EXST7015 : Daily Design Question 13

Carefully read the description of the experiment below. Be prepared to answer the questions that follow the design description as a class quiz.

One of the problematic concepts in understanding ecology and the impact of humans on ecology is the topic of "The Commons". An instructor of a university level introductory ecology course in interested in determining the best way of teaching this topic. He has determined that there are 4 possible approaches to teaching the topic, (1) assigned readings, (2) a movie shown during the ecology lab, (3) a lecture about the topic and (4) a class discussion session.

He has a large class of 100 students, with 25 students in each of his 4 laboratory sections. He assumes that students have been randomly assigned to the 4 laboratory sections and then randomly assigns an approach to each laboratory section, so there are 25 students assigned to experience each approach. As a method of evaluating the four approaches with 25 students each he prepares a quiz to test the students on their understanding of the concept of "The Commons". The quiz is administered after the 4 teaching approaches are completed, and the score for each student on this quiz is the dependent variable for the analysis.

Questions:

What is the treatment arrangement for this experiment?

      (a) single factor   (b) factorial   (c) nested

What is the experimental design for this experiment?

      (a) CRD   (b) RBD   (c) LSD   (e) Split-plot   (d) Repeated Measures

Does it seem to you that the treatments are fixed or random?

      (a) fixed   (b) random

What is the experimental unit for this experiment?

      (a) approach   (b) student   (c) a score   (d) a class   (e) The Commons

What is the sampling unit for this experiment?

      (a) approach   (b) student   (c) a score   (d) a class   (e) The Commons

What is the dependent variable for this experiment?

      (a) approach   (b) student   (c) a score   (d) a class   (e) The Commons

If the design is RBD, what are the blocks?

      (a) approach   (b) student   (c) a score   (d) a class   (e) The Commons

How many degrees of freedom are available for testing the treatments?

       Enter the correct value here: _____