National Testing Agency

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Operations Management

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Operations Management

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Sub-Section Number: 1

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Question Shuffling Allowed: Yes

Question Number: 1 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option:

No Option Orientation : Vertical

Correct Marks: 0.8 Wrong Marks: 0

JIT is a philosophy of

- A. push production.
- B. variability increase.
- C. re-engineering for breakthrough.
- D. waste reduction.

Options:

- 1. 1
- 2.2
- 3.3

Question Number: 2 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option:

No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

When using kanbans

A. the kanban cards provide a direct control on the amount of work-in-process between cells.

- B. in an MRP system, the kanban can be thought of as a "build" authorization and the schedule can serve as the "pull" part of the system.
- C. if the producer and user are not in visual contact, a light or empty spot on the floor should be used as a signal.
- D. each pull station can require only one resupply component.

Options:

- 1. 1
- 2. 2
- 3. 3
- 4.4

Question Number : 3 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 0.8 Wrong Marks: 0

This action tends to reduce variability.

- A. Engineering drawings are inaccurate.
- B. Employees, machines, and suppliers produce units that do not conform to standards.
- C. Production personnel make product before specifications are complete.
- D. Customer demands are made clear.

Options:

- 1. 1
- 2.2
- 3.3
- 4.4

Question Number : 4 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 0.8 Wrong Marks: 0

An effective JIT effort should result in increased

- A. delay time
- B. quality
- C. queue time
- D. costs

Options:

- 1. 1
- 2.2
- 3.3
- 4.4

Question Number: 5 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Option (No Option Option)

No Option Orientation : Vertical

Goals of JIT partnerships include A. elimination of in-transit inventory. B. elimination of all in-plant inventory. C. complete backwards vertical integration. D. elimination of all activities.
Options: 1. 1 2. 2 3. 3 4. 4
Question Number: 6 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
Characteristics of just-in-time suppliers do NOT include A. the purchaser actually helping the supplier to meet the quality requirements. B. minimal release paperwork. C. scheduling inbound freight. D. short-term contract agreements.
Options: 1. 1 2. 2 3. 3 4. 4
Question Number: 7 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
A key to just-in-time production is A. to rely very heavily upon purchased items rather than in-house production. B. the elimination of all or most product options. C. production in large lot sizes. D. the elimination of all inventories.
Options:
1. 1 2. 2
3. 3
4. 4
Question Number: 8 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
The 5S checklist item that calls for the removal of variation from the process via consistent training, tooling, and procedures is A. standardize. B. segregate. C. simplify. D. shine.
Options:
1. 1
2. 2

3. 3

4.4

Question Number : 9 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 0.8 Wrong Marks: 0

JIT, Lean Production, and the Toyota Production System (TPS) all emphasize continuous improvement, but what makes the TPS unique is its emphasis on

- A. supplier relationships.
- learning and employee empowerment.
- C. techniques such as kanban.
- D. inventory reduction.

Options:

- 1. 1
- 2. 2
- 3. 3
- 4.4

 $\label{eq:Question Number: Yes Single Line Question Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical$

Correct Marks: 0.8 Wrong Marks: 0

A production facility wants to determine the number of kanbans necessary for one of the parts used to make its most popular model of razor. This part's daily demand is 200; it has a production lead time of 1/2 day; its safety stock is 1/4 day, and the container size is 10. How many kanbans are needed?

- A. 5
- B. 10
- C. 15
- D. 50

Options:

- 1.1
- 2.2
- 3.3
- 4.4

 $\label{eq:Question Number: Yes Single Line Question Option: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical$

Correct Marks: 0.8 Wrong Marks: 0

A technique used to monitor jobs in process is the

- A. assignment method.
- B. Gantt schedule chart.
- C. Johnson's rule.
- D. Gantt load chart.

Options:

- 1.1
- 2.2
- 3.3
- 4.4

Question Number: 12 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Shop loading

- A. is typically managed using an assembly chart.
- B. means the assignment of dates to specific jobs or operations steps.
- C. means the assignment of jobs to work or processing centers.
- D. is oriented toward the management of work-in-process inventories.

Options:

- 1.1
- 2. 2
- 3.3
- 4.4

Question Number: 13 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

Which of the following dispatch rules tends to maximize the number of jobs completed on time?

- A EDD: Earliest due date
- B. SPT: Shortest processing time
- C. FCFS: First come, first served
- D. LPT: Longest processing time

Options:

- 1.1
- 2.2
- 3.3
- 4.4

Question Number: 14 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

Which of the following dispatch rules tends to minimize the average number of jobs in the system?

- A. FCFS: First come, first served
- B. LPT: Longest processing time
- C. SPT: Shortest processing time
- D. EDD: Earliest due date

Options:

- 1.1
- 2.2
- 3.3
- 4.4

 $\label{eq:Question Number: Yes Single Line Question Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical$

Jobs are processed on a FCFS basis in the order shown in the table. What is the average number of jobs in the system?

