VfD526136rNvCYpp1HD08lABrV4c_PzE8FJb0MzmI_dQNP5wkHrSfPLpMMlStjmKuOf00-Hozf70seBTvZRJyEOEcoiMc9MqhKEIGKP4uj&sig=AHIEtbS3SfembzoOouagJDI4UM6ZBOZNpg

TQM.ppt+Which+of+the+following+is+NOT+an+element+of+TQM%3F+%E2%96%BA+Continuous+improvement+%E2%96%BA+Perceived+quality+%E2%96%BA+Employee+empowerment+%E2%96%BA+Customer+focus&hl=en&pid=bl&srcid=ADGEESiW0giXxuzjczvvFz9Mmc9JqL_ba5VfD526136rNvCYpp1HD08lABrV4c_PzE8FJb0MzmI_dQNP5wkHrSfPLpMMlStjmKuOf00-Hozf70seBTvZRJyEOEcoiMc9MqhKEIGKP4uj&sig=AHIEtbS3SfembzoOouagJDI4UM6ZBOZNpg

Question No: 11 VU-ASKARI - Please choose one

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

Ref: Tolerances or specifications is the range of acceptable values established by engineering design or customer requirements (Handouts Page No. 125)

Question No: 12 VU-ASKARI - Please choose one

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)

Ref: Lot Tolerance Percent Defective (LTPD): Upper limit on the percentage of defects a customer is willing to accept (a property of the consumer) (Handouts Page No. 130)

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Question No: 13 VU-ASKARI - Please choose one

Which of the following require intermediate plans?

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

Ref: Intermediate plans (General levels)

1. Employment
2. Finished Good inventories
3. Subcontracting, Backorders
4. Output (Handouts Page No. 133)

Question No: 14 VU-ASKARI - Please choose one

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

- ▶ Ordering cost
- ▶ **Holding cost**
- ▶ Shortage cost
- ▶ Stock out cost

Ref: 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. Holding (carrying) costs: Holding costs are stated in two ways

- a. Percentage of unit price or
- b. Rupee (Handouts Page No. 144)

Question No: 15 VU-ASKARI - Please choose one

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

Ref: Master Production Schedule

- Time-phased plan specifying timing and quantity of production for each end item.
- Material Requirement Planning Process (Handouts Page No. 156)

Question No: 16 VU-ASKARI - Please choose one

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**

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- ▶ 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. (Handouts Page No. 157)

Question No: 17 VU-ASKARI - Please choose one

Which of the following statements is CORRECT about master schedule?

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

Ref:

http://books.google.com/books?id=kNRkTmMCXDc&pg=PA673&lpg=PA673&dq=master+schedule+is+visible+to+all+levels+of+management&source=bl&ots=mp98tz-HS7&sig=jf6lBNQN9TAn4YSIVGFg7eEFhdY&hl=en&ei=hwBrTPW6JZKqgPyhaDTDw&sa=X&oi=book_result&ct=result&resnum=1&ved=0CBIQ6AEwAA#v=onepage&q=master%20schedule%20is%20visible%20to%20all%20levels%20of%20management&f=false

Question No: 18 VU-ASKARI - Please choose one

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

Ref: Planned-order releases: Planned amount to order in each time period. (Handouts Page No. 160)

Question No: 19 VU-ASKARI - Please choose one

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. (Handouts Page No. 161)

Question No: 20 VU-ASKARI - Please choose one

Big JIT includes all of the following EXCEPT:

- ▶ Vendor relations

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

Ref: Big JIT – broad focus (Includes Internal as well as external)

- Vendor relations
- Human relations
- Technology management
- Materials and inventory management

Little JIT – narrow focus Internal to organization

- Scheduling materials
- Scheduling services of production (Handouts Page No. 170 & 171)

Question No: 21 VU-ASKARI - Please choose one

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

Ref: http://highered.mcgraw-hill.com/sites/0072402857/student_view0/chapter13/multiple_choice_quiz.html (See the Question No. 08)

Question No: 22 VU-ASKARI - Please choose one

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: After completing the introductory discussion on Scheduling, the students would be able to understand what scheduling is and how important it is to high volume and intermediate volume systems (Handouts Page No. 180)

Question No: 23 VU-ASKARI - Please choose one

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

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

Ref: Workstation: An area where one person works, usually with special equipment, on a specialized job. (Handouts Page No. 184)

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Question No: 24 VU-ASKARI - Please choose one

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

Ref: Makespan: This is the total time needed to complete a group of jobs. It is the length of time between the start of the first job in the group and the completion of the last job in the group. (Handouts Page No. 186)

Question No: 25 VU-ASKARI - Please choose one

Which of the following is **TRUE** about a project activity?

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

Ref: Projects are unique, one-time (temporary) operations designed to accomplish a specific set of objectives in a limited time frame. (Handouts Page No. 192)

Question No: 26 VU-ASKARI - Please choose one

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: a project-based organization incorporates the meaning of an organizational structure specially formed for a temporary period to enable a project-based organization execute a specific task

http://webcache.googleusercontent.com/search?q=cache:EMAMM4phT8cJ:www.worldscibooks.com/etextbook/p469/p469_chap01.pdf+organizational+structure+based+on+teams+formed+specifically+for+projects&hl=en

Question No: 27 VU-ASKARI - Please choose one

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

Ref: Limitations of PERT

1. Important activities may be omitted
2. Precedence relationships may not be correct

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3. Estimates may include a fudge factor

4. May focus solely on critical path (Handouts Page No. 196)

Question No: 28 VU-ASKARI - Please choose one

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

▶ Late Start

▶ Long Start

▶ Lazy Start

▶ Low Start

Ref: Network activities

1. ES: early start

2. EF: early finish

3. LS: late start

4. LF: late finish (Handouts Page No. 198)

Question No: 29 VU-ASKARI - Please choose one

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

▶ Late Finish

▶ Long Finish

▶ Lazy Finish

▶ Low Finish

Ref: Network activities

1. ES: early start

2. EF: early finish

3. LS: late start

4. LF: late finish (Handouts Page No. 198)

Question No: 30 VU-ASKARI - Please choose one

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 behaviour

▶ A group cancels the forecasting errors among items

▶ A group behaviour is relatively less uncertain

Ref: Forecasts more accurate for groups vs. individuals naturally because forecasting errors in a group tend to cancel out forecasting errors for individuals. (Handouts page No. 33)

Question No: 31 VU-ASKARI - Please choose one

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

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- ▶ The most recent values are given the more weightage

Ref: One disadvantage of using moving averages for forecasting is that in calculating the average all the observations are given equal weight.

<http://people.brunel.ac.uk/~mastjjb/jeb/or/forecast.html>

Question No: 32 VU-ASKARI - Please choose one

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: Operations Manager often focus on determinants of effective capacity by taking into account both macro and micro levels. 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. (Handouts Page No. 67)

Question No: 33 VU-ASKARI - Please choose one

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

Ref: <http://www.cbpa.ewu.edu/~pnemetzmills/OMch3/ratanswers.html> (See the Question No. 04)

Question No: 34 VU-ASKARI - Please choose one

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

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

Ref: Just-In-Time (JIT) is a Japanese Management technique to inventory control and materials management that has as its aim the completion elimination of waste, including "unnecessary inventory" and scrap in production.

<http://www.strategyassociates.cc/articles/macrologistics/chapter7.html>

Question No: 35 VU-ASKARI - Please choose one

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

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

Ref: Unfortunately, a simple kanban control system does not perform well in environments dealing with high demand or process variability.

<http://www.logisticsit.com/absolutenm/templates/article-critical.aspx?articleid=4061&zoneid=31>

Question No: 36 VU-ASKARI - Please choose one

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

Ref: you will find opportunities for improvement by adopting some or all of the following actions, among others, to minimize the "Bullwhip Effect" and increase business performance.

Minimize the cycle time in receiving projected and actual demand information.

Establish the monitoring of actual demand for product to as near a real time basis as possible.

Understand product demand patterns at each stage of the supply chain.

https://docs.google.com/viewer?a=v&q=cache:bgAh5lvrt-cJ:www.idii.com/wp/donovan_sc_part3.pdf+how+bullwhip+effect+can+be+minimize&hl=en&pid=bl&srcid=ADGEESh_tuBHoaZ1oaLI2QYiCSQc7QGw0_RJTrlakipRseyDr1uW-F-wOj58wS09s8ghLYtM4tVYS23xsnPzwhNI4O7cvUFvO3Jd-nv7mZpnpn81UPC7b3wx_X1R8c3_kBpY0ZLLrvY1&sig=AHIEtbRnImOgrm5FEeOUhELZRNNzuiLOEg

Question No: 37 VU-ASKARI - Please choose one

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 (Handouts Page No. 194)

Question No: 38 VU-ASKARI - Please choose one

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

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

Ref: Cost effective during periods of high unemployment or when low-skilled labor is acceptable https://docs.google.com/viewer?a=v&q=cache:-VCULppndYYJ:www.csun.edu/~shternberg/MfgSys_5.ppt+During+the+period+of+high+unemployment+or+when+low-skilled+labour+is+acceptable,+which+of+the+following+strategy+would+be+cost+effective%3F+%E2%96%BA+Chase+demand+strategy+%E2%96%BA+Level+capacity+strategy+%E2%96%BA+Proactive+strategy+%E2%96%BA+Mixed+or+hybrid+strategies&hl=en&pid=bl&srcid=ADGEESipy1Thm9GmW88Myrky_rO_j2H0zgE104ei1GogrD50wwUIFMnrv5nMUKd3CeQjihA3Lgix7yLFJXejF1-ZHhm9Tjo2Rg_Ghwo4wU-f_7U6nCr_NGZz-grNtTZLRzj5T9ExZ3Dx&sig=AHIEtbT40c0pxmOkYINB4mUPsfMIicX1rg (SLIDE NO. 34)

Paper No. 06

FINAL TERM EXAMINATION
Spring 2010
MGT613- Production / Operations Management
Solved By Honey G <abdulhaiee2004@gmail.com>

Question No: 1 VU-ASKARI - Please choose one
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

Ref: Calculations of multifactor productivity measure inputs and outputs using a common unit of measurement, such as cost. For instance, the measure might use cost of inputs and units of the output:

http://docs.google.com/viewer?a=v&q=cache:bYWPp-Ig99IJ:highered.mcgraw-hill.com/sites/dl/free/0073525251/886181/stevenson1le_sample_ch02.pdf+Multifactor+is+a+measure+of+productivity+that+involves+measuring+inputs+and+outputs+using+a+common+unit+of+measurement&hl=en&gl=pk&pid=bl&srcid=ADGEEShIkJnaEXjh-LIA3HACWDXOFhSy4GxPv8YQXZJIU3WT0go2JJj8vnbbzyuq3hxydg1DjvPnqXn6l7_WK80EPPhN15OYu_iNw-luxMf0zGIxME7Z2JTjx1YPoSJERrLKF0cWbvkXb&sig=AHIEtbTWWf1ESOM052Hrkqk5mCU24fLbQA

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Question No: 2 VU-ASKARI - Please choose one

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

Ref:. Since services are intangible, they cannot be stored. The production and consumption of a service usually occur at the same time.

http://docs.google.com/viewer?a=v&q=cache:L4jyS-JP7UsJ:highered.mcgraw-hill.com/sites/dl/free/0073403318/823112/Sample_Chap_01.pdf+Which+of+the+following+is+NOT+usually+considered+a+general+characteristic+of+a+service%3F+%E2%96%BA+Production+and+sales+cannot+easily+be+separated+functionally+%E2%96%BA+Many+services+involve+both+tangible+and+intangible+outputs+%E2%96%BA+Production+and+consumption+can+always+be+separated+%E2%96%BA+Degree+of+customer+contact+is+high&hl=en&gl=pk&pid=bl&srcid=ADGEEShuWM-Q96C6O4K2DaS9KmGK-rPQprFwAtcLde-7pLcrju7ARaKaP-W0cfES19wotDRnGLRXY2mt2-ESMdhRisXsgqIHrkAVBjXKgzKtFi9C8cxTZbCpNt1A4s-LEGwm619tSfgJ&sig=AHIEtbSbq2OWcRtK1dw4gNnlnLQJb-T-Kw

Question No: 3 VU-ASKARI - Please choose one

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

Ref: order winners are the characteristics of an organization's services that cause it to be perceived as better than the competitor's services. (Handouts Page No. 15)

Question No: 4 VU-ASKARI - Please choose one

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**

Ref: Requirements of a Good Forecast

- Timely
- Reliable
- Accuracy.
- Meaningful
- Written/Documented.
- Simple (Handouts Page No. 34)

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Question No: 5 VU-ASKARI - Please choose one

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

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

Ref: 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 (Handouts Page No. 34)

Question No: 6 VU-ASKARI - Please choose one

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

Ref: Minimax Regret: Determines the worst regret for each alternative (Handouts Page No. 27)

Question No: 7 VU-ASKARI - Please choose one

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

Ref: Normally the decision making process involves the following six important steps

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.

(Handouts Page No. 24)

Question No: 8 VU-ASKARI - Please choose one

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

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

Ref: There are 7 determinants of effective capacity namely:

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- Facilities.
- Product and service factors
- Process factors
- Human factors
- Operational factors
- Supply chain factors
- External factors

(Handouts Page No. 66 and 67)

Question No: 9 VU-ASKARI - Please choose one

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

Ref: alpha - the smoothing constant to use for this exponential smoothing model. Must be a value in the range 0.0 - 1.0 Values above 0.5 is uncommon - though they are still valid and are supported by this implementation.

