

*Test Bank for Science of
Psychology-Connections and
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by Shapiro*

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Chapter 1: The Science of Psychology

Multiple Choice Questions

1. Psychology is the scientific study of:
- a. the brain
 - b. behavior
 - c. mental processes
 - d. emotions
 - e. All of the above are true.

ANS: E DIF: Easy

2. René Descartes was a proponent (supporter of the idea) of:
- a. polyism
 - b. dualism
 - c. alterism
 - d. monism
 - e. intraism

ANS: B DIF: Moderate

3. Empiricism is
- a. an approach to psychology interested in sensation and perception.
 - b. the idea that knowledge begins by observing the natural world.
 - c. a branch of philosophy interested in the workings of the mind.
 - d. a branch of psychology that focuses on observable behavior.
 - e. a branch of philosophy interested in the origin of ideas and knowledge.

ANS: B DIF: Moderate

4. One of the earliest approaches to psychology was _____, which tried to understand complex human thought processes and even the nature of consciousness by investigating fundamental components, such as how our senses and perception work.
- a. functionalism
 - b. componentism
 - c. structuralism
 - d. psychoanalytic

e. behaviorism

ANS: C DIF: Moderate

5. _____ was influenced by Charles Darwin in his development of the approach to psychology called functionalism.
- a. Sigmund Freud
 - b. Ivan Pavlov
 - c. B. F. Skinner
 - d. William James
 - e. Carl Rogers

ANS: D DIF: Moderate

6. The psychanalytic approach to psychology is most associated with:
- a. Sigmund Freud
 - b. Charles Darwin
 - c. Ivan Pavlov
 - d. Edward Thorndike
 - e. John Watson

ANS: A DIF: Easy

7. Dr. Kaur is an experimental psychologist interested in studying the basic principles of learning. Her methods involve training pigeons to peck different colored disks to receive food rewards. Dr. Kaur would likely follow which approach to psychology?
- a. functionalism
 - b. positive psychology
 - c. neuroscience
 - d. psychoanalytic
 - e. behaviorism

ANS: E DIF: Moderate

8. Which of the following is the best definition of the humanistic approach to psychology?
- a. We can understand human psychology if we assume that our greatest motivation is to seek pleasure and avoid pain.

- b. The best way to understand human psychology is through observing our behavior; trying to understand the workings of the human mind is beyond the scope of science.
- c. The best way to understand human psychology is through understanding the pressures felt by our ancient ancestors during our evolution.
- d. Humans have free will, and we are striving to be the best version of ourselves.
- e. Humans are highly influenced and motivated by unconscious thoughts and desires.

ANS: D DIF: Moderate

9. _____ psychology focuses on understanding ways that allow us to reach our full potential and emphasizing what brings us joy.
- a. Hedonistic
 - b. Positive
 - c. Psychoanalytic
 - d. Functional
 - e. Cognitive

ANS: B DIF: Easy

10. Which of the following approaches to psychology would be most interested in the genetic influence of behavior?
- a. positive psychology
 - b. humanistic psychology
 - c. evolutionary approach
 - d. behaviorism
 - e. cognitive psychology

ANS: C DIF: Hard

11. Dr. Williams is interested in how activity in specific areas of the frontal lobe of the brain correlates with trying to remember a list of 15 numbers. Which of the following approaches best describes Dr. Williams' work?
- a. behaviorism
 - b. psychoanalytic
 - c. neuroscientific

- d. evolutionary
- e. sociocultural

ANS: C DIF: Easy

12. Which of the following is the best example of a scientist taking a more reductionistic approach to their research?
- a. a developmental psychologist who is interested in the interaction between adolescents
 - b. a social psychologist who is interested in understanding how people are drawn into cults
 - c. a cognitive psychologist who is interested in how studying habits influences forming and recalling long-term memories
 - d. a biopsychologist who is interested in investigating how amphetamines increase repetitive behaviors in mice
 - e. a clinical psychologist who is interested in comparing different methods of treating someone with depression

