

Unit 10 - Week 8

Course outline

How does an NPTEL online course work?

Week - 0

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

- Lecture 36 : Acceptance Sampling-II

- Lecture 37 : Acceptance Sampling-II (Contd.)

- Lecture 38 : Acceptance Sampling-II (Contd.)

- Lecture 39 : Acceptance Sampling-II (Contd.)

- Lecture 40 : Acceptance Sampling-II (Contd.)

- Week 8 : Lecture Material

- Quiz : Assignment 8

- Week 8 Feedback Form

Week 9

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Week 11

Week 12

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Text Transcripts

Assignment Detailed Solution

Books

Live Interactive Session

Assignment 8

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-03-25, 23:59 IST.

1) While designing a variable sampling plan to control proportion nonconforming in relation to a quality characteristic under consideration, the criteria to be specified are as follows:

2 points

- Producer's risk, consumer's risk, AQL and LQL
- Producer's risk, consumer's risk, \bar{X}_1 , \bar{X}_2
- Producer's risk, consumer's risk, p_1 , p_2
- \bar{X}_1 , \bar{X}_2 , p_1 , p_2

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

c.

2) The main advantages of variable sampling plan are

2 points

- Smaller sample size and less information about the quality characteristic.
- Larger sample size and more information about the quality characteristic.
- Smaller sample size and more information into the areas where quality improvement is possible
- Larger sample size and more insight into the areas where quality improvement is possible.

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

c.

3) In respect of a variable sampling plan, following parameters can be controlled

2 points

- Process mean and process standard deviation
- Process mean and proportion nonconforming
- Process mean or process standard deviation and proportion nonconforming
- All of the above

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

c.

4) While you design a variable sampling plan with the objective of controlling process average for a quality characteristic with double specification limits and specified process standard deviation, the decision variables are:

2 points

- Sample size, and upper and lower acceptance limit
- Sample size, and upper or lower acceptance limit
- Upper and lower acceptance limit
- Sample size only

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

a.

5) While designing a variable sampling plan to control process parameters input conditions to be specified in terms of:

2 points

- Good quality and poor quality of the batches and specifications limits of the quality characteristics
- Good quality and poor quality of the batches, Type-I and Type-II errors and specifications limits of the quality characteristics
- Good quality and poor quality of the batches, Type-I and Type-II errors
- Any of the above

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

b.

6) The application of variable sampling plans is limited. The main reason is:

2 points

- There must be a large number of such sampling plans
- Availability of data is not assured.
- Absence of a fool-proof system for designing a variable sampling plan
- Determination of sampling parameters is based on certain restrictive assumptions

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

d.

7) Form-2 method for a variable sampling plan is used only when

2 points

- When specification limits for the quality characteristic under consideration are known
- When estimates of minimum and maximum proportion nonconforming are made known
- Maximum allowable proportion nonconforming, with respect to quality characteristic under consideration, is known
- Both maximum allowable and actual proportion nonconforming, with respect to quality characteristic under consideration, are known

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

d.

8) Form-1 method is recommended to be used for a variable sampling plan. The parameters to be used for decision making when dealing with single specification limit under this method are

2 points

- n and M (which is compared with Z_L or Z_U)
- n and M (which is compared with p)
- n and k (which is compared with Z_L or Z_U)
- n and k (which is compared with p)

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

c.

9) For determination of the parameters of a variable sampling plan, with the objective of controlling process parameter, for the case of double specification limits and known standard deviation, the following conditions need to be specified:

2 points

- \bar{X}_1 , \bar{X}_2, α , β , specification limits
- \bar{X}_1 , \bar{X}_2, α , β , \bar{X}_{2L} , \bar{X}_{2U}
- \bar{X}_1 , \bar{X}_{2L} , \bar{X}_{2U} , α , β , σ
- \bar{X}_{2L} , \bar{X}_{2U} , α , β , σ

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

c.

10) When the parameters of variable sampling plan, with the objective of controlling process parameter, for the case of single specification limit and unknown standard deviation, are to be determined, the conditions to be specified are:

2 points

- α , β , \bar{X}_1 , \bar{X}_2 , X , n , t
- α , β , AQL, LQL, n , t
- α , \bar{X}_1 , x , n , t
- β , \bar{X}_2 , n , t

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:

a.