Job	Processing Time	Due Date
A	5	12
В	7	15
C	8	25
D	3	6
E	4	30
F	6	20

- A. 2.41
- B. 4.56
- C. 3.64
- D. 0.91

Options:

- 1.1
- 2. 2
- 3.3
- 4.4

Question Number: 16 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

Which of these statements regarding service scheduling is best?

- A. behavioral, social, and status issues are important in scheduling labor.
- B. demand for labor is stable in a service system.
- C. scheduling emphasis is on machines and material.
- D. inventories can be used to smooth demand just like in manufacturing.

Options:

- 1. 1
- 2.2
- 3.3
- 4.4

Question Number: 17 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

When using the critical ratio (CR) to develop a sequence

- A. a CR of 1.0 means that the job should be scheduled last.
- B. a CR of less than 1.0 means that the job is ahead of schedule.
- C. a CR of 1.0 means that the job should be scheduled first.
- D. a CR of greater than 1.0 means that the job has some slack.

Options:

- 1. 1
- 2. 2
- 3. 3
- 4.4

Question Number: 18 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Option (No Option Option)

No Option Orientation : Vertical

Six jobs must be processed first on Machine 1 and then on Machine 2. Which sequence will result in the fastest average processing time for all jobs?

Job	Machine 1	Machine 2
A	6	11
В	6	5
C	12	8
D	12	14
E	11	7
F	9	10

A. A, F, D, C, E, B

B. E, F, C, A, D, B

C. B, C, F, E, A, D

D. F, A, C, E, D, B

Options:

1.1

2. 2

3.3

4.4

Question Number : 19 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 0.8 Wrong Marks: 0

The list of quantities of components, ingredients, and materials required to produce a product is the

- A. engineering change notice.
- B. master schedule.
- C. purchase order.
- D. bill-of-materials.

Options:

- 1.1
- 2. 2
- 3. 3
- 4.4

Question Number: 20 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

____ allows a segment of the master schedule to be designated as "not to be rescheduled."

- A. regenerative MRP
- B. time fence
- C. system nervousness
- D. pegging

Options:

- 1. 1
- 2.2
- 3. 3

Question Number: 21 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option:

No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

A lot-sizing technique that generates exactly what was required to meet the plan is

- A. the Wagner-Whitin algorithm.
- B. lot-for-lot.
- C. economic order quantity.
- D. part period balancing.

Options:

- 1.1
- 2. 2
- 3. 3
- 4.4

Question Number : 22 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 0.8 Wrong Marks: 0

Breaking up the order and running part of it ahead of schedule is known as

- A. lot splitting.
- B. overlapping.
- C. operations splitting.
- D. pegging.

Options:

- 1.1
- 2. 2
- 3. 3
- 4.4

Question Number: 23 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

The difference between a gross material requirements plan (gross MRP) and a net material requirements plan (net MRP) is

- A. the gross MRP may not be computerized, but the net MRP must be computerized.
- B. the gross MRP doesn't take taxes into account, whereas the net MRP includes the tax considerations.
- C. the gross MRP includes consideration of the inventory on hand, whereas the net MRP does not
- D. the net MRP includes consideration of the inventory on hand, whereas the gross MRP does not.

Options:

- 1.1
- 2.2
- 3. 3
- 4.4

Question Number : 24 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks: 0.8 Wrong Marks: 0
A phantom bill-of-materials is a bill-of-materials developed for
 A. a subassembly that exists only temporarily. B. a final product for which production is to be discontinued. C. a module that is a major component of a final product. D. the purpose of grouping subassemblies when we wish to issue "kits" for later use.
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 25 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
Which of the following lot-sizing techniques is likely to prove the most complex to use?
A. part period balancing (PPB) B. economic order quantity (EOQ) C. the Wagner-Whitin algorithm D. lot-for-lot
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 26 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
The operations manager has several tools available to deal with MRP system nervousness. Those tools are
A. pseudo bills and kits. B. buckets with back flush. C. time fences and pegging. D. net and gross requirements.
Options:
1. 1
2. 2
3. 3
4. 4

 $Question\ Number: 27\ Question\ Type: MCQ\ Option\ Shuffling: No\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

An MRP system that provides feedback to the capacity plan, master production schedule, and production plans is called
A. system nervousness. B. lot-sizing. C. load report. D. closed-loop MRP.
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 28 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
A time-phased stock-replenishment plan for all levels of a supply chain is called
A. MRP. B. ERP. C. MRP II. D. DRP.
Options:
1.1
2. 2
3. 3
4. 4
Question Number : 29 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Correct Marks : 0.8 Wrong Marks : 0
Which of the following is an advantage of ERP?
A. is very inexpensive to purchase B. is simple enough that companies have an easy time adjusting to it C. requires major changes to the company and its processes D. creates commonality of databases
Options:
1. 1
2. 2
3. 3
4. 4
Question Number : 30 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Correct Marks : 0.8 Wrong Marks : 0