ANS: D DIF: Moderate

13. In what context would one likely discuss the peer review process?
- a. a researcher who is trying to get a paper published in a journal
 - b. a developmental psychologist who is studying how adolescents interact with their peers
 - c. a cognitive psychologist who is interested in studying memory recall in children
 - d. a social psychologist who is making decisions on how to collect random samples of a population
 - e. a neuroscientist who is using computer algorithms to create real-time images of the brain's activity when someone is in a neuroimaging machine like an MRI

ANS: A DIF: Easy

14. Neuroscience who is studying how certain chemicals in the brain affect depression takes a _____ approach, while a social psychologist who is interested in how groups make decisions take more of a _____ approach.
- a. reductionistic; fundamental

- b. fundamental; reductionistic
- c. narrow; broad
- d. reductionistic; holistic
- e. microscopic; macroscopic

ANS: D DIF: Moderate

15. Dr. Gonzalez is conducting a study looking at what makes people unique individuals. He is particularly interested in measuring the degree to which the person enjoys spending their time interacting with others in a crowded room. Dr. Gonzalez would most likely be categorized as a:

- a. cognitive psychologist
- b. biopsychologist
- c. cultural psychologist
- d. personality psychologist
- e. psychopathologist

ANS: D DIF: Moderate

16. Which of the following is NOT a subdiscipline in psychology?

- a. health psychology
- b. ethology
- c. learning
- d. psychopathology
- e. cultural psychology

ANS: B DIF: Moderate

17. A researcher in which of the following subdisciplines in psychology would be interested in how certain brain changes during adolescence correlate with risks of developing schizophrenia as adults?

- a. biopsychologist
- b. developmental psychologist
- c. psychopathologist
- d. psychiatrist
- e. All of the above are true.

ANS: E DIF: Moderate

18. Which of the following subdisciplines in psychology would NOT be considered an applied field?

- a. clinical psychology
- b. personality psychology
- c. counseling
- d. psychiatry
- e. school psychology

ANS: B DIF: Moderate

19. Applied behavior analysis (ABA) is a subfield of applied psychology. ABA is most associated with which subfield of psychology?

- a. neuroscience
- b. behaviorism
- c. cognitive psychology
- d. psychoanalytic
- e. None of the above are true.

ANS: B DIF: Hard

20. A company is particularly interested in creating a better work environment for its employees. A psychologist in which subdiscipline in psychology would be the most helpful?

- a. industrial and organizational psychology
- b. work-life balance psychology
- c. clinical psychology
- d. school psychology
- e. applied behavior analysis

ANS: A DIF: Moderate

21. Which of the following requires a medical degree?

- a. clinical psychologist
- b. school psychologist
- c. psychiatrist
- d. counseling
- e. All of the above are true.

ANS: C DIF: Moderate

22. Which of the following applied fields requires the person to go to graduate school for the greatest number of years—most often earning a PhD?
- a. therapist
 - b. counselor
 - c. applied behavior analyst
 - d. school psychologist
 - e. clinical psychologist

ANS: E DIF: Hard

23. What is the first step in the scientific method?
- a. theorize
 - b. create a testable hypothesis
 - c. empiricism (observation)
 - d. experimentation
 - e. replication

ANS: C DIF: Moderate

24. In the scientific method, which of the following is a statement of prediction?
The statement is either supported or not by the results of an experiment.
- a. hypothesis
 - b. idea
 - c. conjecture
 - d. fact
 - e. concept

ANS: A DIF: Moderate

25. Dr. Dial is conducting an experiment about the relationship between a person's personality and their preference for a short-term or long-term romantic relationship. She and her research students go to the food court at the university and ask anyone that walks by if they'd be willing to fill out a survey. Dr. Dial is using a _____ method in collecting participants for her research.
- a. self-selected sample
 - b. intermediated sample
 - c. random sample

- d. directed sample
- e. convenience sample

ANS: E DIF: Moderate

26. Rithvik Sharma is a graduate student researching how specific areas of the brain's temporal lobe are active when participants are looking at faces. She needed to recruit participants, so she posted a flier around campus offering \$20 to participate in a neuroimaging study that takes about one hour. People who want to participate are directed to email her. Rithvik is using a _____ sample method.

