Experimental Psychology Exam Questions

Exam Questions Cover:

The Science of Psychology

Getting Started in Research

Research Ethics

1. Empiricism means…

A learning based on common sense

B thinking logically about philosophy

C learning based on observation

D thinking creatively about psychology

2. … questions are questions that can be answered through systematic observation.

A Empirical

B Epistemological

C Enlightened

D Eclectic

3. An example of a pseudoscience is…

A Astrology

B Astronomy

C Physics

D Psychology

4. Which of these concepts describes a tendency to focus on the evidence that seems to prove our already held beliefs while discounting evidence that would disprove our own beliefs?

A Attentional bias

B Gambler’s Fallacy

C Confirmation Bias

D Normalcy Bias

5. The clinical practice of psychology does NOT include…

A Creating and evaluating advertisements

B Prescribing psychotropic medication

C Diagnosing mental illness

D Behavioral therapy

Consider the following psychological experiment: Participants are put into either a happy or a sad mood by having them look at short videos of either an uplifting or depressing nature. They are then asked to rate pictures of people on their attractiveness.

6. In the experiment above, what is the independent variable?

A Smalltalk

B Personal compatibility

C Depression

D Mood

7. What is the independent variable?

A Perception of Attractiveness

B Depression

C Mood

D Perception of videos

8. Height, SAT scores and age are…

A Dependent Variables

B Quantitative variable

C Independent Variables

D Categorical variables

9. Sex, occupation and nationality are…

A Dependent Variables

B Quantitative variable

C Independent Variables

D Categorical variables

10. What is an operational definition?

A A description of how exactly an experiment is going to be carried out.

B A definition that is created during an experiment.

C A definition of a variable in terms of precisely how it is to be measured.

D A general definition of a variable (as found in an encyclopedia).

11. What is the most common way to graphically present correlations between quantitative variables?

A Scatterplots

B Pie Charts

C Bar Graphs

D Impressionism

12. What is the most common way to present statistical information about differences between groups?

A Scatterplots

B Pie Charts

C Bar Graphs

D Impressionism

13. A psychological study finds the following correlational effect: The more students feel under pressure to complete their homework successfully and on time, the more they procrastinate. This is a…

A Positive relationship

B Casual Relationship

C Negative relationship

D Causal Relationship

14. What are two of the main reasons that “correlation does not imply causation”?

A Optimism Bias and Outcome Bias

B Directionality Problem and Third-Variable Problem

C Reasonability Problem and Relevancy Problem

D Pseudocertainty Effect and Projection Bias

15. Which type of article is not commonly found in a scientific journal?

A Feuilleton

B Empirical research report

C Review article

D Theoretical article

16. What are the two main types of scholarly books you can use in your research?

A Treatises and edited volumes

B Monographs and edited volumes

C Treatises and research reports

D Monographs and research reports

17. Psychotherapy can be considered an example of…

A Falsifiability

B Basic research

C Applied research

D Folk psychology

18. A Confederate is someone who…

A does research on the American Civil War.

B pretends to be a participant of an experiment but is really working for the researcher.

C pretends to be the researcher but is really a participant of an experiment.

D pretends to be a participant of an experiment but is really a member of an Institutional Review Board.

19. In the Tuskegee Syphilis Study, there were issues with…

A Informed consent

B The right to Autonomy

C Research Ethics

D All of the Above

20. In what primary way do researchers respect participant’s right to privacy?

A maintaining confidentiality.

B by isolating them from the outside world during an experiment.

C by not disclosing their hypothesis or research question until debriefing.

D by not using Facebook or other social media to contact participants.

21. Which of the following is NOT an ethics code used in psychological research?

A Nuremberg code

B Code of Hammurabi

C Declaration of Helsinki

D Belmont Report

22. What is a Protocol (in psychological research)?

A A list of operational definitions of all the variables connected to the research.

B A detailed description of the research that is reviewed by an independent committee.

C The Declaration of Helsinki

D Good manners.