Whi	ich of these pieces of information is NOT contained in a bill of material?
A. 1	raw materials to be used
В. с	quantities of components
C. I	physical dimensions
D. 1	lead times
Option	ns:
1. 1	
2. 2	
3. 3	
4. 4	
No Op	ion Number : 31 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : ption Orientation : Vertical
	ct Marks : 0.8 Wrong Marks : 0
10 April 10	port that shows the resource requirements in a work center for all currently assigned k as well as all planned and expected orders is a
A. c	closed-loop report.
B. b	back flush report.
	oad report.
D. I	MRP II report.
Option	ns:
1. 1	
2. 2	
3. 3	
4. 4	
Questi No O ₁	ion Number : 32 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : ption Orientation : Vertical
Corre	ct Marks : 0.8 Wrong Marks : 0
Agg: in th	regate planning is concerned with determining the quantity and timing of production te
A. i	intermediate term.
	ong term.
C. n	next term.
D. s	short term.
Option	ns:
1. 1	
2. 2	
3. 3	
4. 4	
	ion Number: 33 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: ption Orientation: Vertical

Managers typically do not use sophisticated planning models for aggregate planning because A. they view these models as overly complex and do not fully understand them. B. these models do not provide information pertinent to the decision at hand. C. the time periods addressed by such models are too long. D. research has demonstrated that such models seldom work well. **Options:** 1.1 2.2 3.3 4.4 Question Number: 34 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0 Which of the following aggregate planning strategies requires employing relatively unskilled personnel to be most effective? A. subcontracting B. back-ordering during high-demand periods C. using part-time workers D. varying production rates through overtime or idle time **Options:** 1.1 2.2 3 3 4.4 Question Number: 35 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: Correct Marks: 0.8 Wrong Marks: 0 Which of the following aggregate planning strategies is likely to have the least impact on quality?

No Option Orientation: Vertical

- A. using part-time workers
- B. subcontracting
- C. varying production rates through overtime or idle time
- D. changing inventory level

Options:

- 1.1
- 2.2
- 3.3
- 4.4

Question Number: 36 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

The aggregate planning strategies of (1) varying inventory level or (2) back ordering during periods of high demand have which of the following disadvantages in common? A. holding costs B. Customers may go elsewhere. C. It is difficult to exactly match supply with demand. D. Quality of output may suffer. **Options:** 1.1 2.2 3.3 4.4 Question Number: 37 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: **No Option Orientation : Vertical** Correct Marks: 0.8 Wrong Marks: 0 In the service sector, aggregate planning for the production of high-volume intangible output is directed toward A. finding the size of the workforce to be employed. B. smoothing the production rate. C. planning for human resource requirements and managing demand. D. attempting to manage demand to keep equipment and employees working. **Options:** 1.1 2.2 3.3 4.4 Question Number: 38 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0 Which of the following is NOT a mathematical approach to aggregate planning?

- A. transportation method
- B. management coefficients model
- C. graphical and charting methods
- D. linear decision rule (LDR)

Options:

- 1.1
- 2. 2
- 3.3
- 4.4

Question Number: 39 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Which of the following is NOT a capacity option of aggregate planning?
A. changing inventory levels
B. varying production rates through overtime or idle time
C. subcontracting
D. back ordering during high-demand periods
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 40 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
Which of the following is NOT a demand option of aggregate planning?
A. counter seasonal product and service mixing
B. using part-time workers
C. back ordering during high-demand periods
D. influencing demand
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 41 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
Yield management is of interest in organizations having the characteristic of
A. low fixed costs.
B. stable demand.
C. high variable costs.
D. demand can be segmented.
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 42 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
The transportation method of aggregate planning requires that
A. the number of rows be greater than the number of columns.

Options:

B. beginning inventory be zero.

D. ending inventory be zero.

C. cost factors be linear and positive.

1. 1
2. 2
3.3
4. 4
Question Number: 43 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical
Correct Marks: 0.8 Wrong Marks: 0
The transportation method of aggregate planning requires that
 A. the number of rows be greater than the number of columns. B. beginning inventory be zero. C. cost factors be linear and positive. D. ending inventory be zero.
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 44 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical
Correct Marks: 0.8 Wrong Marks: 0
Which statement is characteristic of a mixed strategy for aggregate planning? A. Mixed plans are less complex to develop than a chase plan. B. Mixed plans are less complex to develop than a level plan. C. Mixed plans typically yield a worse strategy than a pure plan. D. Mixed plans seek a minimum cost via a combination of eight planning options.
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 45 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
In terms of decision theory, an occurrence or situation over which the decision maker has no control is called a(n) A. alternative. B. state of nature. C. decision under uncertainty. D. decision tree.
Options:
1. 1
2. 2
3. 3
4. 4
4. 4
Question Number : 46 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 0.8 Wrong Marks : 0
In terms of decision theory, a course of action or a strategy that may be chosen by a
decision maker is called a(n)
A. decision under uncertainty.
B. state of nature.
C. decision tree.
D. alternative.
Options:
l. 1
2. 2
3. 3
4. 4
Question Number: 47 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option Option Orientation: Vertical
Correct Marks: 0.8 Wrong Marks: 0
The expected value of perfect information (EVPI) is
A. the payoff for a decision made with perfect information.
B. the difference between the payoff under certainty and the payoff under risk.
C. the payoff under minimum risk.
D. the average expected payoff.
Options:
1. 1
2. 2
3. 3
1. 4
Question Number : 48 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option Option Orientation : Vertical
Correct Marks: 0.8 Wrong Marks: 0
Which of the following is NOT a criterion for decision making under uncertainty?
A. maximin
B. EPUC
C. equally likely
D. maximax
Options:
l. 1
2. 2
3. 3
4. 4