<http://openforecast.sourceforge.net/docs/net/sourceforge/openforecast/models/TripleExponentialSmoothingModel.html>

Question No: 10 VU-ASKARI - Please choose one

In exponential smoothing model, α denotes:

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

Ref: α = Alpha smoothing constant (Handouts page No. 40)

Question No: 11 VU-ASKARI - Please choose one

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

Ref: Design for Remanufacturing: Using some of the components of the old products in the manufacture of new products. (Handouts Page No. 51)

Question No: 12 VU-ASKARI - Please choose one

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

- ▶ Traditional work group
- ▶ Self-directed team

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- ▶ Cross-functional team
- ▶ Self motivated team

Ref: While having representatives from different functions as team members is predicted to facilitate communication with non-team members from those functions, this structure may also create internal conflicts.

<http://docs.google.com/viewer?a=v&q=cache:CpKetaj5A98J:dspace.mit.edu/bitstream/handle/1721.1/2310/SWP-3179-22870423.pdf%3Fsequence%3D1+team+having+representatives+from+different+functional+areas+of+the+organization&hl=en&gl=pk&pid=bl&srcid=ADGEESiZz0JtbazwsFj3WOxuhpTDJ3LMgStdq5o3KAjjil6-ogLEsA07go0PRGGxnd9tFSN1EyQmfkxsF36ST6PakVPq8W0sFVgyN0kKutPRmM5vpEAOtjjM1eJkQDDCvaG0-o0P0BC5&sig=AHIEtbQPvW7bHUJDdOn5ZCFS7AOy6L3gTA>

Question No: 13 VU-ASKARI - Please choose one

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

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

Ref: 1924 – W. Shewhart of Bell Technologies introduced the Statistical process control charts. (Handouts Page No. 101) It is often referred to as 'the Shewhart Cycle'. It was taken up and promoted very effectively from the 1950s on by the famous Quality Management authority, W. Edwards Deming, and is consequently known by many as 'the Deming Wheel'. (Handouts Page No.116)

Question No: 14 VU-ASKARI - Please choose one

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 - service after sale (Handouts Page No. 102)

Question No: 15 VU-ASKARI - Please choose one

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

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

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Ref: 1950's - Quality assurance/TQC (The era of Deming, Juran and Feigenbaum) which changed the concepts of quality for ever (Handouts Page No. 101)

Question No: 16 VU-ASKARI - Please choose one

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

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

Ref: Normally in such situations, R represents Reliability and Responsiveness, A represent Assurance, T represents Tangibles and E represents Empathy respectively. (Handouts Page No. 105)

Question No: 17 VU-ASKARI - Please choose one

Which of the following best describes the ISO?

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

Ref: "ISO" is a word that represents the International Organization for Standardization. http://wiki.answers.com/Q/What_does_ISO_stand_for_in_cameras

Question No: 18 VU-ASKARI - Please choose one

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

- ▶ Plan
- ▶ Do
- ▶ Check/Study stage
- ▶ Act

Ref: CHECK

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

Question No: 19 VU-ASKARI - Please choose one

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

Ref: Total cost of inventory = total units x carrying cost per unit

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Total cost of inventory = $1000 \times 5 = 5000$

Question No: 20 VU-ASKARI - Please choose one

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

Ref: See the Cost Minimization Goal Diagrammed on Page No. 146)

Question No: 21 VU-ASKARI - Please choose one

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

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

Ref: $TC = \text{Carrying costs} + \text{Ordering Costs}$

$TC = Q/2 (H) + D/Q (S)$ (Handouts Page No. 148)

Question No: 22 VU-ASKARI - Please choose one

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

Ref: 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 (Handouts Page No. 157)

Question No: 23 VU-ASKARI - Please choose one

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

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

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

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Question No: 24 VU-ASKARI - Please choose one

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

Ref: An over view of the capacity planning process includes the following.

1. The Master schedule is first tested for feasibility and possibly adjusted before it becomes permanent.
2. The proposed schedule is processed using MRP to ascertain the materials requirements the schedule would generate.
3. These are then translated into capacity requirements in the form of load reports for each departments or work centres.
4. The initial schedule may or may not be feasible given the limits of production or availability of materials.
5. Also, with the aid of Time fences (the series of time intervals during which order changes are allowed or restricted) a feasible schedule may be finalized. (Handouts Page No. 162)

Question No: 25 VU-ASKARI - Please choose one

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

Ref: JIT/Lean Production Features:

- By eliminating waste (muda), quality is improved, production time is reduced and cost is reduced.
- "Pull" production (by means of Kanban).
- While some believe that Lean Manufacturing is a set of problem solving tools.
- In addition, experts in this field believe that philosophy-based Lean Manufacturing strategy is the most effective way to launch and sustain lean activities. (Handouts Page No. 164)

Question No: 26 VU-ASKARI - Please choose one

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

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

Ref: Just In Time Production or Lean Production systems focus on the efficient delivery of products or services. Some of the distinguishing elements of the JIT systems are a pull method to manage material flow, consistently high quantity, small lot sizes, uniform

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work station loads. (Handouts Page No. 164)

Question No: 27 VU-ASKARI - Please choose one

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

Ref: http://forecast.umkc.edu/ftppub/ba547/chapter_17.htm (See the Question No. 01)

Question No: 28 VU-ASKARI - Please choose one

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

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

Ref: Network activities Used to determine

1. Expected project duration
2. Slack time
3. Critical path (Handouts Page No. 198)

Question No: 29 VU-ASKARI - Please choose one

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

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

Ref: Network activities

1. ES: early start
2. EF: early finish
3. LS: late start
4. LF: late finish (Handouts Page No. 198)

Question No: 30 VU-ASKARI - Please choose one

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

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

Ref: Population Source, Arrivals, Waiting Lines, Processing Order, Service, System and Exit are the common identifiable elements of a Queuing System. (Handouts Page No. 212)

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Question No: 31 VU-ASKARI - Please choose one

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**

Ref: A popular managerial view is that the Quality Function should be deployed at the source or at the design stage. We also should know what 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. (Handouts Page No. 55)

Question No: 32 VU-ASKARI - Please choose one

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

Ref:

http://books.google.com.pk/books?id=B5j4D0U6QA0C&pg=PA127&lpg=PA127&dq=Determining+the+amount+of+time+a+worker+spends+on+various+activities&source=bl&ots=geHI2-3mR0&sig=eqWNikcpWGAHCSZtR7taWatslDc&hl=en&ei=tvb-S8S2DpSh_AbtIpmCw&sa=X&oi=book_result&ct=result&resnum=10&ved=0CEQQ6AEwCQ#v=onepage&q&f=false (See the Activity Sampling Second Paragraph)

Question No: 33 VU-ASKARI - Please choose one

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

Ref: Prevention costs:

- Quality planning
- Training program
- Quality audits
- Data acquisition and analysis
- Recruitment and selection
- Supplier evaluation (Handouts Page No. 109)

Question No: 34 VU-ASKARI - Please choose one

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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

Ref:

http://books.google.com/books?id=pq4k3EaFzMYC&pg=PA264&lpg=PA264&dq=selecting+winners+for+a+quality+award&source=bl&ots=_EnFB3GC_w&sig=RZSwWTDdQ3JaUFFilzL22efpuO8&hl=en&ei=iWMYTqe8FtDHsgaK4YioDw&sa=X&oi=book_result&ct=result&resnum=7&ved=0CEQQ6AEwBg#v=onepage&q=selecting%20winners%20for%20a%20quality%20award&f=false

Question No: 35 VU-ASKARI - Please choose one

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

Question No: 36 VU-ASKARI - Please choose one

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

Question No: 37 VU-ASKARI - Please choose one

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

Ref: Economic Order Quantity = $2 \times \text{Annual Demand} \times \text{Ordering Cost} / \text{Carrying Cost}$
Economic Order Quantity = $2 \times (50 \times 50) \times 30 / 10$
Economic Order Quantity = $2 \times 2600 \times 30 / 10 = 15600$
By taking under root of 15600 = 124.89

Question No: 38 VU-ASKARI - Please choose one

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

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

Ref: https://docs.google.com/viewer?a=v&q=cache:f3c0XZx-eZkJ:www.cwu.edu/~bayazito/advanceinv.doc+Perpetual+system+of+inventory+management+is+also+known+First-in-first-out+%E2%96%BA+Probability+model+%E2%96%BA+Fixed-order+quantity+%E2%96%BA+Periodic+review+as&hl=en&pid=bl&srcid=ADGEEShqUcXaVChKFvmkej_jka4VD27yaKzbfZfzk4WAebcVw2ejTN1u-T-WGHEUIUq4NGmo6t_ezOp1pZrQ-0fQsRDMY2k5a1P5e-aCiswv4GfNoJGuPJ7NYFgfFohz64ofwoxzj6Zo&sig=AHIEtbTMdUCcxoZuq3IMqXUFxcIBQGdsgg (See the Question No. 07)

OR

A **perpetual inventory system** (also known as a *continual* system) keeps track of removals from inventory on a continuous basis. When the amount on hand reaches a predefined minimum, a fixed quantity, Q, is ordered. The system provides continuous monitoring of inventory withdraws and the setting of optimal order quantity.
http://mcu.edu.tw/~ychen/op_mgm/notes/inventory.html

Question No: 39 VU-ASKARI - Please choose one

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)

Ref: MRP is a method to determine what, when, and how much component and material are required to satisfy a production plan of end products over time. A MRP system requires a great deal of information and processes in order to perform its complete logic. Planning the menu and calculating the number of servers is equivalent to creating an authorized Master Production Schedule (MPS).

[https://docs.google.com/viewer?a=v&q=cache:5iNirdn543sJ:rddmoheSr.com/output/files/E4.doc+Material+Resource+Planning+system+\(MRP\)+heps+in+effect+of+change+in+Master+Production+Schedule+\(MPS\)+on+purchasing+requirements+for+certain+suppliers,&hl=en&pid=bl&srcid=ADGEESgHS1kWFLj4pqDEhAuqiSczOdAhabpXI45Gb_KB8luxO7S920GbPNYiB71VvCjicS7PEV4AOJaf_E8roYrizVaqeqYKjwqZDguswoMAEI2Kc0q_ElCbAs4H5JjSA9IqZDs-qsf0&sig=AHIEtbRTffqec3zVL2_bQk1OS9yKM3NoBw](https://docs.google.com/viewer?a=v&q=cache:5iNirdn543sJ:rddmoheSr.com/output/files/E4.doc+Material+Resource+Planning+system+(MRP)+heps+in+effect+of+change+in+Master+Production+Schedule+(MPS)+on+purchasing+requirements+for+certain+suppliers,&hl=en&pid=bl&srcid=ADGEESgHS1kWFLj4pqDEhAuqiSczOdAhabpXI45Gb_KB8luxO7S920GbPNYiB71VvCjicS7PEV4AOJaf_E8roYrizVaqeqYKjwqZDguswoMAEI2Kc0q_ElCbAs4H5JjSA9IqZDs-qsf0&sig=AHIEtbRTffqec3zVL2_bQk1OS9yKM3NoBw)

Question No: 40 VU-ASKARI - Please choose one

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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

Ref: $K = \frac{1500 (0.8 + 0.2) (1 + 0)}{270}$ $K = \frac{1500}{270} = 5.5$ Approximately 6

Question No: 41 VU-ASKARI - Please choose one

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

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

Ref: Secondary Goals

1. Eliminate disruptions
2. Make system flexible
3. Eliminate waste, especially excess inventory (Handouts Page No. 170)

Question No: 42 VU-ASKARI - Please choose one

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

- ▶ **Logistics**
- ▶ Technology
- ▶ Automation
- ▶ Just-In-Time System

Ref: Important Characteristics of Logistics

1. Movement within the facility
2. Bar coding
3. Incoming and outgoing shipments
4. EDI (Electronic Data Interchange)
5. Distribution
6. JIT Deliveries (Handouts Page No. 175)

Question No: 43 VU-ASKARI - Please choose one

In labour-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 labour for the job to be completed
- ▶ Workers should be trained to work on a variety of machines

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

Question No: 44 VU-ASKARI - Please choose one

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

Ref: An operation with line flow is often called a flow shop

Medium- to high-volume production

Utilizes line or continuous flow processes

The back office would be the equivalent for a service provider

Tasks are easier to schedule because the jobs have a common flow pattern through the system

<https://docs.google.com/viewer?a=v&q=cache:8Oc7iSDpTFAJ:lewstoops.com/powerpoints/LMGT1349/I%2520Operations%2520Scheduling.ppt+Tasks+are+easily+scheduled+in+Medium-to->

[high+volume+production+\(Flow+shop\)&hl=en&pid=bl&srcid=ADGEESgRtRuw6NG14g6BZV4GJ0Z_afAyrNdJ-L7Z6xtrBs0OGp3nah7QweFzVg-Ou7KhWVKAvF-neZyiExR3gQLEJytg93vOUiG9JV9pLLQpLnNa5e0U6iv3f1gR0W9I_70y4dUhhBld&sig=AHIEtbTnNAGCb5wUjbw_8GJgTWbMxjmvKg](https://docs.google.com/viewer?a=v&q=cache:8Oc7iSDpTFAJ:lewstoops.com/powerpoints/LMGT1349/I%2520Operations%2520Scheduling.ppt+Tasks+are+easily+scheduled+in+Medium-to-high+volume+production+(Flow+shop)&hl=en&pid=bl&srcid=ADGEESgRtRuw6NG14g6BZV4GJ0Z_afAyrNdJ-L7Z6xtrBs0OGp3nah7QweFzVg-Ou7KhWVKAvF-neZyiExR3gQLEJytg93vOUiG9JV9pLLQpLnNa5e0U6iv3f1gR0W9I_70y4dUhhBld&sig=AHIEtbTnNAGCb5wUjbw_8GJgTWbMxjmvKg)

Question No: 45 VU-ASKARI - Please choose one

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

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

Ref: Project Manager is normally considered to have qualification such as

- PMP certification
- CFM, CFA and CFP certification (Handouts Page No. 195)

Question No: 46 VU-ASKARI - Please choose one

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

Ref: Goal of queuing analysis is to minimize the sum of two costs Customer waiting costs and Service capacity costs. (Handouts Page No. 210)

Question No: 47 VU-ASKARI - Please choose one

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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

Ref: Waiting line formulas generally require an arrival rate. **Arrival Rate** is the number of units per period (10 units per hour), which can be classified as constant and variable. "A **constant arrival** distribution is periodic, with exactly the same time between successive arrivals."

