



STUDENT

0030-TMD

TENTAMEN

TIG109 Tentamen

Kurskod	--
Bedömningsform	DT
Starttid	06.04.2022 10:00
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Sektion 1

Fråga	Status	Poäng	Uppgiftstyp
i			Dokument

Sektion 2

Fråga	Status	Poäng	Uppgiftstyp
i			Dokument
1	Rätt	1/1	Flersvarsfråga
2	Rätt	1/1	Flersvarsfråga
3	Delvis rätt	1/1	Flersvarsfråga
4	Fel	0/1	Flersvarsfråga

Sektion 4

Fråga	Status	Poäng	Uppgiftstyp
i			Dokument
5	Delvis rätt	4/6	Sifferfält

Sektion 3

Fråga	Status	Poäng	Uppgiftstyp
i			Dokument
6	Rätt	1/1	Flervalsfråga
7	Rätt	1/1	Flervalsfråga
8	Rätt	1/1	Flervalsfråga
9	Rätt	1/1	Flervalsfråga
10	Rätt	1/1	Flervalsfråga

11	Rätt	1/1	Flervalsfråga
12	Fel	0/1	Flervalsfråga
13	Rätt	1/1	Flervalsfråga
14	Fel	0/1	Flervalsfråga
15	Rätt	1/1	Flervalsfråga
16	Rätt	1/1	Flervalsfråga
17	Fel	0/1	Flervalsfråga
18	Rätt	1/1	Flervalsfråga
19	Rätt	1/1	Flervalsfråga
20	Rätt	1/1	Flervalsfråga

- 1 A researcher wishes to test the spelling abilities of 5th grade children from city and suburban schools. One hundred children from city schools and 100 children from suburban schools are randomly selected. Standardized test scores in the files of the students are used to find pairs of students (one from a city school and one from a suburban school) who have nearly identical reading comprehension scores. The investigator obtains 50 pairs of children in this way. The 50 children from the city schools and the 50 children from the suburban schools are then given a specially prepared spelling test.

Välj ett eller flera alternativ:

- independent groups: random groups design
- independent groups: matched groups design
- independent groups: natural groups design
- repeated measures: incomplete design
- repeated measures: complete design
- complex design (not mixed)
- mixed complex design



- 2 The impact of VR technology on learning was investigated using memory for word lists, by separately varying encoding and recall contexts using VR glasses compared to a conventional computer display. Each word was presented for two seconds and each word list consisted of ten words. Each participant were assigned a random order of four conditions, followed by the reverse of that order. In each condition, one of the word lists was presented. The number of recalled words from each word list was measured.




Välj ett eller flera alternativ:

- independent groups: random groups design
- independent groups: matched groups design
- independent groups: natural groups design
- repeated measures: incomplete design
- repeated measures: complete design
- complex design (not mixed)
- mixed complex design



- 3 Researchers investigated the impact on visual attraction of "attractive" and "neutral" faces in relation to the sex of the participant. Twenty-nine males and 29 females participated in the study. Each participant saw twenty photographs of people (half "attractive" and half "neutral") shown sequentially on a computer screen. Response time of key presses was measured for each photograph.

Välj ett eller flera alternativ:

- independent groups: random groups design
- independent groups: matched groups design
- independent groups: natural groups design 
- repeated measures: incomplete design 
- repeated measures: complete design 
- complex design (not mixed)
- mixed complex design 

- 4 15 right-handed participants, with no history of neurological/psychological disorders, not suffering from claustrophobia, and without metal in their bodies, were recruited for a memory fMRI study. First, participants viewed 256 colour images for three seconds each on a laptop. Then, while inside the brain scanner, participants viewed the 256 earlier images together with 256 novel images, while pressing one of three buttons for each image depending on if they experienced remembering, familiarity, or if it was a novel image.

Välj ett eller flera alternativ:

- independent groups: random groups design ✘
- independent groups: matched groups design ✔
- independent groups: natural groups design ✔
- repeated measures: incomplete design ✘
- repeated measures: complete design
- complex design (not mixed)
- mixed complex design

- 5 A 2 x 2 x 3 complex design has:

a total of ✔ independent variable(s)

a total of ✔ condition(s)

A repeated measures group design with a pre-test and a post-test has:

a total of ✘ (1) independent variable(s)

a total of ✘ (2) condition(s)

An independent groups design with the groups "male" and "female" has:

a total of ✔ independent variable(s)

a total of ✔ condition(s)

6 Balancing in an independent groups design is achieved through

Välj ett alternativ:

- random sampling from the population.
- manipulating the independent variable.
- matching subjects for critical individual variables.
- random assignment to groups.



7 A researcher examines whether there are differences between musicians and non-musicians in their ability to remember simple and complex music passages. The design of this experiment is a

Välj ett alternativ:

- 2 x 2 x 2 complex design.
- correlational design.
- 2 x 2 complex design.
- mixed natural groups design.



8 Which of the following is a block from an independent groups design with the conditions A, B, and C?

Välj ett alternativ:

- BCACBA
- ABCCBA
- CAB
- A



9 Which of the following must be balanced in order to have an interpretable repeated measures design experiment?

Välj ett alternativ:

practice effects



individual differences

task variability

differential transfer

10 In a typical experiment, researchers establish the following relationship(s) between variables:

Välj ett alternativ:

independence.

causation, but not correlation.

correlation, but not causation.

correlation and causation.



11 In a 2 x 2 design with the independent variables, Presentation speed (Slow, Fast) and Type of task (Simple, Complex), which of the following would be one of the four conditions created using factorial combination?

Välj ett alternativ:

complex task

simple task/complex task

slow speed/high speed

slow speed/simple task



12 The most serious problem in any repeated measures design is

Välj ett alternativ:

- error variation.
- individual differences among participants.
- nonlinear practice effects.
- differential transfer.



13 Suppose participants in an experiment with complete repeated measures design press a key as fast as possible when seeing a stimulus on a screen. On the first trial, the response time is much slower than on subsequent trials. This is an example of

Välj ett alternativ:

- individual differences among participants.
- counterbalancing.
- nonlinear practice effects.
- differential transfer.



14 A complex design always involves

Välj ett alternativ:

- only one independent variable.
- two or more dependent variables.
- two or more different research designs.
- two or more independent variables.



15 The overall effect of one independent variable in a complex design is called a(n)

Välj ett alternativ:

- relevant variable.
- main effect.
- interaction effect.
- simple main effect.



16 In an experiment, a dependent variable is

Välj ett alternativ:

- measured by the researcher.
- selected by the researcher.
- balanced by the researcher.
- manipulated by the researcher.



17 Which of the following is a balancing technique used in the incomplete repeated measures design?


Välj ett alternativ:

- ABAB counterbalancing
- all possible orders
- ABBA counterbalancing
- block randomization




18 A researcher tests two types of study methods (A and B) with students who are high or low in test anxiety. The results indicate that performance for the two groups of students is the same when study method A is used, and that low test-anxious students perform better with study method B than high test-anxious students. These results indicate

Välj ett alternativ:

- a main effect of study method.
- two main effects and an interaction effect
- a main effect of test anxiety.
- an interaction effect between study method and test anxiety. 

19 A sensitive experiment is one that

Välj ett alternativ:

- can detect even a small effect of an independent variable. 
- has a great deal of error variation.
- has several conditions of the independent variable.
- examines individual differences variables.

20 When using a natural groups design, researchers must

Välj ett alternativ:

- not compute an effect size of the independent variable.
- use block randomization to the conditions of the individual differences variable.
- use an appropriate matching variable for assigning subjects to different groups.
- avoid making a causal inference about the effect of the variable. 