 $Question\ Number: 49\ Question\ Type: MCQ\ Option\ Shuffling: No\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

Which of the following is NOT an assumption in common queuing mathematical models?

- A. The average arrival rate is faster than the average service rate.
- B. Arrivals come from an infinite or very large population.
- C. Service times from one customer to the next are independent of each other.
- D. Arrivals are treated on a first-in, first-out basis.

Options:

- 1. 1
- 2. 2
- 3. 3
- 4.4

Question Number: 50 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

Which of the following is NOT a key operating characteristic for a queuing system?

- A. calling population
- B. utilization rate
- C. average time spent waiting in the system
- D. percent idle time

Options:

- 1. 1
- 2.2
- 3.3
- 4.4

Question Number: 51 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

If everything else remains constant, including the mean arrival rate and service rate, but the service time becomes constant instead of exponential, then

- A. the average waiting time will be doubled.
- B. the average queue length will increase.
- C. the calling population will double.
- D. the average queue length will be halved.

Options:

- 1. 1
- 2. 2
- 3.3
- 4.4

Question Number : 52 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

No Option Orientation. Vertical

Customers enter the waiting line at a cafeteria on a first-come, first-served basis. The arrival rate follows a Poisson distribution, while service times follow an exponential distribution. If the average number of arrivals is six per minute and the average service rate of a single server is ten per minute, what is the average number of customers in the system?

A. 0.60

B. 0.90

C. 0.25

D. 1.50

Options:

1. 1

2.2

3.3

4.4

Question Number: 53 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

Cars arrive at an automated car wash following a Poisson distribution. If their arrival rate is 20 per hour, and it takes exactly 2 minutes for a car wash, what is the average waiting time in line?

A. 3 minutes

B. 4 minutes

C. 2 minutes

D. 1 minute

Options:

1. 1

2.2

3. 3

4.4

 $\label{eq:Question Number: Yes Single Line Question Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical$

Correct Marks: 0.8 Wrong Marks: 0

A fast-food drive-through system that uses two windows in succession is an example of a

- A. multiple-channel, multiple-phase system.
- B. single-channel, single-phase system.
- C. multiple-channel, single-phase system.
- D. single-channel, multiple-phase system.

Options:

- 1. 1
- 2. 2
- 3. 3
- 4.4

Question Number : 55 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

No Option Orientation: vertical

A customer that gets in line for service but leaves before receiving service is
A. reneging. B. bailing. C. balking. D. blocking.
Options:
1. 1
2. 2
3. 3
4. 4
Question Number : 56 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks: 0.8 Wrong Marks: 0
Which line would be least enjoyable for a customer?
A. a line where W _S >Wq
B. a line where $P_0 > P_1$
C. a line where $\lambda > \mu$
D. a line where Ls>Lq
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 57 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
A grocery store with three checkout registers fed by one line has an average service time
of 5 minutes and a customer arrival rate of 20 per hour. On average there are 0.3747
customers waiting in line. What is the average time a customer spends in the system?
A. about 10 minutes
B. about 6 minutes
C. about 6 seconds
D. about an hour
Options:
1. 1
2. 2
3. 3
4. 4
Question Number : 58 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks: 0.8 Wrong Marks: 0

The limited population model is different from the M/M/1, M/D/1, and M/M/S situations because A. there is a dependent relationship between the length of the queue and the arrival rate B. the amount of time in the queue is not an important performance metric C. there can be more than one server D. the arrival rate should be greater than the service rate **Options:** 1.1 2. 2 3.3 4.4 Question Number: 59 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0 A single channel system must have A. one queue discipline. B. one opportunity to renege. C. one waiting line. D. one stage where service is received before exiting the system. **Options:** 1.1 2.2 3.3 4.4 Question Number: 60 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: Correct Marks: 0.8 Wrong Marks: 0

No Option Orientation: Vertical

Which type of control chart should be used when it is possible to have more than one mistake per item?