<http://www.scribd.com/doc/52427618/Waiting-Line-Management-Written-Report>

Question No: 48 VU-ASKARI - Please choose one

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

Ref: Cost effective during periods of high unemployment or when low-skilled labor is acceptable https://docs.google.com/viewer?a=v&q=cache:-VCULppndYYJ:www.csun.edu/~shternberg/MfgSys_5.ppt+During+the+period+of+high+unemployment+or+when+low-skilled+labour+is+acceptable,+which+of+the+following+strategy+would+be+cost+effective%3F+%E2%96%BA+Chase+demand+strategy+%E2%96%BA+Level+capacity+strategy+%E2%96%BA+Proactive+strategy+%E2%96%BA+Mixed+or+hybrid+strategies&hl=en&pid=bl&srcid=ADGEESipy1Thm9GmW88Myrky_rO_j2H0zgE104ei1GogrD50wwUIFMnrv5nMUkd3CeQjihA3Lgix7yLFJXejF1-ZHhm9Tjo2Rg_Ghwo4wU-f_7U6nCr_NGZz-grNtTZLRzj5T9ExZ3Dx&sig=AHIEtbT40c0pxmOkYINB4mUPsfMIicX1rg (SLIDE NO. 34)

Paper No. 07

FINAL TERM EXAMINATION
Spring 2010
MGT613- Production / Operations Management (Session - 4)
Solved By Honey G <abdulhaiee2004@gmail.com>

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Time: 90 min
Marks: 69

Question No: 1 VU-ASKARI - Please choose one

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 - service after sale (Handouts Page No. 102)

Question No: 2 VU-ASKARI - Please choose one

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

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

Ref:

http://wps.prenhall.com/bp_levine_statsexcel_5/65/16646/4261523.cw/content/index.htm
(See the Question No. 10)

Question No: 3 VU-ASKARI - Please choose one

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

Ref: H = Annual Holding cost for the item.

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

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

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

Incremental Holding Cost = 383.56 Approximately 384 (Handouts Page No. 175)

Question No: 4 VU-ASKARI - Please choose one

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)

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Ref: http://forecast.umkc.edu/ftppub/ba547/chapter_10.htm (SEE THE QUESTION NO. 01)

Question No: 5 VU-ASKARI - Please choose one

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

Ref: Requirements of a Good Forecast

- Timely
- Reliable
- Accuracy.
- Meaningful
- Written/Documented.
- Simple (Handouts Page No. 34)

Question No: 6 VU-ASKARI - Please choose one

CBR stands for which one of the following?

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

Ref: CBR denotes Center Board of Revenue (Handouts Page No. 46)

Question No: 7 VU-ASKARI - Please choose one

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

Ref: $\text{Availability} = (\text{MTBF}) / (\text{MTBF} + \text{MTR})$

$$\text{Availability} = (350) / (350+3)$$

$$\text{Availability} = 350 / 353$$

$$\text{Availability} = 0.99$$

Question No: 8 VU-ASKARI - Please choose one

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**

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Ref: http://highered.mcgraw-hill.com/sites/0072402857/student_view0/chapter10/multiple_choice_quiz.html (See the Question No.10)

Question No: 9 VU-ASKARI - Please choose one

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 (Handouts Page No. 96)

Question No: 10 VU-ASKARI - Please choose one

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

Ref: order winners are the characteristics of an organization's services that cause it to be perceived as better than the competitor's services. (Handouts Page No. 15)

Question No: 11 VU-ASKARI - Please choose one

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: TQM is an approach to business which has had a significant influence on operations. This chapter discusses seven principles of TQM: meeting the needs and expectations of customers, covering all parts of the organisation, including every person in the organisation, examining all the costs related to quality, getting things 'right first time', developing systems and procedures and developing a continuous process of improvement. http://wps.pearsoned.co.uk/ema_uk_he_slack_opsman_4/17/4473/145151.cw/index.html

Question No: 12 VU-ASKARI - Please choose one

Identify the stage of the DMAIC (Define, Measure, Analyze, Improve and Control)

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methodology which involves eliminating the root causes of non-random variation.

- ▶ Define
- ▶ Measure
- ▶ Analyze
- ▶ Improve

Ref: IMPROVE the problem by selecting a solution. Based on the identified root cause(s) in the prior step, directly address the cause with an improvement.

[https://docs.google.com/viewer?a=v&q=cache:kPRYYBV-N9YJ:media.techtarget.com/searchSoftwareQuality/downloads/ect01TreasurechestSixSigma.pdf+Identify+the+stage+of+the+DMAIC+\(Define,+Measure,+Analyze,+Improve+and+Control\)+methodology+which+involves+eliminating+the+root+causes+of+non-random+variation&hl=en&pid=bl&srcid=ADGEEShPGymMpXmByr9bioIo8dp_HH30AOCcglqhqrTqxGOmeF6w17luGijS9wEE-I3TZxfRK-jx1uEyF4-NuV914Fn9DrmlwYqAIRh71bRW9evtv2iLpCNzZyPfd0GivNqkodCXcna0&sig=AHIEtbSBV40YaQ9bTqKSBUCI_lw245bdA](https://docs.google.com/viewer?a=v&q=cache:kPRYYBV-N9YJ:media.techtarget.com/searchSoftwareQuality/downloads/ect01TreasurechestSixSigma.pdf+Identify+the+stage+of+the+DMAIC+(Define,+Measure,+Analyze,+Improve+and+Control)+methodology+which+involves+eliminating+the+root+causes+of+non-random+variation&hl=en&pid=bl&srcid=ADGEEShPGymMpXmByr9bioIo8dp_HH30AOCcglqhqrTqxGOmeF6w17luGijS9wEE-I3TZxfRK-jx1uEyF4-NuV914Fn9DrmlwYqAIRh71bRW9evtv2iLpCNzZyPfd0GivNqkodCXcna0&sig=AHIEtbSBV40YaQ9bTqKSBUCI_lw245bdA)

Question No: 13 VU-ASKARI - Please choose one

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 (Handouts Page No. 116)

Question No: 14 VU-ASKARI - Please choose one

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

Ref: Analyze the process: Ask questions about the process including process flow being logical, any activities or steps being missing or identification of duplication activities (Handouts Page No. 116)

Question No: 15 VU-ASKARI - Please choose one

Identify the correct sequence of steps in the control process.

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- (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

(Handouts Page No. 121)

Question No: 16 VU-ASKARI - Please choose one

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

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

Ref: $QBEP = FC / (R - VC)$ (Handouts Page No. 76)

Question No: 17 VU-ASKARI - Please choose one

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.
(Handouts Page No. 128)

Question No: 18 VU-ASKARI - Please choose one

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

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

Ref: Long-range plans

3. Long term capacity
 4. Location / layout
- (Handouts Page No. 133)

Question No: 19 VU-ASKARI - Please choose one

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Aggregate planning usually covers time span of how many months?

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

Ref: Aggregate planning: Intermediate-range capacity planning, usually covering 2 to 12 months. (Handouts Page No. 133)

Question No: 20 VU-ASKARI - Please choose one

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

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

Ref:

http://books.google.com.pk/books?id=Q5tWH0II0HIC&pg=PT351&dq=Annual+ordering+cost++is+inversely+related+with+order+size&hl=en&ei=8CxATZqAIYXusgaarLT7BA&sa=X&oi=book_result&ct=result&resnum=2&ved=0CCoQ6AEwAQ#v=onepage&q=Annual%20ordering%20cost%20%20is%20inversely%20related%20with%20order%20size&f=false

Question No: 21 VU-ASKARI - Please choose one

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

Ref: Net requirements: Actual amount needed in each time period. (Handouts Page No. 160)

Question No: 22 VU-ASKARI - Please choose one

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: Benefits of MRP

- Low levels of in-process inventories
- Ability to track material requirements
- Ability to evaluate capacity requirements
- Means of allocating production time (Handouts Page No. 159)

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Question No: 23 VU-ASKARI - Please choose one

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

Ref: Just-In-Time (JIT): JIT can be defined as an integrated set of activities designed to achieve high-volume production using minimal inventories (raw materials, work in process, and finished goods), JIT also involves the elimination of waste in production effort. JIT also involves the timing of production resources (i.e., parts arrive at the next workstation "just in time"). (Handouts Page No. 170)

Question No: 24 VU-ASKARI - Please choose one

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: characteristics of Lean Systems, which include:

1. Pull method of materials flow
 2. Consistently high quality
 3. Small lot sizes
 4. Uniform workstation loads
 5. Standardized components and work methods
 6. Close supplier ties
 7. Flexible workforce
 8. Line flows
 9. Maintenance
 10. Automated production
 11. Preventive maintenance
- (Handouts Page No. 166)

Question No: 25 VU-ASKARI - Please choose one

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

- Lower inventories
- Higher productivity
- Greater agility
- Shorter lead times

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- Higher profits
- Greater customer loyalty (Handouts Page No. 174)

Question No: 26 VU-ASKARI - Please choose one

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: After completing the introductory discussion on Scheduling, the students would be able to understand what scheduling is and how important it is to high volume and intermediate volume systems (Handouts Page No. 180)

Question No: 27 VU-ASKARI - Please choose one

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 (Handouts Page No. 181)

Question No: 28 VU-ASKARI - Please choose one

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

Ref: Schedule chart – A type of Gantt chart that shows the orders or jobs in progress and whether they are on schedule or not. (Handouts Page No. 182)

Question No: 29 VU-ASKARI - Please choose one

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

Ref: Job Flow Time: The length of time a job is in the shop at a particular workstation or work center. (Handouts Page No. 185)

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Question No: 30 VU-ASKARI - Please choose one

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

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

Ref: Preventive maintenance: goal is to reduce the incidence of breakdowns or failures in the plant or equipment to avoid the associated costs (Handouts Page No. 190)

Question No: 31 VU-ASKARI - Please choose one

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: Key Decisions in Project Management

- Deciding which projects to implement
- Selecting the project manager
- Selecting the project team
- Planning and designing the project
- Managing and controlling project resources
- Deciding if and when to terminate a project

<http://www.kulzick.com/stu/kdprojm.htm>

Question No: 32 VU-ASKARI - Please choose one

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. (Handouts Page No. 196)

Question No: 33 VU-ASKARI - Please choose one

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

Ref: Capacity decisions are important to all departments of the organization; an accountant would be interested in collecting cost accounting information in order to ensure that correct capacity expansion decision is reached. Similarly a financial

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manager would be interested in performing the financial analysis of whether the investment decision is justified for a plant or capacity increase. An Information Technology Manager would end up preparing data bases that would aid the organization again to decide about the capacity and last but not the least an operations manager would select strategies that would help the organization achieve the optimum capacity levels to meet the capacity demand. (Handouts Page No. 64)

Question No: 34 VU-ASKARI - Please choose one

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. <http://www.shmula.com/forecasting-unweighted-and-weighted-moving-average-model/308/>

Question No: 35 VU-ASKARI - Please choose one

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

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

Ref: Services are all intangible. For example cleaning something or delivering a pizza they are services they don't produce anything.

<http://answers.yahoo.com/question/index?qid=20090320204146AAIPtZT>

Question No: 36 VU-ASKARI - Please choose one

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: Operations Manager often focus on determinants of effective capacity by taking into account both macro and micro levels. 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. (Handouts Page No. 67)

Question No: 37 VU-ASKARI - Please choose one

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

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services?

