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reviewer4@nptel.iitm.ac.in ▼

Courses » Surrogates and Approximations in Engineering Design

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## Unit 4 - Week 2

### Course outline

How to access the portal

Pre-requisite Assignment

Week 1

Week 2

The big picture - Overview

Introduction to DOE - 1

Introduction to DOE - 2

Types of DOE - 1

Types of DOE - 2 and some examples

Quiz : Assignment 2

WEEK 2 - FEEDBACK - Surrogates and Approximations in Engineering Design

Week 3

Week 4

## Assignment 2

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment. **Due on 2018-09-05, 23:59 IST.**

1) Surrogates can be used to perform 1 point

- a) Sensitivity analysis
- b) Optimization study
- c) Design space exploration
- d) All of the above

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*d) All of the above*

2) In design process which of the following is used to avoid / remove bias 1 point

- a) Replication
- b) Randomization
- c) Interaction
- d) None of the above

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*b) Randomization*

3) In an experiment consisting of 3 factors with 2 levels each how many experiments are needed to study the effect of single factor and all interactions possible. 1 point

- a) 8

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a) 8

4) System response can be influenced by design variable which is of the following type **1 point**

- a) Discrete
- b) Continuous
- c) Random
- d) All of the above

**No, the answer is incorrect.****Score: 0****Accepted Answers:***d) All of the above*5) Which of the following approaches have the potential to capture interaction of variables? **1 point**

- a) One Factor At a Time
- b) Orthogonal Array
- c) Trial and Error
- d) All of the above

**No, the answer is incorrect.****Score: 0****Accepted Answers:***b) Orthogonal Array*6) In Morris method, large measure of spread of elementary effects with respect to ith variable **1 point** indicates

- a) Heavy influence of the variable
- b) Variable involved in interaction
- c) Response function is nonlinear in terms of ith variable
- d) b and/or c

**No, the answer is incorrect.****Score: 0****Accepted Answers:***d) b and/or c*7) Latin Hypercube sampling operates on the basic philosophy of **1 point**

- a) Samples are stratified in some specified dimensions
- b) Samples are stratified in all dimensions
- c) No stratification
- d) Both b and c

**No, the answer is incorrect.****Score: 0****Accepted Answers:***b) Samples are stratified in all dimensions*[Previous Page](#)[End](#)