- A. R-chart
- B. c-chart
- C. p-chart
- D. x-bar chart

Options:

- 1.1
- 2.2
- 3.3
- 4.4

Question Number: 61 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

One type of control chart for attributes is a
A. R-chart.
B. x-bar chart.
C. p-chart.
D. C _{PK} chart.
Options:
1. 1
2. 2
3. 3
4. 4
Question Number : 62 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Correct Marks : 0.8 Wrong Marks : 0
C-charts are based on the
A. binomial distribution.
B. normal distribution.
C. Poisson distribution.
D. Erlang distribution.
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 63 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
If a sample of parts is measured and the mean of the sample measurements is outside the
control limits
A. the process is in control, but not capable of producing within the established control limits.
B. the process is out of control and the cause can be established.
C. The process variance must also be in control.
D. the process is within the established control limits with only natural causes of variation.
Options:
1. 1
2. 2
3. 3
4. 4
Question Number : 64 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Process capability

- A. exists when Cpk is less than 1.0.
- B. exists when the process is perfectly centered.
- C. cannot be measured.
- D. means that the natural variation of the process must be small enough to produce products that meet the standard.

Options:

- 1.1
- 2. 2
- 3.3
- 4.4

Question Number : 65 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 0.8 Wrong Marks: 0

The object of a statistical process control (SPC) system is to

- A. provide a signal when assignable variations are present.
- B. eliminate natural variation.
- C. provide a signal when natural variations are present.
- D. assess the customer expectations.

Options:

- 1. 1
- 2. 2
- 3.3
- 4.4

Question Number: 66 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

The R-chart

- A. is used to indicate gains or losses in uniformity.
- B. generally uses control limits set at plus or minus 2 standard deviations of the distribution, rather than plus or minus 3 which is commonly used on the X-bar chart.
- C. is always in control if the X-bar chart is in control.
- D. is used to measure changes in the central tendency.

Options:

- 1.1
- 2. 2
- 3. 3
- 4.4

Question Number: 67 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option:

No Option Orientation : Vertical

In acceptance sampling, the producer's risk is the risk of having a
A. good lot accepted.
B. good lot rejected.
C. bad lot accepted.
D. bad lot rejected.
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 68 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
Twenty samples of size 100 are taken. The total number of defective items is 75. What is the UCL of the 3-sigma (z=3) p-chart?
A. 0.165
B. 0.094
C. 0.793
D. 0.0375
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 69 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
A customer service hotline has received an average of 7 complaints a day for the last 25
days. What type of control chart should be used to monitor this hotline?
A. X-bar chart
B. c-chart
C. p-chart
D. R-chart
Options:
1. 1
2. 2
3. 3
4. 4
Question Number : 70 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks: 0.8 Wrong Marks: 0

For the last 30 days, the number of mistakes on the daily report has averaged 4.5. What would the UCL be if a 3-sigma c-chart was constructed?
A. 10.86 B. 18 C. 2.12 D. 7.5
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 71 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
A bottling company runs a filling process that should fill bottles with 12 plus or minus 0.04 ounces. A capability study reveals that the process mean is 12 ounces and the standard deviation is 0.01 ounces. What is the capability of the bottling process? A. 0.67
B. 0.75 C. 1.33 D. 1.5
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 72 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
A manufacturing engineer is designing a process that must be able to produce a shaft with a diameter of 2.5 cm plus or minus 0.01 cm. If the process capability must be 1.5, what is the maximum process standard deviation?
A. 0.00222 B. 0.02 C. 2.49 - 2.51 D. 0.0133
Options:
1. 1
2. 2
3. 3

Question Number: 73 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

4.4

Which is the best statement regarding an operating characteristic curve?

- A. As the fraction defective increases, the probability of accepting the lot also increases.
- B. As the lot tolerance percent defective decreases, the consumer's risk also decreases.
- C. As the fraction defective decreases, the probability of accepting the lot also decreases.
- D. As the AQL decreases, the producer's risk also decreases.

Options:

- 1.1
- 2.2
- 3.3
- 4.4

 $\label{eq:Question Number: Yes Single Line Question Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical$

Correct Marks: 0.8 Wrong Marks: 0

A box of 1000 parts is subjected to an acceptance sampling plan that examines only 50 parts. The actual fraction defective in the box is 0.02 and the sampling plan has a 0.53 probability of accepting a box of this quality. What is the average outgoing quality for this scenario?

- A. 0.53
- B. 0.01
- C. 0.51
- D. 0.02

Options:

- 1.1
- 2. 2
- 3.3
- 4.4

Question Number: 75 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

Efficiency is given by

- A. effective capacity divided by actual output.
- B. actual output divided by effective capacity.
- C. actual output divided by design capacity.
- D. capacity divided by utilization.