► **Process selection**

- Process reengineering
- Process redesign
- Process design

Ref: Process Selection refers to the way an organization chooses to produce its good or services. (Handouts Page No. 77)

Question No: 38 VU-ASKARI - Please choose one

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

Ref: Gap 4:

Differences between service delivery and external communication with customer (Handouts Page No. 107)

Question No: 39 VU-ASKARI - Please choose one

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**

Ref: https://docs.google.com/viewer?a=v&q=cache:k3qdxvr-kS0J:www.cwu.edu/~bayazito/435inv.doc+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%3F+%E2%96%BA+An+order+should+be+placed+now+for+20+units+%E2%96%BA+The+current+inventory+position+is+100+units+%E2%96%BA+An+order+should+be+placed+now+for+10+units+%E2%96%BA+There+is+no+need+to+order+at+the+present&hl=en&pid=bl&srcid=ADGEESjO4ONSz5PogIq0aGik6GUCEGIByyWE5xOqjKG_9nZHzu_OXvKth63mDmWob3EfR_JJ77mhIY0AGwDc9yULYGgWmJUpxcwK5P3Tc30FRrH93wg4cbyVHuIX-Y3OTo5ZXorA-4I4&sig=AHIEtbSToKWmbdLKn6vQi99DP2tRHu7akg (See the Question No. 13)

Question No: 40 VU-ASKARI - Please choose one

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

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

Ref: In this model, the demand increases for production the inventory gets depleted. When the inventory drops to a critical point the re order process gets triggered. New order is always place for fixed quantities. On receipt of the delivery against the order the inventory level goes up <http://www.managementstudyguide.com/inventory-planning.htm>

Question No: 41 VU-ASKARI - Please choose one

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

Ref: Inventory models (1/13)

Problem

- Retailer - demand from customers
- Supplier – demand from retailers

Objective

- Minimizing total cost, or
- Maximizing revenue/profit

<http://webcache.googleusercontent.com/search?q=cache:O7mvkdH4QeEJ:madis1.iss.ac.cn/madis.files/faculty/ajli/scm/lja1.ppt+Most+inventory+models+aim+at+minimizing+Total+cost+of+inventory&cd=2&hl=en&ct=clnk&source=www.google.com>

Question No: 42 VU-ASKARI - Please choose one

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

Ref: Total Planned Inventory = Holding Containers x Units in one holding container
Total Planned Inventory = 20 x 350 = 7000 Units

Question No: 43 VU-ASKARI - Please choose one

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

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- Master production schedule

Ref: In manufacturing, eliminating the problem of too much scrap might require improving work methods, employee quality training, and supplier quality.
<http://www.scribd.com/doc/51899876/Just-In-Time>

Question No: 44 VU-ASKARI - Please choose one
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: Chose the minimum Column with highest value.

Question No: 45 VU-ASKARI - Please choose one

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

Question No: 46 VU-ASKARI - Please choose one

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

Ref: Waiting line formulas generally require an arrival rate. **Arrival Rate** is the number of units per period (10 units per hour), which can be classified as constant and variable. "A **constant arrival** distribution is periodic, with exactly the same time between successive arrivals."

<http://www.scribd.com/doc/52427618/Waiting-Line-Management-Written-Report>

Question No: 47 VU-ASKARI - Please choose one

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

- Inventory management

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

Ref: Little JIT – narrow focus Internal to organization

- a. Scheduling materials
- b. Scheduling services of production (Handouts Page No. 171)

Question No: 48 VU-ASKARI - Please choose one

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

Ref: The models differ in their attitude towards stockouts. Most authors consider either backlogs, when the demand must be fulfilled later at the expense of providing lower price or lost sales which also includes some theoretical costs (e.g., loss of goodwill, loss of profit, etc. http://en.wikipedia.org/wiki/Channel_coordination)

Paper No. 08

MIDTERM EXAMINATION
FALL 2007
MGT613 - PRODUCTION / OPERATIONS
MANAGEMENT (Session - 5)

Solved By Honey G <abdulhaiee2004@gmail.com>

Question No: 1 VU-ASKARI - Please choose one

Operations manager is responsible for all of the following except:

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

Ref: Operations Managers job responsibility includes but is not limited to:

- Forecasting
- Capacity planning
- Scheduling
- Inventory Management
- Quality Assurance and Control
- Motivating employees

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- Deciding where to locate facilities (Handouts Page No. 03)

Question No: 2 VU-ASKARI - Please choose one
The sources of competitive advantage include:

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

Ref: The special attributes or abilities that give an organization a competitive edge are:

1. Price
2. Quality
3. Time
4. Flexibility
5. Service
6. Location (Handouts Page No. 13)

Question No: 3 VU-ASKARI - Please choose one
External factors include all of the following except:

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

- Ref:**
1. Economic conditions: should include both Micro and Macro Economics.
 2. Political conditions: require the organization to carryout PEST analysis.
 3. Legal environment: relates to government regulations for investor protection.
 4. Technology: .Gap Analysis focusing market leaders in the respective field.
 5. Competition: so as to expect no free lunches or no monopolies.
 6. Markets are always free markets till proven otherwise (Handouts Page No. 16)

Question No: 4 VU-ASKARI - Please choose one

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

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

Ref: Risk There is a 25 % chance of demand of 2000 units, 50% chance of demand of 1000 units and 25 % chance of an order of 500 units (Handouts Page No. 25)

Question No: 5 VU-ASKARI - Please choose one
_____ is an optimistic approach.

- ▶ Maximin
- ▶ Maximax

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- ▶ Laplace
- ▶ Minimax regret

Ref: 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.
- Go for it strategy. (Handouts Page No. 26)

Question No: 6 VU-ASKARI - Please choose one

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

Week	Demand
1	21
2	25
3	20
4	13
5	15

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

Ref: $(21 + 25 + 20 + 13 + 15 / 5) = 94/5 = 18.8$ Units

Question No: 7 VU-ASKARI - Please choose one

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

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

Ref: Regression - technique for fitting a line to a set of points (Handouts Page No. 42)

Question No: 8 VU-ASKARI - Please choose one

Availability can be calculated by the formula:

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

Ref: Availability = $(MTBF) / (MTBF + MTR)$ (Handouts Page No. 63)

Question No: 9 VU-ASKARI - Please choose one

The formula to calculate breakeven quantity is:

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

Ref: $QBEP = FC / R - VC$ (Handouts Page No. 74)

Question No: 10 VU-ASKARI - Please choose one
_____ is a user of resources to transform inputs into some desired outputs.

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

Ref: A productive system is defined as a user of resources to transform inputs into some desired outputs (products as well as services) where as production system refers specifically to only desired output in the form of products or manufactured goods. (Handouts Page No. 5)

Paper No. 09

Final Term Paper
MGT613 - Production & Operation Management
Solved By Honey G <abdulhaiee2004@gmail.com>

Question No. 1

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

- ▶ Job Shop
- ▶ Batch processing
- ▶ Assembly line
- ▶ **Continuous processing**

Ref: http://highered.mcgraw-hill.com/sites/0073403296/student_view0/chapter7/multiple_choice_quiz.html (See the Question No. 02)

Question No. 2

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

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- ▶ Capital
- ▶ Energy
- ▶ Labor
- ▶ Machine

Ref: Capital Productivity

Units of output per Rs. input

Dollar value of output per Rs. Input (Handouts Page No. 19)

Question No. 3

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

Ref: Ordering costs: Costs of ordering and receiving inventory (Handouts Page No. 144)

Question No. 4

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

Ref: Gap 4: Differences between service delivery and external communication with customer

- Customers are influenced by what they hear and see about a company's service
- Word-of-mouth publicity and advertising are main outlets which customers open their opinions to
- 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 (Handouts Page No. 107)

Question No. 5

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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

Ref: While having representatives from different functions as team members is predicted to facilitate communication with non-team members from those functions, this structure may also create internal conflicts.

<http://docs.google.com/viewer?a=v&q=cache:CpKetaj5A98J:dspace.mit.edu/bitstream/handle/1721.1/2310/SWP-3179-22870423.pdf%3Fsequence%3D1+team+having+representatives+from+different+functional+areas+of+the+organization&hl=en&gl=pk&pid=bl&srcid=ADGEESiZz0JtbazwsFj3WOxuhpTDJ3LMgStdq5o3KAjjil6-ogLEsA07go0PRGGxnd9tFSN1EyQmfkxsF36ST6PakVPq8W0sFVgyN0kKutPRmM5vpEAOtjjM1eJkQDDCvaG0-o0P0BC5&sig=AHIEtbQPVw7bHUJDdOn5ZCFS7AOy6L3gTA>

Question No. 6

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

- ▶ Increased competition
- ▶ Reduced number of suppliers
- ▶ Technology improvement
- ▶ **Aging of the population**

Ref: Supply Chain: A sequence of activities and organizations involved in producing and delivering a good or service. Suppliers' Suppliers, Direct, Suppliers Producer, Distributor, Final Consumer are involved in Supply Chain. (Handouts Page No. 08) Whereas aging of population have no concern with supply chain and direct links with the stages in economic development.

Question No. 7

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

- ▶ Random
- ▶ Single
- ▶ Double
- ▶ **Multiple**

Ref: 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. (Handouts Page No. 128)

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Question No. 8

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

- ▶ Process layout
- ▶ Product layout
- ▶ Fixed-position layout
- ▶ All of the given options

Ref: Hybrid/Combination: A Layout that makes use of the combination of Product, Process or Fixed Position Layout. (Handouts Page No. 80)

Question No. 9

Master schedule interfaces with all of the following Except

- ▶ Capacity planning
- ▶ Resource planning
- ▶ Production planning
- ▶ Distribution planning

Ref: Master schedule: Determines quantities needed to meet demand Interfaces with

1. Marketing
 2. Capacity planning
 3. Production planning
 4. Distribution planning
- (Handouts Page No. 139)

Question No. 10

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

Ref: Total inventory cost = Carrying Cost per Unit X Average Inventory
Total inventory cost = 4 X 800 = 3200 (Handouts Page No. 137)

Question No. 11

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

Ref: Would not be feasible for industries which require highly skilled labor or where competition for labor is fierce https://docs.google.com/viewer?a=v&q=cache:-VCULppndYYJ:www.csun.edu/~shternberg/MfgSys_5.ppt+NOT+feasible+for+the+ind

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ustries+where+highly+skilled+labor+is+required+and+the+competition+for+labor+is+in
tense?+%E2%96%BA+Level+capacity+strategy+%E2%96%BA+Chase+demand+strategy
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&gl=pk&pid=bl&srcid=ADGEESipy1Thm9GmW88Myrky_rO_j2H0zgE104ei1GogrD5
0wwUIFMnrv5nMUKd3CeQjihA3Lgix7yLFJXejF1-ZHhm9Tjo2Rg_Ghwo4wU-
f_7U6nCr_NGZz-
grNtTZLRzj5T9ExZ3Dx&sig=AHIEtbQqAdK7IJQVwVSRq5N1J87rDtU19w&pli=1

Question No. 12

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

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

Ref: Customer population

The source of input to the service system

Whether the input source is finite or infinite

Whether the customers are patient or impatient

[https://docs.google.com/viewer?a=v&q=cache:](https://docs.google.com/viewer?a=v&q=cache:WLPf2G65j8J:https://www2.bc.edu/~xueme/MD021/class%2520notes/waiting%2520line%2520model.doc+Source+of+input+to+the+service+system+in+waiting+line+model+is+known+as:+%E2%96%BA+Balking+%E2%96%BA+Customer+population+%E2%96%BA+Reneging+%E2%96%BA+Waiting+population&hl=en&gl=pk&pid=bl&srcid=ADGEESjJh8poq7DY9MZ7aCTCF0BC0vVETqCQaD4r91XNgmq0mPtQSGsA9XcZhvldKKUze_hBLbD7-S-WTcoe88FR6SMsK22IWtBU-Y2sb2FMbf2tc7HEg67G84eMPnbWV7IG_XXo2mYM&sig=AHIEtbTtC2a3HGt4P36WNRbceU-cEcQW6w&pli=1)

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Question No. 13

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

Question No. 14

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

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systems?

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

Ref: The management believes that the best way to get what they want is to help their employees get what they want and vice versa. In short the Japanese management respect each employee's dignity, human rights and privacy; never permit any discrimination toward employees; provide all with equal employment opportunities; and endeavor to create comfortable workplaces for all employees.

https://docs.google.com/viewer?a=v&q=cache:Ldbz-O5lQGkJ:www.qurtuba.edu.pk/jms/default_files/JMS/1_1/1_qadar_bakhsh.pdf+Respect+for+worker+Japanese+management+system&hl=en&gl=pk&pid=bl&srcid=ADGEESH_P_qUgL2d0BrIk_oJwKy5tR10Sj7dsj0cB-5cNqYY0Q_ojf3XEqwIo9FOqbIOO_Vxz6rcq9enq2H0Nhyl3xvWYX3uw95w3PdIKuC04hHsM5lDZurxQ0ndqET548THOLuJVeIHk&sig=AHIEtbSQ-TpE0kgr8pUcvkj7YMI3j3OJvg

Question No. 15

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

Ref: you will find opportunities for improvement by adopting some or all of the following actions, among others, to minimize the "Bullwhip Effect" and increase business performance.

Minimize the cycle time in receiving projected and actual demand information.

Establish the monitoring of actual demand for product to as near a real time basis as possible.