23. Which of these is not a level of risk for research according to federal regulations?

A Exempt research

B Minimal risk research

C At-risk research

D Maximum risk research

24. Stanley Milgram’s famous obedience study used deception in what way?

A Participants were led to believe that they had no other choice but to participate in the experiment.

B Participants were led to believe that they were not being watched.

C Participants were told that someone in the adjoining room was receiving electrical shocks though actually there were no shocks.

D Participants were told that if they stopped administering shocks they would be shocked themselves as a consequence.

25.Which of the following is a categorical variable?

A eye color

B IQ

C number of lifetime sexual partners

D height

26. Which of the following questions is not falsifiable?

A Does Bigfoot exist?

B Do men drive faster than women?

C Does number of hours of sleep relate to cognitive functioning in adults?

D Does Facebook increase symptoms of narcissism in its users?

27. A(n) \_\_\_\_\_\_\_\_ study is one that focuses on a practical problem, like effective therapies to treat PTSD. A(n) \_\_\_\_\_\_\_\_ study is one that focuses on a question of interest that may not have practical implications, like the types of music people like most.

A Empirical; rational

B Rational; empirical

C Basic; applied

D Applied; basic

28. In a study of happiness, 100 people rate their level of happiness on a 1-to-10 scale. What kind of variable is this?

A categorical

B quantitative

C independent

D dependent

29. Which of the following is an example of an applied research question?

A What is people’s favorite color M&M?

B How do people organize their conceptual knowledge?

C What color recycling bin leads people to recycle more?

D All the above

Short Answer Questions

Please explain HOW each of the following ethical standards were violated for ONE of the studies below (pick only ONE study from below):

Milgram’s Study on Obedience OR Stanford Prison Study (circle which one):

* Beneficence/Nonmaleficence
* Fidelity and Responsibility
* Integrity
* Justice
* Respect for people’s rights

1. Name a phenomenon/construct that psychologists might study and provide TWO operational definitions for that phenomenon/construct.
2. Why can’t we determine causation from a correlational study? Give an example in your response.
3. Compare and contrast empiricism and rationalism. In your response, include a description, example, and identify the group of people who typically engage in each approach.
4. What are the main differences between science and pseudoscience? Be thorough with your response, outlining some of the main features of each.

Exam Questions Cover:

Theory in Psychology

Psychological Measurement

Experimental Research

1. Psychoanalysis is a…

A Theoretical perspective

B Hypothetical theory

C Parsimonious model

D Formal phenomenon

2. The principle of parsimony holds that…

A A theory should include only as many concepts as are necessary to explain or interpret the phenomena of interest.

B A theory should include a relatively wide number of concepts, so as to be thorough enough to explain a complex phenomenon.

C More parsimonious theories are more closely based on already established theories.

D More parsimonious theories used methods that made a study easier to replicate.

3. Piaget’s theory of cognitive development is an example of a…

A Functional theory

B Mechanistic theory

C Stage theory

D Typology

4. Most theories of personality are…

A Functional theories

B Mechanistic theories

C Stage theories

D Typologies

5. A researcher observes a phenomenon. She then chooses a theory that offers a possible explanation. She generates a hypothesis that should be confirmed it that theory is true. To test the hypothesis, she conducts an empirical study. This researcher is using the:

A Hypothetico-deductive method

B Inductive - theoretical method

C Hypothetico – empiricist method

D Deducto-inductive method

6. Which of the following is NOT a common psychometric measure?

A Self-report measures

B Free association measure

C Behavioral measures

D Physiological measures

7. Construct

Which of the following would NOT be considered a psychological construct?

A Neuroticism

B Mood

C Heart Rate

D Extraversion

8. An example of a physiological measure would be…

A Neuroticism

B Mood

C Heart Rate

D Extraversion

9. “Converging operations” means that…

A Repeat measurements tend to be closer to the mean than the original measurement. This can decrease test-retest reliability.

B Psychologists use multiple operational definitions of the same construct — either within a study or across studies.

C In a within-subjects study, psychologists can study more than one dependent variable at a time, saving time and financial resources.

D At the end of a study, researchers consolidate all the information gathered into one conclusion.

