

Directions and Sample Questions for Final Exam

Part I. Logic of Evidence

A. Answer in a short paragraph (10 points):

Show what it would take (using a made-up example) to falsify the hypothesis that heavy objects, when released in the earth's atmosphere, fall faster than lighter objects. Be sure to make clear what the logical form of the argument is and identify any auxiliary hypotheses that are involved and how they affect the logic of the falsification.

Part II: Correlation

A. Answer the following questions in two or three sentences (15 points)

Explain why establishing correlation does not suffice to demonstrate causation. Give an example.

B. Answer the following multiple-choice questions on the supplied scantron form (20 points)

To make a prediction for a new value of the predictor variable based on a correlation, you

- multiply the correlation coefficient by the new value and add the value of the y-intercept.
- divide the new value by the slope of the correlation line and add the value of the y-intercept.
- add the new value to the slope of the correlation line and divide by the value of the y-intercept.
- none of the above.

Part III: Causation

A. Answer the following questions in two or three sentences (15 points)

You are trying to identify the cause of being promoted rapidly at the Dogeatdog Company using Mill's method of agreement. Make up values for the appropriate table that shows that giving gifts to the Director of Human Resources is the cause and not hard work, working overtime without reporting it, above average intelligence, or bribing one's supervisor.

B. Answer the following multiple-choice questions on the supplied scantron form (20 points)

- Confounding variables are a threat to the
- external validity of a study.

- b. internal validity of a study.
- c. statistical significance of the result.
- d. none of the above.

Part IV: Mechanism

A. Answer the following question in two or three sentences (10 points)

Explain and give an example of how a lesion or ablation study provides evidence as to the workings of a mechanism.

B. Answer the following multiple-choice questions on the supplied scantron form (10 points)

The debate between holism and reductionism consist in all of the following except:

- a. holists claim that reductionists fail to consider the importance of higher-levels of organization.
- b. reductionists claim that holists are unable to properly explain how parts give rise to the behavior of the whole.
- c. reductionists claim that we should reduce the number of components in a mechanism.
- d. holists claims that the whole is more than the sum of its parts.