Understand product demand patterns at each stage of the supply chain.

https://docs.google.com/viewer?a=v&q=cache:bgAh5lvrt-cJ:www.idii.com/wp/donovan_sc_part3.pdf+how+bullwhip+effect+can+be+minimize&hl=en&pid=bl&srcid=ADGEESH_tuBHoaZ1oaLI2QYiCSQc7QGw0_RJTrlakipRseyDr1uW-F-wOj58wS09s8ghLYtM4tVYS23xsnPzwhNI4O7cvUFvO3Jd-nv7mZpnpn8lUPC7b3wx_X1R8c3_kBpY0ZLLrvY1&sig=AHIEtbRnImOgrm5FEeOUhELZRNNzuiLOEg

Question No. 16

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

- ▶ Supplier kanban

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- ▶ Material kanban
- ▶ Withdrawal kanban
- ▶ Production kanban

Ref: Production kanban authorizes production

https://docs.google.com/viewer?a=v&q=cache:km2UG-2VOvsJ:repo.kuliah.uajy.ac.id/481/JIT_Odd_2010-2011_by_Laks/Kanban_JIT_Odd_2010-2011_.pdf+Which+of+the+following+is+a+type+of+kanban+that+authorizes+the+production+of+goods%3F+%E2%96%BA+Supplier+kanban+%E2%96%BA+Material+kanban+%E2%96%BA+Withdrawal+kanban+%E2%96%BA+Production+kanban&hl=en&gl=pk&pid=bl&srcid=ADGEESiO8-DYD05fBp5oql6zuXTSSoGui8yr36pMWhMQjsOWwP18CJuAa0YRPxogXeN442OFPInY2PP03MdoL4H2OfNC_87D-NI-VbMeuSn_Vw4QwSaPT2l_LnvmyTSloyf3ncuyJAvs&sig=AHIEtbTnZ2bN-BAjYkQNZ0dbhqHPpMSSVA

Question No. 17

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

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

Ref: Project Manager is normally considered to have qualification such as

- PMP certification
- CFM, CFA and CFP certification (Handouts Page No. 195)

Question No. 18

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

Ref: Important Characteristics of Logistics

1. Movement within the facility
2. Bar coding
3. Incoming and outgoing shipments
4. EDI (Electronic Data Interchange)
5. Distribution
6. JIT Deliveries (Handouts Page No. 175)

Question No. 19

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

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quality award?

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

Ref:

http://books.google.com/books?id=pq4k3EaFzMYC&pg=PA264&lpg=PA264&dq=selecting+winners+for+a+quality+award&source=bl&ots=_EnFB3GC_w&sig=RZSwWTDdQ3JaUFFiZL22efpuO8&hl=en&ei=iWMYTqe8FtDHsgaK4YioDw&sa=X&oi=book_result&ct=result&resnum=7&ved=0CEQQ6AEwBg#v=onepage&q=selecting%20winners%20for%20a%20quality%20award&f=false

Question No. 20

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

Ref: An over view of the capacity planning process includes the following.

1. The Master schedule is first tested for feasibility and possibly adjusted before it becomes permanent.
2. The proposed schedule is processed using MRP to ascertain the materials requirements the schedule would generate.
3. These are then translated into capacity requirements in the form of load reports for each departments or work centres.
4. The initial schedule may or may not be feasible given the limits of production or availability of materials.
5. Also, with the aid of Time fences (the series of time intervals during which order changes are allowed or restricted) a feasible schedule may be finalized. (Handouts Page No. 162)

Question No. 21

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

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

Ref: Services are all intangible. For example cleaning something or delivering a pizza they are services they don't produce anything.

<http://answers.yahoo.com/question/index?qid=20090320204146AAIPtZT>

Question No. 22

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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. (Handouts Page No. 196)

Question No. 23

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: After completing the introductory discussion on Scheduling, the students would be able to understand what scheduling is and how important it is to high volume and intermediate volume systems (Handouts Page No. 180)

Question No. 24

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: Benefits of MRP

- Low levels of in-process inventories
- Ability to track material requirements
- Ability to evaluate capacity requirements
- Means of allocating production time (Handouts Page No. 159)

Question No. 25

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

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

Ref: So $QBEP = FC / R - VC$ (Handouts Page No. 74)

Question No. 26

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**

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

Ref:

http://www2.cob.ilstu.edu/achoudh/choudhury/classes/Mqm227/ch09_classnote_1.pdf

Question No. 27

Which of following statement is true about effective capacity?

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

Ref: Effective capacity is always less than design capacity (See the Slide No. 2)

https://docs.google.com/viewer?a=v&q=cache:3TTv7TR3u4EJ:timurdhaka.weebly.com/uploads/5/4/0/2/5402479/capacity_planning.ppt+effective+capacity+is+always+less+than+designed+capacity&hl=en&gl=pk&pid=bl&srcid=ADGEESj3gppHvaySuqfjRQILJIV5EkPdM5xxBalXv5C_Y-h4QDdsvVh__Io9TSs9MntITUCAfLMzIDK_RrJrBIOCgxd7z9UIDFTLpYhwJspOoAW2mPcvxZz9Q3oht5DwLJIWSFpY9s&sig=AHIEtbQ5T2As10mQ_fKjkiHwkMyJGG4hQw

Paper No. 10

FINAL TERM EXAMINATION
Fall 2008

MGT613- Production / Operations Management (Session - 2)

Solved By Honey G <abdulhaiee2004@gmail.com>

Question No: 1 VU-ASKARI- Please choose one

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

- ▶ Machine
- ▶ Capital
- ▶ **Energy**
- ▶ Labor

Ref: Energy Productivity:

- Units of output per kilowatt-hour
- Rupee value of output per kilowatt-hour (Handouts Page No. 19)

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Question No: 2 VU-ASKARI- Please choose one

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

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

Ref: Steps in the Forecasting Process:

- **Determine the purpose of the forecast:** meaning what is the purpose and when will it be required. This will provide the level of detail for resources required man, machine, time and capital.
- **Establish a time horizon:** We already know that as time increases the accuracy of the Forecast decreases.
- **Select a forecasting technique:** whether qualitative or quantitative
- **Gather and analyze the appropriate data:** It goes without saying that before a forecast can be delivered data is required. The closer the real life data more realistic would be the forecast. This may be the time when you would like to identify the important assumptions and suppositions.
- **Prepare the forecast:**
- **Monitor the forecast:** A forecast has to be closely monitored to determine whether it is fulfilling its basic purpose. This helps in re-examining the method, assumptions and validity of the data and preparing a revised forecast.

Question No: 3 VU-ASKARI- Please choose one

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**

Ref: Minimax Regret: Determines the worst regret for each alternative (Handouts Page No. 27)

Question No: 4 VU-ASKARI- Please choose one

Given the table:

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

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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: Take average for each alternative and choose the alternative with best average.

Small facility = $10000 + 8000 = 18000 / 2 = 9000$

Medium facility = $12000 + 20000 = 32000 / 2 = 16000$

Large facility = $18000 + 15000 = 33000 / 2 = 16500$

Question No: 5 VU-ASKARI- Please choose one

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

Ref: Moving average – A technique that averages a number of recent actual values, updated as new values become available. (Handouts Page No. 37)

Question No: 6 VU-ASKARI- Please choose one

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

- ▶ **Minimum cost and optimal operating rate are functions of size of plant.**
- ▶ Minimum cost and optimal operating rate are functions of fixed cost.
- ▶ Minimum cost and productivity are functions of size of plant.
- ▶ Maximum cost and optimal operating rate are functions of size of plant.

Ref: Evaluating Alternatives

- As the general capacity of the plant increases, the optimal output rate increases and the minimum cost for the optimal rate decreases.
- This is the prime reason why larger plants tend to have higher optimal output rates and lower minimum costs than smaller plants. (Handouts page No. 69)

Question No: 7 VU-ASKARI- Please choose one

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

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

$QBEP = 10000 / (7-5)$

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QBEP = 10000/2

QBEP = 5000 Units

Question No: 8 VU-ASKARI- Please choose one

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

- ▶ Job shop
- ▶ **Assembly line**
- ▶ Batch
- ▶ Automation

Ref: Before discussing JIT look at in-line assembly systems (traditionally used in **high volume car manufacture**)

http://webcache.googleusercontent.com/search?q=cache:rJ2HjqtUCIQJ:www.ocr.org.uk/download/sm/ocr_13258_sm_gce_unit_f524.doc+%22manufacturing+process%22+for+%22high+volume+car+manufacture?%22&hl=en

Question No: 9 VU-ASKARI- Please choose one

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

- ▶ High lead times
- ▶ Short process times
- ▶ The ability to handle high variety
- ▶ **The ability to handle high volumes**

Ref:

http://wps.pearsoned.co.uk/ema_uk_he_slack_opsman_4/17/4472/1144864.cw/index.htm
(In Multiple Choice Questions See the Question No. 11)

Question No: 10 VU-ASKARI- Please choose one

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

- ▶ **Process selection**
- ▶ Process reengineering
- ▶ Process redesign
- ▶ Process design

Ref: Process Selection refers to the way an organization chooses to produce its good or services. (Handouts Page No. 77)

Question No: 11 VU-ASKARI- Please choose one

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

- ▶ Customer satisfaction and variety
- ▶ **Customer satisfaction and profitability**
- ▶ Reliability and variety
- ▶ Quality and reliability

Ref: <http://www.docstoc.com/docs/19583340/Chapter-4-product-and-service-designppt>

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(See the Slide No. 14)

Question No: 12 VU-ASKARI- Please choose one

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. (Handouts Page No. 33)

Question No: 13 VU-ASKARI- Please choose one

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

- ▶ Armand Feigenbaum
- ▶ Genichi Taguchi
- ▶ Joseph Juran
- ▶ **Frank Gilbreth**

Ref: Quality Guru:

- Armand Feigenbaum said, "Quality is a total field or total function"
- Genichi Taguchi –robust design for designing products insensitive to change in environment.
- Joseph M. Juran is famous for his concept of "Quality is the fitness for use".
(Handouts Page No. 102)

Question No: 14 VU-ASKARI- Please choose one

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

Ref: Often organizations use a performance measure matrix using the same service dimensions and they often call it RATE based on the 5 dimensions described below.

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. (Handouts Page No. 105)

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Question No: 15 VU-ASKARI- Please choose one

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

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

Ref: Normally in such situations, R represents Reliability and Responsiveness, A represent Assurance, T represents Tangibles and E represents Empathy respectively. (Handouts Page No. 105)

Question No: 16 VU-ASKARI- Please choose one

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

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

Ref: Poka-Yoke: Poka Yoke (pronounced POH-kah YOH-kay) is the Japanese word for mistake proof. In services, a simple mistake can have dire consequences, think of a hair dresser or stylist giving you a wrong haircut. His mistake cannot be rectified because service again is an entity which is based on transaction between the service provider and service receiver. (Handouts Page No. 107)

Question No: 17 VU-ASKARI- Please choose one

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

- ▶ Failure cost
- ▶ Prevention cost
- ▶ Appraisal cost
- ▶ Management cost

Ref: Juran later highlighted the traditional tradeoffs that contrast prevention plus appraisal costs with failure costs (Juran, 1962).

https://docs.google.com/viewer?a=v&q=cache:LnNn6SzEF1QJ:citeseerx.ist.psu.edu/viewdoc/download%3Fdoi%3D10.1.1.84.7644%26rep%3Drep1%26type%3Dpdf+Which+of+the+following+is+NOT+included+in+Juran%E2%80%99s+classification+of+costs+of+quality%3F+%E2%96%BA+Failure+cost+%E2%96%BA+Prevention+cost+%E2%96%BA+Appraisal+cost+%E2%96%BA+Management+cost&hl=en&pid=bl&srcid=ADGEEShZRQ4J2gt68pYjLG_H_huJ2MIHgapM12Wpq19s98DxA6E3fiZBIUb2cMXkimppUd8ixzXSiPyYmp914QJ0lEhwaOPH1hJygxji6bt0mJoEq-gdeNeVsCtuP3h9T2urQbxc-M4&sig=AHIEtbTbMFMMVfx58oy-13Hngl30MSupFQ

Question No: 18 VU-ASKARI- Please choose one

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

- ▶ Competitive benchmarking

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- ▶ Inspection
- ▶ **Six Sigma**
- ▶ Statistical process control

Ref: Six Sigma Programs are always directed towards quality improvement, cost cutting and time saving. (Handouts Page No. 114)

An international training and consulting firm that helps organizations save money and increase revenues through Six Sigma business process improvement.

[https://docs.google.com/viewer?a=v&q=cache:uqAG0oxexi4J:www.bptrends.com/publicationfiles/10-](https://docs.google.com/viewer?a=v&q=cache:uqAG0oxexi4J:www.bptrends.com/publicationfiles/10-04%2520WP%2520Leveraging%2520BPM%2520and%2520Six%2520Sigma%2520-%2520Breyfogle.pdf+Six+Sigma+refers+to+a+company+wide+initiative+to+reduce+costs+through+process+efficiency+and+increase+revenues+through+process+effectiveness&hl=en&gl=pk&pid=bl&srcid=ADGEESjdoaeQRiaF_JKjTG3qNJrdtjRm1_Q2BodGENKazYFtbVy01Gn8tuur-AEX6I0QiRCwMffCLpnV_ql67e7t7eSyM7W-aYRB_KVB2iNzZvf8A0oKcPKCU_yGPbaP8tpNM5nMn0-&sig=AHIEtbQdrNdtz4cy3-Q9arwUwnrIsYn1Rg)

[04%2520WP%2520Leveraging%2520BPM%2520and%2520Six%2520Sigma%2520-%2520Breyfogle.pdf+Six+Sigma+refers+to+a+company+wide+initiative+to+reduce+costs+through+process+efficiency+and+increase+revenues+through+process+effectiveness&hl=en&gl=pk&pid=bl&srcid=ADGEESjdoaeQRiaF_JKjTG3qNJrdtjRm1_Q2BodGENKazYFtbVy01Gn8tuur-AEX6I0QiRCwMffCLpnV_ql67e7t7eSyM7W-aYRB_KVB2iNzZvf8A0oKcPKCU_yGPbaP8tpNM5nMn0-&sig=AHIEtbQdrNdtz4cy3-Q9arwUwnrIsYn1Rg](https://docs.google.com/viewer?a=v&q=cache:uqAG0oxexi4J:www.bptrends.com/publicationfiles/10-04%2520WP%2520Leveraging%2520BPM%2520and%2520Six%2520Sigma%2520-%2520Breyfogle.pdf+Six+Sigma+refers+to+a+company+wide+initiative+to+reduce+costs+through+process+efficiency+and+increase+revenues+through+process+effectiveness&hl=en&gl=pk&pid=bl&srcid=ADGEESjdoaeQRiaF_JKjTG3qNJrdtjRm1_Q2BodGENKazYFtbVy01Gn8tuur-AEX6I0QiRCwMffCLpnV_ql67e7t7eSyM7W-aYRB_KVB2iNzZvf8A0oKcPKCU_yGPbaP8tpNM5nMn0-&sig=AHIEtbQdrNdtz4cy3-Q9arwUwnrIsYn1Rg)

Question No: 19 VU-ASKARI- Please choose one

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

- ▶ Control chart
- ▶ **Operating characteristic curve**
- ▶ Learning curve
- ▶ X bar charts

Ref: Operating Characteristic Curve

Important criteria of sampling plan are how it discriminates between lots of high and low quality.