10. Participants’ weight is measured in kilograms. This is an example of which level of measurement?

A Nominal level

B Ordinal level

C Interval level

D Ratio level

11. A researcher is assigning participants to categories by occupation. Which level of measurement is he using?

A Nominal level

B Ordinal level

C Interval level

D Ratio level

12. Reliability refers to…

A The feasibility of a measure

B The nonresponse quotient of a survey

C The accuracy of a measure

D The consistency of a measure.

13. Cronbach’s alpha and split-half correlations are the most common ways to determine…

A Internal consistency

B Test-retest reliability

C Cohen’s kappa

D Interrater reliability

14. Which term describes the extent to which the scores from a measure represent the variable they are intended to?

A Control

B Reliability

C Reactivity

D Validity

15. What is criterion validity?

A The extent to which scores on a measure are not correlated with measures of variables that are conceptually distinct.

B The extent to which people’s scores on a measure are correlated with other variables that one would expect them to be correlated with.

C The extent to which a measure “covers” the construct of interest.

D The extent to which a measurement method appears to measure the construct of interest.

16. The different levels of the independent variable in an experiment are called…

A Placebos

B Conditions

C Controls

D Checks

17. Participants are asked questions to determine their attitude towards gun control. The experimenter strongly supports gun control which might lead to a variation in results. This is called the…

A Political bias effect

B Experimenter expectancy effect

C Opinion transfer effect

D Social conformity effect

18. Testing participants in different orders is referred to as … and presents a solution to … effects.

A counterbalancing / experimenter expectancy

B deception / sampling bias

C deception / placebo

D counterbalancing / carryover

19. Election polls that accurately predict from a small sample how the population voted have a lot of…

A Socially desirable responding

B External validity

C Manipulation checks

D Conditions

20. A definition of a variable in terms of precisely how it is to be measured is referred to as a(n)…

A Operational definition

B Double-blind definition

C Conceptual definition

D Interrater definition

21. An extraneous variable that differs on average across levels of the independent variable is referred to as a…

A Validity-reducing variable

B Manipulation check

C Confounding variable

D Operational effect

22. In a between-subjects experiment, each participant is tested under all conditions.

Correct False

Short Answer

23. Briefly describe what makes a study a double-blind study.

24. What constitutes socially desirable responding?

25. Why is it often necessary to include a manipulation check in an experiment?

26. Why are placebos used in research?

27. Give at least one way to measure stress for each of the following types of measurement:

a. Physiological measurement

b. Self-report measurement

c. Behavioral measurement

28. What is one advantage of within-subject research? What is one disadvantage? What is one advantage of between-subject research? What is one disadvantage?

29. What is counterbalancing and why is it used in research?

Exam Questions Cover:

Nonexperimental Research

Complex Research Designs

Survey Research

1. Which of the following is NOT a common approach to data collection in qualitative research?

A Interviews

B Correlations

C Archival Data

D Naturalistic Observation

2. In a pretest-posttest design, if the average posttest score is better than the average pretest score, then it makes sense to conclude that the treatment might be responsible for the improvement. However, there are common alternative explanations for this. What are they?

A History, Maturation, Inverse Correlation and Optimism Bias

B Crossover Effect, Non-Response Bias and Regression to the Mean

C History, Maturation, Regression to the Mean and Spontaneous Remission

D Crossover Effect, Maturation, Inverse Correlation and Spontaneous Remission

3. Quasi-experimental research is considered to be a type of…

A Experimental research

B Nonexperimental research

C Qualitative research

D Single-variable research

4. Stanley Milgram’s obedience study as it was originally conducted in the early 1960s was an example of…

A Single-variable research

B Naturalistic observation

C Qualitative research

D Correlational Research

5. When observations require a judgment on the part of the observers this process is often described as \_\_\_\_ . A set of target behaviors is defined clearly. The observers then categorize participants individually in terms of which behavior they have engaged in and the number of times they engaged in each behavior. The target behaviors must be defined in such a way that different observers \_\_\_\_\_\_ them in the same way.