Options:

- 1.1
- 2.2
- 3.3
- 4.4

Question Number : 76 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The maximum output of a system in a given period is called the
A. design capacity.
B. efficiency.
C. break-even point.
D. effective capacity.
Options: 1. 1
2. 2
3. 3
4. 4
Question Number: 77 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
Costs that continue even if no units are produced are called
A. fixed costs.
B. marginal costs.
C. mixed costs.
D. variable costs.
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 78 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
A facility with a design capacity of 1,000 units, an actual average of 800 units, and effective capacity of 850 units has a utilization of
A. 94%
B. 80%
C. 125%
D. 85%
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 79 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0

A facility with a design capacity of 1,000 units, an actual average of 800 units, and effective capacity of 850 units has an efficiency of
A. 85% B. 80% C. 50% D. 94%
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 80 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
The multiple product case of determining breakeven in dollars
A. weights the variable cost of each product.
B. weights the selling price of each product.
C. weights the fixed cost attributable to each product.
D. weights the contribution of each product.
Options:
1. 1
2. 2 3. 3
4. 4
Question Number: 81 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical
Correct Marks: 0.8 Wrong Marks: 0
When demand exceeds capacity, a firm should
A. temporarily lay-off workers.
B. add workers.
C. lower prices. D. advertise.
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 82 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0

Which of the following actions would be best if a firm faced highly seasonal demand for a perishable product?

- A. offer a product with a complementary demand pattern.
- B. build up inventory when demand is low.
- C. hire and fire employees as demand fluctuates.
- D. add warehouse and production building space to accommodate the highest period of demand

Options:

- 1.1
- 2.2
- 3.3
- 4.4

Question Number: 83 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

The most aggressive and risky approach to capacity planning is

- A. attempts to have an average capacity that straddles demand with incremental expansion.
- B. leading demand with incremental expansion.
- C. capacity lags with incremental expansion.
- D. leading demand with one-step expansion.

Options:

- 1.1
- 2.2
- 3.3
- 4.4

Question Number: 84 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

What are the input resources to any transformation process?

- A. staff, facilities, materials, information and customers.
- B. processes, people and parts.
- C. people and machines.
- D. information, materials and customers.

Options:

- 1.1
- 2.2
- 3.3
- 4.4

Question Number: 85 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Disneyland is one of the largest and best-known theme parks. In terms of the four Vs (volume, variety, variation, visibility) how would you describe it?

- A. high volume, high variety, low variation, high visibility.
- B. high volume, low variety, high variation, low visibility.
- C. high volume, high variety, high variation, high visibility.
- D. high volume, low variety, high variation, high visibility.

Options:

- 1. 1
- 2.2
- 3. 3
- 4.4

Question Number: 86 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

Operations can be classified according to their volume and variety of production as well as the degree of variation and visibility. Which of the following operations would be classified as high volume, low variety?

- A. a front office bank
- B. a carpenter
- C. a fast food restaurant
- D. a family doctor

Options:

- 1.1
- 2.2
- 3. 3
- 4.4

Question Number: 87 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

Which of the following activities is NOT a direct responsibility of operations management?

- A. designing the operation's products, services and processes.
- B. developing an operations strategy for the operation.
- C. planning and controlling the operation.
- D. determining the exact mix of products and services that customers will want.

Options:

- 1.1
- 2.2
- 3. 3
- 4.4

Question Number: 88 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option:

No Option Orientation : Vertical

Operations typically differ in terms of volume of output, variety of output, variation in demand or the degree of 'visibility' (i.e. customer contact) that they give to customers of the production process. Please match the following element with the most appropriate of the above dimensions. Short waiting tolerance is most closely matched to:

- A. volume
- B. variation
- C. variety
- D. visibility

Options:

- 1.1
- 2. 2
- 3.3
- 4.4

 $Question\ Number: 89\ Question\ Type: MCQ\ Option\ Shuffling: No\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

Correct Marks: 0.8 Wrong Marks: 0

Low-variety operations do not include

- A. university lectures
- B. a jeans shop
- C. a tax consultancy advice service
- D. processing of credit card transactions

Options:

- 1.1
- 2.2
- 3.3
- 4.4

Question Number: 90 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

Service processes that are devoted to producing knowledge-based or advice-based services are called

- A. value services
- B. professional services
- C. customer-centric services
- D. customized services

Options:

- 1.1
- 2.2
- 3.3
- 4.4

Question Number: 91 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Which of the following requires the most lead time in dealing with changes in the numbers of school children?
A. build temporary classrooms B. hire new staff
C. amend school catchment areas D. hire short-term teachers
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 92 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
Which of the following is NOT an example of a supply side influence?
A. cost of labour
B. labour skills
C. land costs
D. energy costs
Options:
1. 1
2. 2
3. 3
4. 4
Question Number : 93 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks: 0.8 Wrong Marks: 0
Which of the following is an example of a supply side influence in the location decision?
A. cost of labour
B. labour skills
C. image of location D. convenience for customers
Options: 1. 1
2. 2
2. 2 3. 3
4. 4
Question Number : 94 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks: 0.8 Wrong Marks: 0
An advantage of a capacity lagging strategy is that

