

Name

Class

Date

1. Which design involves assigning participants to experimental and control groups based on some cutoff point before the treatment.
 - a) Equivalent time series
 - b) Factorial design
 - c) Regression discontinuity analysis
 - d) Recurrent institutional cycle
2. What is the key difference between quasi-experimental and true experimental design?
 - a) Type of data collected
 - b) Sample size required
 - c) Number of experimental conditions
 - d) Assignment of participants
3. What is the key feature of a Latin square design?
 - a) Each participant experiences every condition once.
 - b) The number of conditions is equal to the number of participants.
 - c) Each condition appears once in each row and column.
 - d) Conditions are presented in a random order.
4. What is the purpose of analyzing main effects in factorial design?
 - a) To assess the statistical significance of the results.
 - b) To identify the interaction effects between factors on the dependent variable.
 - c) To determine the independent effects of each factor on the dependent variable.
 - d) To investigate the confounding variables present in the study.
5. In the context of research, what does the term 'recurrent institutional cycle' refer to?
 - a) The analysis of data using statistical methods
 - b) The selection of participants based on specific criteria
 - c) The repeated and systematic collection of data over time
 - d) The process of randomly assigning participants to different groups

6. What is the main advantage of factorial design over single-factor design?
- a) It allows for the examination of interaction effects between multiple factors.
 - b) It allows for random assignment of participants to different conditions.
 - c) It reduces the chances of Type II error in the study.
 - d) It provides more control over confounding variables in the study.
7. Which design does not use a comparison group?
- a) Interrupted time series
 - b) Multiple time series
 - c) Static group comparison
 - d) Non-equivalent control group
8. Which one of the following is a possible threat in multiple time series design?
- a) interaction with selection
 - b) interaction of selection and treatment
 - c) history
 - d) maturation
9. What is one advantage of using multiple time series design?
- a) It provides a more detailed understanding of individual participants.
 - b) It eliminates the need for control groups.
 - c) It simplifies data collection and analysis.
 - d) It allows for the comparison of multiple groups over time.
10. What is the purpose of counterbalancing in a within subjects factorial design?
- a) To ensure that participants are assigned to different treatment groups randomly.
 - b) To control for order effects and minimize their impact on the results.
 - c) To examine the interaction effects between independent variables.
 - d) To prevent participants from experiencing fatigue or practice effects.
11. Which design involves measuring the dependent variable before and after the treatment is implemented in multiple time periods?
- a) Time-Series Experiment
 - b) Recurrent Institutional Cycle
 - c) Counterbalanced Design
 - d) Nonequivalent Control Group
12. In a 2x2 factorial design, how many independent variables are being manipulated?
- a) 4
 - b) 2
 - c) 1
 - d) 0

13. Which design is applied when the effect of the experimental variable is anticipated to be of transient.
- a) Interrupted time samples
 - b) Factorial design
 - c) Equivalent time samples
 - d) Recurrent institutional cycle
14. What is the purpose of factorial design in research?
- a) To control for confounding variables in the study.
 - b) To investigate the main effects and interaction effects of multiple factors on the dependent variable.
 - c) To determine the sample size needed for the study.
 - d) To analyze the qualitative data collected in the study.
15. What is the main difference between within subjects factorial design and between subjects design?
- a) Both designs involve participants receiving multiple treatments.
 - b) Within subjects design involves a smaller number of participants than between subjects design.
 - c) Both designs only involve one treatment per participant.
 - d) Participants receive multiple treatments in within subjects design, but only one treatment in between subjects design.
16. Which of the following designs is more likely to be used when random assignment is not feasible?
- a) Longitudinal design
 - b) True experimental design
 - c) Quasi-experimental design
 - d) Cross-sectional design

Answer Keys

1. c) Regression discontinuity analysis
2. d) Assignment of participants
3. c) Each condition appears once in each row and column.
4. c) To determine the independent effects of each factor on the dependent variable.
5. c) The repeated and systematic collection of data over time
6. a) It allows for the examination of interaction effects between multiple factors.
7. a) Interrupted time series
8. b) interaction of selection and treatment
9. d) It allows for the comparison of multiple groups over time.
10. b) To control for order effects and minimize their impact on the results.
11. a) Time-Series Experiment
12. b) 2
13. c) Equivalent time samples
14. b) To investigate the main effects and interaction effects of multiple factors on the dependent variable.
15. d) Participants receive multiple treatments in within subjects design, but only one treatment in between subjects design.
16. c) Quasi-experimental design

