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NPTEL

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Courses » Six Sigma

Announcements

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Unit 7 - Week 6

Course outline

How to access the portal

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Week 6

Lecture 20: MIL-STD-105E Sampling Plan

Lecture 21: Introduction to SPC

Lecture 22: Control Chart Examples

Feedback for week 6

Quiz : Week 6:Assignment (Jan 2018)

Week 6 Assignment Solution (Jan 2018)

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Week 6:Assignment (Jan 2018)

The due date for submitting this assignment has passed. **Due on 2018-03-07, 23:59 IST**
As per our records you have not submitted this assignment.

Week 6 Assignment (Jan 18)

1) 15 software CD's have been selected from a lot with the defect rate = 0.2. What is the probability that at most 1 item is defective? 1 point

- 0.165
- 0.13
- 0.035
- None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

0.165

2) In a sampling, risk for the producer and consumer is same and that is 0.5. Which one of these statements is correct? 1 point

- The probability of acceptance at acceptable quality level (AQL) is same as that at rejection quality level (RQL)
- The probability of acceptance at acceptable quality level (AQL) is higher than that at rejection quality level (RQL)
- The probability of acceptance at acceptable quality level (AQL) is lower than that at rejection quality level (RQL)
- Data insufficient

No, the answer is incorrect.

Score: 0

Accepted Answers:

The probability of acceptance at acceptable quality level (AQL) is same as that at rejection quality level (RQL)

3) Larson Nomogram is based on 1 point

- Binomial distribution
- Poisson distribution
- Bernoulli distribution
- None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Binomial distribution

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4) With increase in sample size, the probability of acceptance

1 point

- Increases
- Decreases
- Remains same
- None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Decreases

5) Acceptance quality level, is the minimum percentage of defective parts for sampling inspection which are considered satisfactory as a process average.

1 point

- True
- False

No, the answer is incorrect.

Score: 0

Accepted Answers:

False

6) In an inspection lengths of randomly selected 8 bars coming from Machine A and Machine B are as follows

1 point

Machine A: {71, 73, 70, 69, 72, 68, 69, 71}

Machine B: {73, 72, 71, 69, 71, 67, 69, 70}

If Machines are supposed to produce bars with the dimension 70. Select the correct option

- Machine B is more accurate than Machine A
- Machine A is more accurate than Machine B
- Machine A and Machine B are equally accurate
- None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Machine B is more accurate than Machine A

7) Following data is available

1 point

Average \bar{X} = 160

Variation of \bar{X} = 2.25 cm

Calculate upper control limit

- 164.5
- 169
- 166.75
- 173.5

No, the answer is incorrect.

Score: 0

Accepted Answers:

164.5

8) Let's use a shepherd and wolf example. Let us assume our null hypothesis is that there is "no wolf present." Shepherd thinks wolf is present (shepherd cries wolf) when no wolf is actually present. This is the classical example of type II error.

1 point

- True
- False

No, the answer is incorrect.

Score: 0

Accepted Answers:

False

9) The variance of x-bar chart is equal to x-Chart

1 point

- True
 False

No, the answer is incorrect.

Score: 0

Accepted Answers:

False

10) In control charts, upper control limit is

1 point

- σ away from the mean
 2σ away from mean
 3σ away from the mean
 6σ away from the mean

No, the answer is incorrect.

Score: 0

Accepted Answers:

3σ away from the mean

11) 25 items are selected from the lot size of 425 items. If the probability of accepting a lot is 0.75, Identify average total inspection.

1 point

- 25
 50
 125
 150

No, the answer is incorrect.

Score: 0

Accepted Answers:

125

12) Match the following and select correct option

1 point

- | | |
|------------|--|
| 1. R chart | A. study the number of defects per unit |
| 2. C chart | B. size of variable is studied |
| 3. P chart | C. dispersion of measured data |
| 4. X chart | D. defective units produced per subgroup |

- 1 – A, 2 – B, 3 – D, 4 – C
 1 – C, 2 – D, 3 – B, 4 – A
 1 – A, 2 – D, 3 – B, 4 – C
 1 – C, 2 – A, 3 – D, 4 – B

No, the answer is incorrect.

Score: 0

Accepted Answers:

1 – C, 2 – A, 3 – D, 4 – B

13) High cost, low volume items require complete inspection

1 point

- True
 False

No, the answer is incorrect.

Score: 0

Accepted Answers:

False

14 Attributes are monitored using

1 point

- R-chart
- Xbar-Chart
- Neither R-chart nor Xbar-Chart
- Both R-chart and Xbar-Chart

No, the answer is incorrect.

Score: 0

Accepted Answers:

Neither R-chart nor Xbar-Chart

15 Sequential sampling requires bigger sample size as compared to Single sampling 1 point

- True
- False

No, the answer is incorrect.

Score: 0

Accepted Answers:

False



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