A. utilisation of the plants is always relatively low.B. always sufficient capacity to meet demand.

C. no ability to exploit short-term increases in demand.

D. over-capacity problems are minimised if forecasts are optimistic.

Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 95 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
Disintermediation refers to
A. the reduction of component parts B. the reduction or first-tier suppliers C. the reorganisation of supply networks D. 'cutting out the middle man'
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 96 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
The decision whether to make or buy goods/services is called the
A. vertical integration decision
B. supply configuration decision
C. Taguchi option
D. network shaping decision
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 97 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
Supply network design is important because
A. it allows organizations to reduce the number of suppliers.
B. it improves the relationship between internal and external suppliers.
 C. every operation is part of a larger and interconnected network of operations. D. it allows marketing more influence over the choice of suppliers.
D. It allows marketing more influence over the choice of suppliers.
Options:
1. 1
2. 2
3. 3

4. 4

Question Number : 98 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks: 0.8 Wrong Marks: 0
Factors affecting the location decision include
A. labour costs / land availability / environmental restrictions B. labour costs / land availability / capacity planning C. land cost / skills availability / capacity planning D. sales forecasts / capacity planning / road access
Options: 1. 1
2. 2
3. 3
4. 4
Question Number: 99 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
From high variety to low variety, which is the correct order of layout types?
A. product, fixed-position, process B. fixed-position, cell, process C. product, cell, process D. process, cell, product
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 100 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
The layout of an operation is concerned with deciding where to put
A. facilities and machines B. staff and facilities C. equipment, staff, and machines D. staff, machines, facilities and equipment
Options:
1. 1
2. 2
3. 3

Question Number : 101 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

4.4

A self-service cafeteria is usually positioned as
A. product layout
B. cell layout
C. fixed-position layout
D. process layout
Options :
1
2. 2
3. 3
1. 4
Question Number : 102 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Correct Marks : 0.8 Wrong Marks : 0
The layout where the equipment, machinery, plant and people move as necessary is known as
A. process layout
B. cell layout
C. fixed-position layout
D. product layout
Options :
1
2. 2
3. 3
1. 4
Question Number: 103 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
A mortgage division of a European Bank prepares an average of 210 new mortgages a
week. The work content of a mortgage is 1.5 hours. The office works 7 ½ hours a day
Monday to Thursday and 5 hours on Friday. What is the required cycle time?
A. minute
B. 90.0 minutes
C. 5.0 minutes
D. 10.0 minutes
Options:
1
2. 2
3. 3
4. 4

 $\label{eq:Question Number: Yes Single Line Question Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical$

Single-sourcing has a number of advantages. Which of the following is NOT an advantage of single sourcing? A. wide sources of knowledge and expertise to tap. B. better communication. C. strong durable relationships with individual suppliers. D. dependency encourages more commitment and effort. **Options:** 1.1 2.2 3.3 4.4 Question Number: 105 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0 Multiple-sourcing has a number of advantages. Which of the following is NOT an advantage? A. the purchaser can drive down prices through competitive tendering. B. more scale economies. C. a wider source of knowledge and expertise is available. D. sources can be switched in case of supplier failure. **Options:** 1.1 2.2 3. 3 4.4 Question Number: 106 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: Correct Marks: 0.8 Wrong Marks: 0 All the operations that are linked together to provide goods and services to the end customer are called A. the Supply Network

No Option Orientation : Vertical

- B. the Supply Chain Pipeline
- C. the Supply Chain
- D. the Distribution Chain

Options:

- 1.1
- 2. 2
- 3.3
- 4.4

Question Number: 107 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

3-D printing driven business model enable
A. economies of scale
B. economies of scope
C. economies of technology
D. economies of effort
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 108 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
IoT driven processes aim to provide
A. seamless data flow B. use of internet C. use of micro chips D. use of labels
Options :
1. 1
2. 2
3. 3
4. 4
Question Number: 109 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical
Correct Marks: 0.8 Wrong Marks: 0
Basic just-in-time techniques do NOT include
A. flexibility
B. market research
C. line-stop authority
D. quality of working life (QWL)
Options:
1. 1
2. 2
3. 3 . .
4. 4
Question Number: 110 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical
Correct Marks: 0.8 Wrong Marks: 0

Visibility measures used in just-in-time (JIT) would NOT include

- A. visual control items such as kanban.
- B. samples of competitor's products, including good and defective items.
- C. displays showing improvement techniques and checklists.
- D. hidden TV cameras to monitor individual staff at work.

Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 111 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical
Correct Marks: 0.8 Wrong Marks: 0
The basic practices underpinning just-in-time (JIT) do NOT include
A. development of staff
B. improving quality of working life
C. creativity
D. a 'them' and 'us' division of labour
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 112 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
Which of the following is an advantage of the 'traditional' approach to operations?
A. fewer stoppages B. lower inventory C. no surplus production D. high capacity utilisation
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 113 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
Using Statistical Process Charts (SPC) on a process in control, what is the number of parts that will fall outside +/- 3 standard deviations of the mean?
A. 63 per million
B. 45 per thousand
C. 3 per thousand
D. 0
Options:
1. 1
2. 2
3. 3

4. 4

Question Number: 114 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical
Correct Marks: 0.8 Wrong Marks: 0
The various definitions of quality do NOT include the
A. manufacturing-based approach
B. minimum specification approach
C. value-based approach
D. transcendent approach
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 115 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
Different departments hold the main organizational responsibility for closing gaps
between the customers' expectation of a product or service and their perception of it.
Which department is primarily responsible for ensuring that promises made to customers
concerning the product or service can be delivered by the operation in reality?
A. product/service development
B. operations
C. marketing
D. all of the above
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 116 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
The first step to ensure that products and services are made to conform with their
specification is to
A. define the quality characteristics of the product or service.
B. decide how to measure each quality characteristic.
C. set quality standards for each quality characteristic. D. control quality against standards.
Options:
1. 1
2. 2
3. 3
4. 4

Question Number: 117 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Which of the following is not a reason why 100% checking may not guarantee that all defects or problems will be identified?

A. wrong information may be given.

- B. staff may become fatigued over a period of time.
- C. checking every product or service can be both time-consuming and costly.
- D. quality measures may be unclear and staff making the checks may not know precisely what to look for.

Options:

- 1. 1
- 2.2
- 3.3
- 4.4

Question Number : 118 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 0.8 Wrong Marks: 0

The various gaps between customer perception and expectation in diagnosing quality problems do not normally include which one of the following?

- A. the customer's specification-operation's specification gap
- B. the quality produced-benefits provided gap
- C. the quality specification-actual quality gap
- D. the actual quality-communication gap

Options:

- 1.1
- 2.2
- 3.3
- 4.4

Question Number: 119 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

Organizing quality planning and control to ensure conformance to specification would

NOT include:

- A. finding and correcting causes of poor quality.
- B. continuing to make improvements.
- C. dismissing employers responsible for poor quality.
- D. applying quality standards for each quality characteristic.

Options:

- 1. 1
- 2.2
- 3.3
- 4.4

Question Number: 120 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option:

No Option Orientation : Vertical

Which of the following costs decrease as the order size is increased
A. price discount costs
B. storage costs
C. obsolescence costs
D. working capital costs
Options:
1. 1
2. 2
3. 3
4. 4
Question Number: 121 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical Correct Marks: 0.8 Wrong Marks: 0
One of the most powerful aspects to emerge from TQM is the concept of the internal customer and supplier. This means that
 A. Every part of the organisation contributes to external customer satisfaction by satisfying its own internal customers. B. Service Level Agreements must be in place to ensure standards are met. C. It is the responsibility of the executive in charge of TQM to manage internal customer-supplier relationships. D. The product or service must be inspected prior to its delivery to the external customer.
Options:
1. 1
2. 2
3. 3
4. 4
Question Number : 122 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks: 0.8 Wrong Marks: 0
Which of the following would NOT normally be considered as a 'costs of quality'?
A. Inspection costs
B. Marketing costs
C. Prevention costs
D. Internal failure costs
Options:
1. 1
2. 2

 $Question\ Number: 123\ Question\ Type: MCQ\ Option\ Shuffling: No\ Display\ Question\ Number: Yes\ Single\ Line\ Question\ Option: No\ Option\ Orientation: Vertical$

Correct Marks: 0.8 Wrong Marks: 0

3. 3 4. 4 Which one of the following would normally be considered as one of the 'costs of quality'?

- A. Overhead costs
- B. Appraisal costs
- C. Transport costs
- D. Marketing costs
- E. Transaction costs

Options:

- 1. 1
- 2. 2
- 3.3
- 4.4

Question Number : 124 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks: 0.8 Wrong Marks: 0

TQM expands on earlier approaches to quality management. Which of the following is ordered correctly from earlier to later ideas?

- A. Quality Control, Inspection, Quality Assurance, Total Quality Management
- B. Quality Assurance, Inspection, Quality Control, Total Quality Management
- C. Inspection, Quality Control, Quality Assurance, Total Quality Management
- D. Quality Assurance, Quality Control, Inspection, Total Quality Management

Options:

- 1.1
- 2.2
- 3.3
- 4.4

Question Number: 125 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 0.8 Wrong Marks: 0

What is internal service principle?

- A. Service to internal customers depends on the extent of communication with internal suppliers.
- B. Service to internal customers is the most important form of service.
- C. Service to external customers never exceeds service to internal customers.
- D. Service to internal customers depends on the culture of an organisation.

Options:

- 1.1
- 2.2
- 3. 3
- 4.4