A Quantifying / quantify

B Categorizing / categorize

C Scoring / score

D Coding / code

6. What is Triangulation?

A Having at least three researchers rate the same behavior to improve interrater reliability.

B Using both quantitative and qualitative methods simultaneously to study the same general questions and to compare the results.

C Testing each participant in three different conditions to avoid context effects

D An interdisciplinary approach to quantitative research

7. What is participant observation?

A During an experiment, participants are left alone in a room and observed without their knowledge

B A confederate observes participants and reports their results back to the researcher.

C A type of quantitative research.

D The researcher becomes an active participant in a situation in the group or situation they are is studying.

8. A researcher is using qualitative research methods to generate a hypothesis and quantitative methods for hypothesis testing. This is an example of …

A Mixed-methods research

B Quasi-experimental research

C Grounded Theory

D An interrupted time-series design

9. This approach was developed within the field of sociology in the 1960s and has gradually gained popularity in psychology. Researchers start with the data and develop a theory or an interpretation that is based on those data. They do this in stages. First, they identify ideas that are repeated throughout the data. Then they organize these ideas into a smaller number of broader themes. Finally, they write a theoretical narrative—an interpretation—of the data in terms of the themes that they have identified.

Which research method is being described above?

A Grounded Theory

B Survey Research

C Informal interviews

D Participant Observation

10. “How many alcoholic drinks have you consumed in the past week? Please choose one of the following: None, 1-3, 3-6, 6-10, more than 10.” This is a(n) \_\_\_ survey item.

A Open-ended

B Closed-ended

11. “On a scale from 1 to 10, how hungry are you feeling right now?” This is a(n) \_\_\_ survey item.

A Open-ended

B Closed-ended

12. “Which three countries would you like to travel to the most?” This is a(n) \_\_\_ survey item.

A Open-ended

B Closed-ended

13. Nonmanipulated independent variables are almost always…

A Intellectual variables

B Physiological variables

C Within-subjects factors

D Between-subjects factors

14. What is the strongest form of interaction between independent variables?

A Mutualistic Interaction

B Crossover Interaction

C Synergistic Interaction

D Antagonistic Interaction

15. A large number of variables are organized into a smaller number of clusters, such that they are strongly correlated within each cluster but weakly correlated between clusters. Each cluster is then interpreted as multiple measures of the same underlying construct. This procedure is called…

A Factorial design

B Factor analysis

C Statistical control

D Multiple regression

16. What does the acronym “BRUSO” stand for?

A Brief, relevant, useful, sharp and ordinary

B Blunt, respondent-friendly, universal, short and objective

C Brief, revealing, useful, specific and objective

D Brief, relevant, unambiguous, specific and objective

17. Briefly explain why this question is not a good survey question: “How often do you go on walks to lead a healthier lifestyle?”

18. When should a study include a manipulation check?

19. Please name three factors that might lead to unintended context effects in surveys.

20. A sampling frame is a list of criteria that are being used to select respondents.

A True B False

21. Cluster sampling is especially useful for surveys that involve …

A Naturalistic observation

B Different ethnic groups

C Face-to-face interviewing.

D A large amount of questions

22. In survey research, it is common practice to pre-notify respondents, send them reminders and offer incentives for participation. Why?

A To reduce non-response bias

B To reduce sampling bias

C To comply with APA standards

D To reduce stress on respondents

23. Stratified random sampling can be used to select a sample in which the proportion of respondents in each of various subgroups matches the proportion in the population.

A True B False

24. Which of these is NOT a type of probability sampling?

A Simple random sampling

B Convenience Sampling

C Cluster sampling.

