X

Unit 11 - Week 10

Week 10: Assignment (Jan 2018)

The due date for submitting this assignment has passed. **Due on 2018-04-04, 23:59 IST.**
As per our records you have not submitted this assignment.

1. Total No. of Questions: 15. Each question carries one point.
2. All questions are objective type. In some of the questions, more than one answers are correct.
3. This assignment includes true/false statement questions.

1) Birla Tyres purchases rims from DEL Ltd. an external supplier. DEL Ltd. takes 10 days in manufacturing and delivering an order. Birla Tyres requires 10,000 units of rims annually. Its ordering cost is Rs 60,000.00 per order and its carrying costs are Rs 180.00 per unit per year. The maximum usage per day could be 50 per day. What will be reorder level and safety stock? ***1 point***

- 274 and 400 respectively
- 226 and 500 respectively
- 400 and 274 respectively
- 500 and 226 respectively

No, the answer is incorrect.
Score: 0

Accepted Answers:
500 and 226 respectively

2) A Design of an experiment is too sensitive. What will the designer will do to plan for the unexpected? ***1 point***

- Best case scenario
- Optimal case scenario
- Worst case scenario
- None of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
Worst case scenario

3) Taguchi's robust design uses certain data which are as follows 12, 15, 18, 20, 22, 27, 32, 38, 40, 46, 53, and 57. What will be the SN ratio for the design process? ***1 point***

- 1.5854
- 2.0944
- 2.7854
- 3.1466

No, the answer is incorrect.
Score: 0

Accepted Answers:
2.0944

DOWNLOAD VIDEOS

4) Indian Cricket Association runs a mail-order business for cricket kit equipment. Annual demand for cricket bat is 16000. The annual holding cost per unit is Rs 150.00 and the cost to place an order is Rs 3000.00. What will be best quantity to order for maximum profit? **1 point**

- 600
- 700
- 800
- 900

No, the answer is incorrect.
Score: 0

Accepted Answers:
800

5) Which of the following is a 4-level array in the Taguchi's Orthogonal Array Table? **1 po**

- $L_4(2^3)$
- $L_27(3^13)$
- $L_25(5^6)$
- $L_16(4^5)$

No, the answer is incorrect.
Score: 0

Accepted Answers:
$L_16(4^5)$

6) A push/pull view of the supply chain categorizes processes based on whether they are initiated in response to a customer order (pull) or in anticipation of a customer order (push). This view is very useful when considering strategic decisions relating to supply chain design. **1 point**

- True
- False

No, the answer is incorrect.
Score: 0

Accepted Answers:
True

7) For a sample of data given below what will be the SN ratio when response is to be maximized by Taguchi? **1 point**

2, 5, 7, 11, 14, 18, 21, 24, 26, 29, 30, 34, 37

- 15.873
- 16.358
- 16.478
- None of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
15.873

8) What are Taguchi's contributions? **1 point**

- Quality Engineering Philosophy – Targets and Loss functions
- Methodology – System, Parameter, Tolerance design steps
- Experimental Design – use of Orthogonal arrays
- All are correct

No, the answer is incorrect.
Score: 0

Accepted Answers:
All are correct

9) The cost of scrapping a part is Rs 13.00 when it deteriorates from a target by ±0.25 mm. what will be the quality loss coefficient if the target value for the product's response is 1.5 mm? ***1 point***

- 8.32
- 16.54
- 29.92
- 35.46

No, the answer is incorrect.
Score: 0

Accepted Answers:
8.32

10) Which is not an assumption taken while calculating Economic Order Quantity (EOQ)? ***1 point***

- The ordering cost is constant.
- The rate of demand is random.
- The lead time is fixed.
- The replenishment is made instantaneously; the whole batch is delivered at once.

No, the answer is incorrect.
Score: 0

Accepted Answers:
The rate of demand is random.

11) A great deal of inventory piles up along the supply chain due to ***1 point***

- Good quality of suppliers – production may go rapidly.
- Poor management of logistics and not monitoring the lead time.
- Machine breakdown resulting from poor quality culture causing production interruption.
- Quality of finished products may be high causing no need to inspect and waist time.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Poor management of logistics and not monitoring the lead time.
Machine breakdown resulting from poor quality culture causing production interruption.

12) Taguchi focused on off-Line Quality Control. What is the meaning of off-Line Quality Control? ***1 point***

- A commitment to quality that goes beyond internal company issues to suppliers and customers.
- None of these.
- Improving quality and reducing costs in the product or process at the production stage.
- Improving quality and reducing costs in the product or process at the design stage.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Improving quality and reducing costs in the product or process at the design stage.

13) By Minimizing SN ratio one can maximize robustness of a design. ***1 point***

- True
- False
- None of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
False

14) Suppose a genetic algorithm uses chromosomes of the form x = abcdef with a fixed length of six genes. Each gene can be any digit between 0 and 9. Let the fitness of individual x be calculated as: *1 point*

$f(x) = 4a + 3f - (b + c) - 2d + 5e$

Let the initial population consist of four individuals with the following chromosomes:

$x_1 = 654532$

$x_2 = 239285$

$x_3 = 871201$

$x_4 = 418594$

Which gene has the minimum fitness using Genetic Algorithm?

- x_1
- x_2
- x_3
- x_4

No, the answer is incorrect.
Score: 0

Accepted Answers:
x_3

15) Which of the following is a Noise factor of Taguchi's robust design? *1 point*

- Operating Temperature
- Position of the gas pedal
- Dimensions of parts
- Deposition time in silicon wafer fabrication

No, the answer is incorrect.
Score: 0

Accepted Answers:
Operating Temperature

Previous Page End