- The ability of a Sampling Plan to discriminate is described by its OC.
- The degree to which a sampling plan discriminates between good and bad lots is a function of steepness of the curve
- The ideal plan would require 100 % inspection of each lot. (Handouts Page No. 129)

Question No: 20 VU-ASKARI- Please choose one

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

Ref: Total cost of inventory = total units x carrying cost per unit

Total cost of inventory = 1000 x 5 = 5000

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Question No: 21 VU-ASKARI- Please choose one

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

- ▶ Rs. 150
- ▶ Rs. 302
- ▶ **Rs. 600**
- ▶ Rs. 298

Ref: Back Order Cost = Back Order Cost per Unit x Number of Backorder Units

Back Order Cost = 2 x 300

Back Order Cost = 600

Question No: 22 VU-ASKARI- Please choose one

EOQ stands for which of the following?

- ▶ **Economic Order Quantity**
- ▶ Equal Order Quantity
- ▶ Economic Output Quantity
- ▶ Equal Output Quantity

Question No: 23 VU-ASKARI- Please choose one

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

- ▶ **Group A**
- ▶ Group B
- ▶ Group C
- ▶ Group X

Ref: Group A consists of High Rupee (Monetary) Value, which account for a small portion about 10% of the total inventory usage. (Handouts Page No. 144)

Question No: 24 VU-ASKARI- Please choose one

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

- ▶ Shortage cost
- ▶ **Carrying cost**
- ▶ Ordering cost
- ▶ None of the above

Ref: When keeping inventory, there are always some cost incurred Inventory holding cost (or carrying cost):

- The variable cost of keeping items on hand
- \$/ unit-period

https://docs.google.com/viewer?a=v&q=cache:PdxlWIDhnG0J:e-learning.tu.ac.th/IM322/doc_download/im322_1_071250.pdf+carrying+cost+is+the+variable+cost+of+keeping+items+on+hand&hl=en&gl=pk&pid=bl&srcid=ADGEESHg5KRMtAtX7BKPA6Cd8u3L0oRVZNBml0zhEn-oiMrg-AV7Em-q-ZzApld09ubYrVquNHITv-WyVaF7B-9dtg0udUYp5Nv3Tvr0SjBp1dPe-C3dho3-

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7nuZ6_0yvgZ4vQ11oNfA&sig=AHIEtbQREX1sxW8Q5BW2_-GfD0uTno2bpA

Question No: 25 VU-ASKARI- Please choose one

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

Ref: Two bin system: **Inventory control method** (used usually for small or low value items) in which when the first bin is used up, an order is made out for replenishment. The second bin contains enough quantity of the item to last until the ordered quantity arrives. <http://www.businessdictionary.com/definition/two-bin-system.html>

Question No: 26 VU-ASKARI- Please choose one

Which of the following statements is CORRECT about master schedule?

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

Ref:

http://books.google.com/books?id=kNRkTmMCXDSC&pg=PA673&lpg=PA673&dq=master+schedule+is+visible+to+all+levels+of+management&source=bl&ots=mp98tz-HS7&sig=jf6lBNQN9TAn4YSIVGFg7eEFhdY&hl=en&ei=hwBrTPW6JZKqugPyhaDTDw&sa=X&oi=book_result&ct=result&resnum=1&ved=0CBIQ6AEwAA#v=onepage&q=master%20schedule%20is%20visible%20to%20all%20levels%20of%20management&f=false

Question No: 27 VU-ASKARI- Please choose one

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

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

Ref:

http://books.google.com.pk/books?id=YcBhcTC0qGMC&q=Exception+reports.+Data+on+any+major+discrepancies+encountered&dq=Exception+reports.+Data+on+any+major+discrepancies+encountered&hl=en&ei=V-ToTd3fG5Hm-gaM2InVDw&sa=X&oi=book_result&c

Question No: 28 VU-ASKARI- Please choose one

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

- ▶ **Setup cost to unit holding cost per period**

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- ▶ Setup cost to unit stock out cost per period
- ▶ Setup cost to unit shortage cost per period
- ▶ Setup cost to annual ordering cost per period

Ref: Economic Part Period (EPP) is the ratio of setup costs to the cost of hold a unit for one period. (Handouts Page No. 158)

Question No: 29 VU-ASKARI- Please choose one

JIT stands for which of the following?

- ▶ Just In Time
- ▶ Just In Test
- ▶ Job In Time
- ▶ Job Inventory Time

Ref: Just-In-Time (JIT): JIT can be defined as an integrated set of activities designed to achieve high-volume production using minimal inventories (raw materials, work in process, and finished goods). (Handouts Page No. 170)

Question No: 30 VU-ASKARI- Please choose one

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

Ref: Just-In-Time (JIT): JIT can be defined as an integrated set of activities designed to achieve high-volume production using minimal inventories (raw materials, work in process, and finished goods), JIT also involves the elimination of waste in production effort. JIT also involves the timing of production resources (i.e., parts arrive at the next workstation "just in time"). (Handouts Page No. 170)

Question No: 31 VU-ASKARI- Please choose one

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

- ▶ Inventory record
- ▶ Time fences
- ▶ Load report
- ▶ Capacity report

Ref: The Master schedule is first tested for feasibility and possibly adjusted before it becomes permanent. (Handouts Page No. 161)

Question No: 32 VU-ASKARI- Please choose one

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

- ▶ A method in which the production of the items begins in advance of customer needs
- ▶ A method in which customer demand activates the production of the item
- ▶ A method in which the production of items begins in response to the

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competitor's needs

- ▶ A method in which items are produced according to the resources available

Ref: Pull Method: A method in which customer demand activates production of the service or item. (See the Slide No. 09)

<https://docs.google.com/viewer?a=v&q=cache:MrObUKTMkeoJ:business.fullerton.edu/management/gmanoochehri/mgt339/KR-PP/KR-Ch9E.ppt+A+method+in+which+customer+demand+activates+production+of+the+service+or+item&hl=en&gl=pk&pid=bl&srcid=ADGEEShGgwmOs4nLaDQ90SCiww0IVehgoMbfrJTKKiCrHoZN3qWslAZcxfS9SkP2j996fump28KX0Ac5plzKn3pa5PnLGSB5U4-nzMRDvcjXa3aMgCuEw1y79fSYisoUliqLWB0FnCoh&sig=AHIEtbTAUd1yYgA643idIX8WX8p5O1hQPg>

Question No: 33 VU-ASKARI- Please choose one

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

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

Ref: Just In Time Production or Lean Production systems focus on the efficient delivery of products or services. Some of the distinguishing elements of the JIT systems are a pull method to manage material flow, consistently high quantity, small lot sizes, uniform work station loads. (Handouts Page No. 164)

Question No: 34 VU-ASKARI- Please choose one

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

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

Ref: Benefits of JIT Systems

1. Reduced inventory levels
2. High quality
3. Flexibility
4. Reduced lead times
5. Increased productivity (Handouts page No. 172)

Question No: 35 VU-ASKARI- Please choose one

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

- ▶ Value chain
- ▶ Demand chain

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- ▶ Process chain
- ▶ **Supply chain**

Ref: Supply Chain: The sequence of organization's facilities, functions, and activities that are involved in producing and delivering a product or service. (Handouts Page No. 174)

Question No: 36 VU-ASKARI- Please choose one

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**
- ▶ Procurements
- ▶ Shipment
- ▶ Movement

Ref: 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. (Handouts Page No. 174)

Question No: 37 VU-ASKARI- Please choose one

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

Ref: Input/Output Control Chart – A type of Control Chart that shows management of work flow and queues at the work centres (Handouts Page No. 182)

Question No: 38 VU-ASKARI- Please choose one

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

- ▶ Scheduling
- ▶ **Sequencing**
- ▶ Loading
- ▶ Leading

Ref: Sequencing: Determine the order in which jobs at a work center will be processed. (Handouts Page No. 184)

Question No: 39 VU-ASKARI- Please choose one

Successful project management includes all of the following factors EXCEPT:

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

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Ref: What are the Key Success Factors?

1. Top-down commitment
 2. Having a capable project manager
 3. Having time to plan
 4. Careful tracking and control
 5. Good communications
- (Handouts Page No. 192)

Question No: 40 VU-ASKARI- Please choose one

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

Ref: PERT: Program Evaluation and Review Technique (Handouts Page No. 196)

Question No: 41 VU-ASKARI- Please choose one

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

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

Ref: Used to determine

1. Expected project duration
 2. Slack time
 3. Critical path
- (Handouts Page No. 198)

Question No: 42 VU-ASKARI- Please choose one

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

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

Ref: Network activities

1. ES: early start
 2. EF: early finish
 3. LS: late start
 4. LF: late finish
- (Handouts Page No. 198)

Paper No. 11

FINAL TERM EXAMINATION

Spring 2010

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MGT613- Production / Operations Management (Session - 4)

SOLVED BY MAHA SHAH

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Question No: 1 VU-ASKARI- Please choose one

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.

Question No: 2 VU-ASKARI- Please choose one

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

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

Ref:

http://wps.prenhall.com/bp_levine_statsexcel_5/65/16646/4261523.cw/content/index.html
1 (See the Question No. 10)

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Question No: 3 VU-ASKARI- Please choose one

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

Ref: JIT/Lean Production Features:

- By eliminating waste (muda), quality is improved, production time is reduced and cost is reduced.
- "Pull" production (by means of Kanban).
- While some believe that Lean Manufacturing is a set of problem solving tools.
- In addition, experts in this field believe that philosophy-based Lean Manufacturing strategy is the most effective way to launch and sustain lean activities. (Handouts Page No. 164)

Question No: 4 VU-ASKARI- Please choose one

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

Ref:

http://docs.google.com/viewer?a=v&q=cache:jTF6w497_WMJ:www.wiley.com/college/sc/reid/chap5.pdf+Identify+the+correct+sequence+of+steps+in+Deming+wheel.&hl=en&gl=pk&pid=bl&srcid=ADGEESHHR2sG6G2zcGWgstXsYdwQCZwRFSGUs3r2_1mTepmxs0urVL1oLMjMqS2C3DCQtjcCI5MBw8lISm11stlo3jFYMIXRI6quDtdTAqmY0UnkxmVnOEZPjPMWGmMmUEBpKT184qTx&sig=AHIEtbRFLvtvZmkTBe1PQSZgtXrRP3mCHA

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Question No: 5 VU-ASKARI- Please choose one

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

- ▶ Supplier kanban
- ▶ Material kanban
- ▶ Withdrawal kanban

▶ **Production kanban**

Ref:

http://docs.google.com/viewer?a=v&q=cache:q09orEXbgIcJ:www.icaen.uiowa.edu/~je166/Private/Lecture/Ch8-Kanban.pdf+production+kanban&hl=en&gl=pk&pid=bl&srcid=ADGEEShH6jvEQt_1JHpDjkhvn2QRLkOFOWM-EOh25g972KvMqN4udcX7ROddBKYvE6T-wa43NcfWPw_oS_GMrnXX8jDPUfOmYdtfWRFJQ-m-z87-Y2ONSsSqSwA1ZDpHdHneiMexCq1S&sig=AHIEtbTeyLGAwUc4spRXkkLELRAfRd3qww

Question No: 6 VU-ASKARI- Please choose one

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

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

Ref: Life Cycle Strategies are based on Demand. http://www.hammertap.com/nl_0050/

Question No: 7 VU-ASKARI- Please choose one

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

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► 2.0

► **0.99**

► 0.006

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

= (300)/(300+2)

=0.99

Question No: 8 VU-ASKARI- Please choose one

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

Question No: 9 VU-ASKARI- Please choose one

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

Ref: Inventory turnover ratio = Cost of goods sold / Average inventory

Question No: 10 VU-ASKARI- Please choose one

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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

Ref: Center of gravity method: The center of gravity method is used to determine the location of a single distribution center that will minimize distribution costs. The quantity to be shipped to each destination is assumed to be fixed

Question No: 11 VU-ASKARI - Please choose one

The quality guru Kaoru Ishikawa is famous for:

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

Question No: 12 VU-ASKARI - Please choose one

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

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

Question No: 13 VU-ASKARI - Please choose one

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. <http://www.shmula.com/forecasting-unweighted-and-weighted-moving-average-model/308/>

Question No: 14 VU-ASKARI - Please choose one

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

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- ▶ 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**

Question No: 15 VU-ASKARI - Please choose one

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

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

Question No: 16 VU-ASKARI - Please choose one

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)

Ref:

Average Outgoing Quality (AOQ): Average of rejected lots and accepted lots

Question No: 17 VU-ASKARI - Please choose one

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: 15/15 quiz

Question No: 18 VU-ASKARI - Please choose one

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

Question No: 19 VU-ASKARI - Please choose one

For which of the following purpose master schedule determines quantities?