D Stratified random sampling

25. Which of these is the correct formula used to perform multiple regression?

A b1X1+ b2Y2+ b3X3+ … + biYi= bX

B b1X1+ b2X2+ b3X3+ … + biXi= Y

C Y1X1+Y2X2+Y3X3+ … +YiXi= b

D b1+b2+b3+ … +bi = XY

Short Answer

* + - 1. A researcher wants to study the effect of temperature and time of day on mood. Temperature is broken down into “hot” and “cold.” Time of day is broken down into “day” and “night.” Please answer the following questions about this factorial design study:
         1. What are the independent variables?
         2. How many levels does each independent variable have? List what those levels are for each independent variable.
         3. What is the dependent variable?
         4. How many groups will there be in the study? (You can draw it out in a square if that will help.)
         5. If you found a main effect, what would that look like? Please give an example here.
         6. If you found an interaction, what would that look like? Please give an example here.
      2. You are a researcher interested in studying the factors that influence prison recidivism. What might some of these factors be? What type of research study/analysis would you do for this research question?
      3. You have been commissioned by a retail company to review a survey about customers’ feelings about opening the store for “Black Friday” on Thanksgiving evening. Upon reading the survey, you realize that the survey does not meet the BRUSO guidelines for writing survey questions. Write an example of questions that violate BRUSO, giving one example for each letter. In your response, also label what each letter means.
         1. B:
         2. R:
         3. U:
         4. S:
         5. O:

Exam Questions Cover:

Single-Subject Research

Presenting Your Research

Descriptive Statistics

Inferential Statistics

1. Applied behavior analysis is a type of research usually carried out using … subjects.

A Nonhuman

B Human

2. The three phases of a particular experiment can be described as ABA. This experiment uses a(n)…

A Reversal Design

B Alternating Treatments Design

C Latency Design

D Descriptive Design

3. Which factor describes the time it takes for the dependent variable to start changing after a change in conditions?

A Trend

B Level

C Latency

D State

4. The steady state strategy is normally used in…

A Between-subjects research

B Single subject research

C Naturalistic observation

D Participant observation

5. APA style can be seen as having three different levels. What are they?

A Organization, high-level style, low-level style

B Organization, Formatting, References

C High-, mid-, and low-level style

D High-level style, References, low-level style

6. What do you call an article that represent the results of one or more empirical studies?

A Abstract

B Theoretical Article

C Review Article

D Empirical Research Report

7. Consistent double-spacing, the running head, and the placement of tables and figures at the end are typical features of a(n)…

A Poster

B Copy Manuscript

C Method Section

D Appendix

8. In a particular distribution, the peak is shifted toward the lower end of its range and the distribution has a relatively long positive tail. This distribution is…

A Negatively skewed

B Positively skewed

C Symmetrical

D None of the Above

9. Which of the following is NOT a type of central tendency?

A Mode

B Cohen’s d

C Mean

D Median

10. The … is the most frequent score in the distribution.

A Standard Deviation

B Variance

C Mode

D Median

11. The standard deviation is the square root of the…

A Range

B Mean

C Variance

D Variability

12. Many sex differences are statistically significant—and may even be interesting for purely scientific reasons—but they are not …

A Politically correct

B Practically significant

C Feminist

D Ethically significant

13. When researchers obtain statistically significant results, they tend to submit them for publication, and journal editors and reviewers tend to accept them. But when researchers obtain nonsignificant results, they tend not to submit them for publication, or if they do submit them, journal editors and reviewers tend not to accept them. This problem is called the…

A Shelving conundrum

B File drawer Problem

C Desktop Folder Issue

D Scientific Bermuda Triangle

14. The problem described in the previous question has which effect?

A The published literature probably contains a higher proportion of Type I errors than we might expect

B The published literature probably contains a higher proportion of Type II errors than we might expect

15. Analysis of Variance is typically used when…

A the sample is relatively large.

B we are only comparing two groups or conditions.

C we are comparing three or more groups or conditions.

D the experiment lacks statistical power large enough to avoid Type II error.

16. A result is said to be statistically significant if…

A The null hypothesis is rejected.

B The alternative hypothesis is rejected.

C The p value lies below 30%.

D The t test turns out positive.

Short Answer

1. Design a simple single-subject study using a reversal design to answer a question about a behavior of interest. Create a graph that displays the hypothetical results for the study you designed.

2. Outline the steps of null hypothesis testing, including an explanation of what a null hypothesis and alternative hypothesis are and why they are important. In your response, give an example of each.