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

Question No: 20 VU-ASKARI - Please choose one

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**

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- ▶ 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. (Handouts Pg# 157)

Question No: 21 VU-ASKARI - Please choose one

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. (Handouts Pg# 161)

Question No: 22 VU-ASKARI - Please choose one

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

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

Question No: 23 VU-ASKARI - Please choose one

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.

Question No: 24 VU-ASKARI - Please choose one

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

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

Ref:

Loading - assignment of jobs to process center

Question No: 25 VU-ASKARI - Please choose one

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**

Ref:

input/Output Control Chart –

A type of Control Chart that shows management of work flow and queues at the work centers

Question No: 26 VU-ASKARI - Please choose one

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

Question No: 27 VU-ASKARI - Please choose one

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**

Ref:

•Quality-based strategies

Focuses on maintaining or improving the quality of an organization's products or services

Quality at the source

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Question No: 28 VU-ASKARI - Please choose one

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. (Handouts Pg# 37)

Question No: 29 VU-ASKARI - Please choose one

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**

Ref: A popular managerial view is that the Quality Function should be deployed at the source or at the design stage. We also should know what 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. (Handouts Pg# 55)

Question No: 30 . VU-ASKARI - Please choose one

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

Ref: Prevention costs:

- Quality planning
- Training program
- Quality audits
- Data acquisition and analysis
- Recruitment and selection
- Supplier evaluation (Handouts Pg# 109)

Question No: 31 VU-ASKARI - Please choose one

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

- ▶ Black belts
- ▶ Green belts
- ▶ Top management

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Ref:

Scheduled Receipts ("SR") – sometimes called "open orders". These are orders that have been placed but not yet completed/received.

Question No: 35 . VU-ASKARI - Please choose one

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**

Ref:

<http://www.flashcardmachine.com/operations-management-ch15.html>

Question No: 36 VU-ASKARI - Please choose one

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

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

Question No: 37 VU-ASKARI - Please choose one

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

Ref: $1500/270 = 6$

Question No: 38 VU-ASKARI - Please choose one

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.(Pg#.172)

Question No: 39 VU-ASKARI - Please choose one

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

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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

Question No: 40 . VU-ASKARI - Please choose one

An operations manager of an airline industry schedules the arrival and departure of flights by working ahead from 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 than the requested due date because forward scheduling schedules the tasks as early as possible.

Question No: 41 VU-ASKARI - Please choose one

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

Ref: An operation with line flow is often called a flow shop

Medium- to high-volume production

Utilizes line or continuous flow processes

The back office would be the equivalent for a service provider

Tasks are easier to schedule because the jobs have a common flow pattern through the system

[https://docs.google.com/viewer?a=v&q=cache:8Oc7iSDpTFAJ:lewstoops.com/powerpoints/LMGT1349/I%2520Operations%2520Scheduling.ppt+Tasks+are+easily+scheduled+in+Medium-to-high+volume+production+\(Flow+shop\)&hl=en&pid=bl&srcid=ADGEESgRtRuw6NG14g6BZV4GJ0Z_afAyrNdJ-L7Z6xtrBs0OGp3nah7QweFzVg-Ou7KhWVKAvF-neZyiExR3gQLEJytg93vOUiG9JV9pLLQpLnNa5e0U6iv3f1gR0W9L_70y4dUhhBld&sig=AHIEtbTnNAGCb5wUjbw_8GJgTWbMxjmvKg](https://docs.google.com/viewer?a=v&q=cache:8Oc7iSDpTFAJ:lewstoops.com/powerpoints/LMGT1349/I%2520Operations%2520Scheduling.ppt+Tasks+are+easily+scheduled+in+Medium-to-high+volume+production+(Flow+shop)&hl=en&pid=bl&srcid=ADGEESgRtRuw6NG14g6BZV4GJ0Z_afAyrNdJ-L7Z6xtrBs0OGp3nah7QweFzVg-Ou7KhWVKAvF-neZyiExR3gQLEJytg93vOUiG9JV9pLLQpLnNa5e0U6iv3f1gR0W9L_70y4dUhhBld&sig=AHIEtbTnNAGCb5wUjbw_8GJgTWbMxjmvKg)

Question No: 42 VU-ASKARI - Please choose one

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

SCHEDULING JOBS FOR MULTIPLE WORKSTATIONS

When a workstation becomes idle, an appropriate priority rule is applied to the jobs waiting for that operation, and the job with the highest priority is selected

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Question No: 43 VU-ASKARI - Please choose one

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 (Handouts Pg#. 194)

Question No: 44 VU-ASKARI - Please choose one

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. (Pg#209)

Question No: 45 VU-ASKARI . - Please choose one

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

Question No: 46 VU-ASKARI - Please choose one

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. (Pg#135)

Question No: 47 VU-ASKARI - Please choose one

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

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Question No: 48 VU-ASKARI - Please choose one

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

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

Ref:

http://docs.google.com/viewer?a=v&q=cache:7ZEOkK-B508J:www.sonoma.edu/users/a/atkint/bus316spring/rchap9.ppt+chase+demand+strategy+example&hl=en&gl=pk&pid=bl&srcid=ADGEESiZLJKGpmXCPwzw9Rbmw-DINUxduuDKEHITliajMlc61sN_dLP50KA5w1KDtHYdE5uso0NiMBYb9kk57YwKKuqoWlpcc7glbOeCOeL6H1cW2gr_FiyliIjoEj30z9KAZJIFmtD3&sig=AHIEtbRZRamBM0ZucEgfoOVhIZQ9su1RgQ

Paper No. 12

FINAL TERM EXAMINATION

Fall 2010

MGT613- Production / Operations Management

SOLVED BY MAHA SHAH

[<maha.shah.askari@gmail.com>](mailto:maha.shah.askari@gmail.com)

Time: 120 min

Question No: 1 VU-ASKARI - Please choose one

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

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

Question No: 2 VU-ASKARI - Please choose one

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

- ▶ Capital
- ▶ **Energy**
- ▶ Labor
- ▶ Machine

Ref:

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Energy productivity: units of the output per kilowatt hour
Rupee value of output per kilowatt hour

Question No: 3 VU-ASKARI - Please choose one

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

Question No: 4 VU-ASKARI - Please choose one

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

Question No: 5 VU-ASKARI - Please choose one

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. <http://www.shmula.com/forecasting-unweighted-and-weighted-moving-average-model/308/>

Question No: 6 VU-ASKARI - Please choose one

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 weightage

Ref: One disadvantage of using moving averages for forecasting is that in calculating the average all the observations are given equal weight. <http://people.brunel.ac.uk/~mastjjb/jeb/or/forecast.html>

Question No: 7 VU-ASKARI - Please choose one

Which of following statement is true about effective capacity?

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

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► **It is always less than designed capacity**

Ref: Effective capacity is always less than design capacity (See the Slide No. 2)

https://docs.google.com/viewer?a=v&q=cache:3TTv7TR3u4EJ:timurdhaka.weebly.com/uploads/5/4/0/2/5402479/capacity_planning.ppt+effective+capacity+is+always+less+than+designed+capacity&hl=en&gl=pk&pid=bl&srcid=ADGEESj3gppHvaySuqfjRQILJIV5EkPdM5xxBalXv5C_Y-h4QDdsvVh_Io9TSs9MntITUCAfLMzIDK_RrJrBlOCgxd7z9UIDFTLpYhwJspOoAW2mPcvxZz9Q3ohtt5DwLJIWSFpY9s&sig=AHIEtbQ5T2As10mQ_fKjkiHwkMyJGG4hQw

Question No: 8 VU-ASKARI - Please choose one

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

Ref:

http://www2.cob.ilstu.edu/achoudh/choudhury/classes/Mqm227/ch09_classnote_1.pdf

Question No: 9 VU-ASKARI - Please choose one

Which one of the following designs resists modifications?

► **Frozen design**

- Product design
- Service design
- Robust design

Question No: 10 VU-ASKARI - Please choose one

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

Question No: 11 VU-ASKARI - Please choose one

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

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

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Question No: 12 VU-ASKARI - Please choose one

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: While having representatives from different functions as team members is predicted to facilitate communication with non-team members from those functions, this structure may also create internal conflicts.

<http://docs.google.com/viewer?a=v&q=cache:CpKetaj5A98J:dspace.mit.edu/bitstream/handle/1721.1/2310/SWP-3179-22870423.pdf%3Fsequence%3D1+team+having+representatives+from+different+functional+areas+of+the+organization&hl=en&gl=pk&pid=bl&srcid=ADGEESiZz0JtbazwsFj3WOxuhpTDJ3LMgStdq5o3KAjjil6-ogLEsA07go0PRGGxnd9tFSN1EyQmfkxsF36ST6PakVPq8W0sFVgyN0kKutPRmM5vpEAOtjjM1eJkQDDCvaG0-o0P0BC5&sig=AHIEtbQPvW7bHUJDdOn5ZCFS7AOy6L3gTA>

Question No: 13 VU-ASKARI - Please choose one

Who emphasized quality in terms of inspection and gauging?

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

Ref: Frederick Winslow Taylor the father of scientific management brought back the concept of quality by incorporating product inspection as well as focusing on the importance of manufacturing management. (Handouts Page No. 101)

Question No: 14 VU-ASKARI - Please choose one

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

Ref:

Aesthetics - appearance, feel, smell, taste

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Question No: 15 VU-ASKARI - Please choose one
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: TQM is an approach to business which has had a significant influence on operations. This chapter discusses seven principles of TQM: meeting the needs and expectations of customers, covering all parts of the organisation, including every person in the organisation, examining all the costs related to quality, getting things 'right first time', developing systems and procedures and developing a continuous process of improvement. http://wps.pearsoned.co.uk/ema_uk_he_slack_opsman_4/17/4473/145151.cw/index.html

Question No: 16 VU-ASKARI - Please choose one

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: Although continuous improvement involves making incremental changes that may not be highly visible in the short term, they can lead to significant contributions in the long term. Organizational performance can improve from knowledge gained through experience. <http://www.enotes.com/management-encyclopedia/continuous-improvement>

Question No: 17 VU-ASKARI - Please choose one

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

► **Kaizen**

- Poka-yoke
- Six sigma
- Inspection

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. (Handouts Page No. 112)

Question No: 18 VU-ASKARI - Please choose one

Problem solving is an example of which of the following?

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

Ref:

http://www.accountingformanagement.com/quality_costs.htm

Question No: 19 VU-ASKARI - Please choose one

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

Ref: Analyze the process: Ask questions about the process including process flow being logical, any activities or steps being missing or identification of duplication activities (Handouts Page No. 116)

Question No: 20 VU-ASKARI - Please choose one

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

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

Ref: The concept of the PDCA Cycle was first introduced by Walter Shewhart, the leading statistician, who also developed statistical process control in the Bell Laboratories in the US during the 1930's. It is often referred to as 'the Shewhart Cycle'. (Handouts Page No. 116)

Question No: 21 VU-ASKARI - Please choose one

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)

Ref: Lot Tolerance Percent Defective (LTPD): Upper limit on the percentage of defects a customer is willing to accept (a property of the consumer) (Handouts Page No. 130)

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Question No: 22 VU-ASKARI - Please choose one

Aggregate planning usually covers time span of how many months?

► 2 – 12 months

- 2– 15 months
- 2 – 16 months
- 2 – 17 months

Ref: Aggregate planning: Intermediate-range capacity planning, usually covering 2 to 12 months. (Handouts Page No. 133)

Question No: 23 VU-ASKARI - Please choose one

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

► $a + b - c$

- $a + b + c$
- $a - b + c$
- $a - b - c$

Ref:

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.

Question No: 24 VU-ASKARI - Please choose one

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

Ref:

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

Question No: 25 VU-ASKARI - Please choose one

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

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- ▶ Frozen time fence
- ▶ **Flexible time fence**

Ref:
15/15 quiz

Question No: 26 VU-ASKARI - Please choose one

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

- ▶ **Carrying cost per unit + average inventory cost**
- ▶ Carrying cost per unit \times average inventory cost
- ▶ Carrying cost per unit \div average inventory cost
- ▶ Carrying cost per unit $-$ average inventory cost

Ref:
Inventory cost = Carrying Cost per Unit \times Average Inventory cost

Question No: 27 VU-ASKARI - Please choose one

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

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

Question No: 28 VU-ASKARI - Please choose one

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

Ref:
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.

Question No: 29 VU-ASKARI - Please choose one

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

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

Ref: $TC = \text{Carrying costs} + \text{Ordering Costs}$
 $TC = Q_0/2 (H) + D/Q_0 (S)$ (Handouts Page No. 148)

Question No: 30 VU-ASKARI - Please choose one

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

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

Question No: 31 VU-ASKARI - Please choose one

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

Ref:

Product structure tree : Visual depiction of the requirements in a bill of materials, where all components are listed by levels.

Question No: 32 VU-ASKARI - Please choose one

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

Ref:

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

Question No: 33 VU-ASKARI - Please choose one

ERP stands for which of the following?

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► **Enterprise Resource Planning**

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

Question No: 34 VU-ASKARI - Please choose one

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

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

Ref: JIT applies primarily to *repetitive manufacturing* processes in which the same products and components are produced over and over again. The general idea is to establish flow processes (even when the facility uses a jobbing or batch process layout) by linking work centers so that there is an even, balanced flow of materials throughout the entire production process, similar to that found in an assembly line.
<http://personal.ashland.edu/~rjacobs/m503jit.html>

Question No: 35 VU-ASKARI - Please choose one

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

Ref:

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”

Question No: 36 VU-ASKARI - Please choose one

DRP stands for which of the following?

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

Ref:

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

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Question No: 37 VU-ASKARI - Please choose one

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

Question No: 38 VU-ASKARI - Please choose one

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

Ref: Job Flow Time: The length of time a job is in the shop at a particular workstation or work center. (Handouts Page No. 185)

Question No: 39 VU-ASKARI - Please choose one

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

Ref: Preventive maintenance: goal is to reduce the incidence of breakdowns or failures in the plant or equipment to avoid the associated costs

1. Preventive maintenance is periodic
2. Result of planned inspections
3. According to calendar
4. After predetermined number of hours (Handouts Page No. 190)

Question No: 40 VU-ASKARI - Please choose one

Successful project management includes all of the following factors EXCEPT:

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

Ref: What are the Key Success Factors?

1. Top-down commitment

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2. Having a capable project manager
3. Having time to plan
4. Careful tracking and control
5. Good communications (Handouts Page No. 192)

Question No: 41 VU-ASKARI - Please choose one

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

Ref:

An organization's structure develops when managers assign work tasks and activities to specific individuals and work groups and coordinate the diverse activities required to reach the firm's objectives.

Delegation of authority not only gives tasks to employees, but also empowers them to make commitments, use resources, and take whatever actions are necessary to carry out those tasks. Delegation gives a **responsibility**, or obligation, on employees to carry out assigned tasks satisfactorily and holds them accountable for the proper execution of their assigned work. The principle of **accountability** means that employees who accept an assignment and the authority to carry it out are answerable to a superior for the outcome. The process of delegating authority establishes a pattern of relationships and accountability between superior and subordinates

http://highered.mcgraw-hill.com/sites/0072973587/student_view0/chapter8/summary.html

Question No: 42 VU-ASKARI - Please choose one

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

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

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

Paper No. 13

FINAL TERM EXAMINATION

2009

SOLVED BY MAHA SHAH

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

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

<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**
- ▶ 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**

Ref: VU-ASKARI

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)

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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**

Ref: VU-ASKARI

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

Ref: VU-ASKARI

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

Ref: VU-ASKARI

Cycle time for the Optimal Run Size

$QO/U =$

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

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

Ref: VU-ASKARI

http://docs.google.com/viewer?a=v&q=cache:tV_XLMKHkloJ:hodgesh.people.cofc.edu/DSCI304/PPT/18%2520Material%2520Requirements%2520Planning.pps+Planned+order+report+contains+data+for+assessing+future+material+requirements&hl=en&gl=pk&pid=bl&srcid=ADGEESg-IyoE7q1D4HJWaSjokQVekmkdCg5nqUOI-qJtMGheW9TpCs325ju8knmTYb3kcTJk0jgnjLMcw6VBGlQgwY7lszkKGW_Y44wHW03CKPO_MlhP46-YJm_1A0PovXDFvQ9bwtHx&sig=AHIEtbRUQ3xwXLVea2apVqUOmBQzjL1X7w&pli=1

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

- ▶ Planned-order releases
- ▶ Routing information
- ▶ Job times information

▶ **Bill of materials**

Ref: VU-ASKARI

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

Ref: VU-ASKARI

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

Ref: VU-ASKARI

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 row reduction
- ▶ **Obtaining column reduction**

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► Modification of tabular sequence in case of difference between rows and columns

Ref: VU-ASKARI

Hungarian Method

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**
- 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: VU-ASKARI [http://highered.mcgraw-](http://highered.mcgraw-hill.com/sites/0073403296/student_view0/chapter7/multiple_choice_quiz.html)

[hill.com/sites/0073403296/student_view0/chapter7/multiple_choice_quiz.html](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.

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

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

Ref: VU-ASKARI

The Master Black Belts support all other members of the Six Sigma team with guidance, coaching and mentoring.

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

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► **How much and when to order?**

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

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

► **Top management's commitment**

- Employee empowerment
- Accuracy of inputs
- Computer support

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

- Material Resource Planning system (MRP)

► **Manufacturing Resource Planning system (MRPII)**

- Enterprise Resource Planning system (ERP)
- Capacity Requirement Planning system (CRP)

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

► **Just-in time manufacturing**

- Manufacturing resource planning (MRPII)
- Material requirements planning (MRP)
- All of the given options

Ref: VU-ASKARI

http://docs.google.com/viewer?a=v&q=cache:vb6zwSYrmCwJ:www.eurojournals.com/EJTAER_2_04.pdf+Operational+Efficiency+is+the+key+purpose+of+just&hl=en&gl=pk&pid=bl&srcid=ADGEESh2uEfvIj+OaejIzaGM2VAaWRWQ4MhxJSCgqq-Unfz2uWdvRGez9eSepOS5nT9PrT43dXHtGrwVi9-IHJUpKJYoomCXrvm8vg9ThUNuESxcNFpJjvFkDqxq2W4-WhMgNM5Og&sig=AHIEtbQOupKvbR4K7HabGIyL_AoH-ki4hQ

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

Ref: VU-ASKARI

Line flow strategy is to reduce frequency of setups (product layout, one worker, multiple machines)

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

- American management system

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► **Japanese management system**

- Asian management system
- European management system

Ref: VU-ASKARI The management believes that the best way to get what they want is to help their employees get what they want and vice versa. In short the Japanese management respect each employee's dignity, human rights and privacy; never permit any discrimination toward employees; provide all with equal employment opportunities; and endeavor to create comfortable workplaces for all employees.

https://docs.google.com/viewer?a=v&q=cache:Ldbz-O51QGkJ:www.qurtuba.edu.pk/jms/default_files/JMS/1_1/1_qadar_bakhsh.pdf+Respect+for+worker+Japanese+management+system&hl=en&gl=pk&pid=bl&srcid=ADGEEShP_qUgL2d0BrIk_oJwKy5tR10Sj7dsj0cB-5cNqYY0Q_ojf3XEqwIo9FOqbIOO_Vxz6rcq9enq2H0Nhyl3xvWYX3uw95w3PdIKuCo4hHsM5IDZurxQ0ndqET548THOLuJVeIHk&sig=AHIEtbSQ-TpE0kgr8pUcvkj7YMI3j3OJvg

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

Ref:

$180/10 = 18$

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

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

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► Uncertain in terms of number

Ref: VU-ASKARI

http://books.google.com.pk/books?id=oMjLPc6LwbwC&pg=PA295&lpg=PA295&dq=In+a+mailorder+operation,+customer+population&source=bl&ots=x6cJasRmKp&sig=hz5UUKS4A7hz5N14gL15kFHi55c&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

Paper No. 14

FINAL TERM EXAMINATION

2009 paper Final term

SOLVED BY MAHA SHAH

[<maha.shah.askari@gmail.com>](mailto:maha.shah.askari@gmail.com)

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

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

Which 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

Ref: VU-ASKARI

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
- Customized parts

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► **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

Ref: VU-ASKARI

Page 51

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

Ref: VU-ASKARI

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. (Handouts Page No. 93)

Identify a quality guru among the following:

- Frank Gilbreth
- Adam Smith
- Henri Gantt

► **Joseph Juran**

Ref: VU-ASKARI

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

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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

Ref: VU-ASKARI

Quality at the source : The philosophy of making each worker responsible for the quality of his or her work.

Do it right If isn’t right, fix it

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

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

Ref: VU-ASKARI

<http://www.mbanotesworld.in/2010/11/costs-of-internal-and-external-failure.html>

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

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

Note: Solve these papers by yourself

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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

Ref: VU-ASKARI

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

Ref: VU-ASKARI

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

Ref: VU-ASKARI

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?

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

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

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

Ref: VU-ASKARI

Irregular variations - caused by unusual circumstances such as severe weathers, earthquakes, worker strikes, or major change in product or service.

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

Ref: VU-ASKARI

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. (Handouts Page No. 82)

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

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production schedule are determined through which of the following?

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

Ref: VU-ASKARI

Purposes of the Master Production Schedule:

- to set due dates for the availability of end items
- to provide information regarding resources and materials required to support the aggregate plan
- as an input to Materials Requirements Planning, which will set specific production schedules for parts and components used in end items

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

Ref: VU-ASKARI

Modular (planning) BOM. A BOM can also be visually represented by a *product structure tree*, although they are rarely used in the workplace.

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

Ref: VU-ASKARI

www.ies.luth.se/LOG/courses/iet065/Krajweski%20Chapter%209.ppt

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

20

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

▶ 7.88

▶ **8.88**

▶ 9.7

▶ 6.89

Ref: VU-ASKARI

$$= 10000 / 1125 = 8.88$$

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

▶ Romantic Just-In-Time System

▶ Big Just-In-Time System

▶ **Pragmatic Just-In-Time System**

▶ Little Just-In-Time System

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

▶ Setup cost

▶ Shipping cost

▶ **Incremental holding cost**

▶ Holding cost

Ref: VU-ASKARI

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

$$\text{Incremental Holding Cost} = H \left(d/365 \right)$$

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**

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Ref: VU-ASKARI

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

Ref: VU-ASKARI

average tardiness = process time – due date

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

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

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

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

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

Ref: VU-ASKARI

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**

Ref: VU-ASKARI

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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

Ref: VU-ASKARI

http://docs.google.com/viewer?a=v&q=cache:0c1TH80q-kQJ:lewestoops.com/powerpoints/BMGT1331/N%2520Supplement%2520C-Waiting%2520Lines.ppt+Source+of+input+to+the+service+system+in+waiting+line+model+is+known+as+customer+population&hl=en&gl=pk&pid=bl&srcid=ADGEESitpEQigSsy2cWYsoCJw-aczLgME64QYD6zQ_7auOciKbDi3aE7fxd6fnYYJfDa3hy5NmHjxuQ6Kt6f9qX7BKILPDrrNCq6E4Y5nEAn9Xz3pVP4NC8Jf-3fFXhTZBDUPje6R3Hz&sig=AHIEtbRPdg_suaROOUZYWMiDxwgXt6vkfw&pli=1

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

Ref: VU-ASKARI

http://books.google.com.pk/books?id=2rC1Yb0T6nIC&pg=PA259&dq=highly+skilled+labor+is+not+required+in+chase+demand&hl=en&ei=dD0cTruEHsiG-wa57v3ZCA&sa=X&oi=book_result&ct=book-preview-link&resnum=1&ved=0CCsQuwUwAA#v=onepage&q=highly%20skilled%20labor%20is%20not%20required%20in%20chase%20demand&f=false

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

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organization?

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

Ref: VU-ASKARI

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 spent 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.

Paper No. 15

FALL 2007
MGT613 - PRODUCTION / OPERATIONS
MANAGEMENT (Session - 4)
SOLVED BY MAHA SHAH

<maha.shah.askari@gmail.com>

Question No: 1 VU-ASKARI - Please choose one

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

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

Ref:

http://mcu.edu.tw/~ychen/op_mgm/notes/part3.html

Question No: 2 VU-ASKARI - Please choose one

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

- ▶ Capital requirements, leadership skills, technology and labor

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- ▶ Technology, capital requirements, leadership skills and market conditions
- ▶ Labor, raw materials, market conditions and capital requirements

▶ **Capital requirements, labor, technology and market conditions**

Ref:

http://books.google.com.pk/books?id=2rC1Yb0T6nIC&pg=PA62&dq=order.+What,+then,+are+the+factors+that+should+be+considered+in+making+this+choice?+First+of+all,+the+company+should+consider+market+conditio&hl=en&ei=sRkcTojWD9Cp-gal6PD5CA&sa=X&oi=book_result&ct=book-preview-link&resnum=1&ved=0CCsQuwUwAA#v=onepage&q&f=false

Question No: 3 VU-ASKARI - Please choose one

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

- ▶ SWOT analysis

▶ **Quality based strategies**

- ▶ Operations strategies
- ▶ Organizational strategies

Question No: 4 VU-ASKARI - Please choose one

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

▶ **Qualitative**

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

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.

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Question No: 5 VU-ASKARI - Please choose one

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

▶ **It deals with a huge number of variables**

▶ It has potential for achieving commercial applications

▶ It does not involve high costs

▶ It is relatively easy to conduct

Ref:

<http://www.mikeraulin.org/graziano7e/supplements/applrsrch.htm>

Question No: 6 VU-ASKARI - Please choose one

Cycle time can be calculated as:

▶ D/OT

▶ **OT/D**

▶ D+OT

▶ D-OT

Question No: 7 VU-ASKARI - Please choose one

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

▶ Internal failure costs

▶ External failure costs

▶ **Supply chain failure costs**

▶ Prevention costs

Question No: 8 VU-ASKARI - Please choose one

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

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► ISO 9000

► PPM Matrix approach

► Statistical process control

► Six Sigma approach

Question No: 9 VU-ASKARI - Please choose one

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

► Pareto chart

► Cause and effect (fishbone) diagram

► Scatter diagram

► Brainstorming

Ref:

http://en.wikipedia.org/wiki/Seven_Basic_Tools_of_Quality

Question No: 10 VU-ASKARI - Please choose one

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

► Expected project duration

► Slack time

► Critical path

► Budgeted cost

Ref: Used to determine

1. Expected project duration

2. Slack time

3. Critical path (Handouts Page No. 198)

Note: Solve these papers by yourself

This VU Group is not responsible for any solved content

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