- a. self-selected
- b. convenience
- c. random
- d. directed
- e. compensated

ANS: A DIF: Moderate

27. The field of _____ studies materials and machinery that are extremely small. This field may be extremely important for the future of neuroscience.

- a. microtechnology
- b. nanotechnology
- c. macrotechnology
- d. nanoneurology
- e. microneurology

ANS: B DIF: Easy

28. The WEIRD problem in psychology is about

- a. the fact that a good deal of research in psychology provides results that do not represent real-world conditions or situations.
- b. the fact that results of research in psychology are not often replicated if the experiment is conducted again.
- c. the fact that most experiments are not conducted more than once, disregarding the fifth stage in the scientific method, replication.
- d. not having enough ethnic, racial, and socio-economic diversity among the participants in research.

- e. journal articles or books on psychology not being written in a natural-language style; this style makes it very difficult for people outside of the field to understand.

ANS: D DIF: Moderate

29. In an experiment, the _____ is a factor that is changed or manipulated by the researcher, and the _____ is the measurement or data collected.
- a. dependent variable; independent variable
 - b. nominal variable; discrete variable
 - c. discrete variable; nominal variable
 - d. ordinal variable; dependent variable
 - e. independent variable; dependent variable

ANS: E DIF: Moderate

30. Dr. Bravebird is conducting research on how antidepressant medication reduces the symptoms of depression. One group of people received the antidepressant, and a different group received a pill with no active ingredients. Dr. Bravebird then monitored the symptoms of depression in both groups for six months. This is an example of a:
- a. within-subjects design
 - b. multi-factor design
 - c. integrated design
 - d. between-subjects design
 - e. confounding-variable design

ANS: D DIF: Hard

31. Dr. Cohen is conducting research on how antidepressant medication reduces the symptoms of depression. One group of people received the antidepressant, and a control group received a pill with no active ingredients. In both cases, the pills looked identical, and the participants did not know whether they were getting the antidepressant medication or the other pill. An experiment needs both groups because of:
- a. the confounding variable effect
 - b. the placebo effect
 - c. the experimental bias effect
 - d. the palliative effect

e. the expectation effect

ANS: B

DIF: Easy

32. For his honors research project, Malcolm conducts an experiment using a survey that he gives to other college students. The survey asks questions about social media use and questions about self-esteem. He finds that the more time someone spends on social media, the lower they score on the measure of self-esteem. This is an example of a:

- a. longitudinal research design
- b. correlational research design
- c. case study research design
- d. cross-sectional research design
- e. naturalistic observation research design

ANS: B

DIF: Moderate

33. Which of the following is an example of a longitudinal research design?

- a. A researcher is interested in studying the age-related symptoms of anxiety. The researcher asks 100 people to fill out a survey about anxiety. Of those people, 20 participants are age 20, 20 are age 30, 20 are age 40, and 20 are age 50.
- b. A researcher studied a single patient known by the initials R. D. who had a tumor in their temporal lobe. The tumor caused R. D. to lose the ability to recognize faces.
- c. A developmental psychologist conducts her research by observing children in a classroom through a one-way mirror.
- d. A researcher is interested in the genetic influence on measures of personality. In their research, the researcher follows 24 sets of identical twins. Once a year for 30 years, the researcher returned to the same participants and had each complete a personality survey.
- e. A researcher does not conduct new research but evaluates the results of many studies that address very similar topics.

ANS: D

DIF: Moderate

34. A good way to evaluate the strength of a theory or the effectiveness of a medication is to evaluate many scientific studies on the topic. This is known as a:

- a. meta-analysis
- b. compare-and-contrast analysis
- c. case study evaluation
- d. broad-scope analysis
- e. summary-evaluation analysis

ANS: A DIF: Easy

35. Dr. Chew conducts an experiment on phobias. He asks 100 people to respond on a scale of 1 (not at all) to 10 (extremely) about how scared they are of different animals (e.g., dogs, cats, snakes, spiders, etc.). How would Dr. Chew calculate the mean score for how scared people are of spiders?
- a. He would look for the most common answer. For example, out of the 100 people, 43 responded with the number 6.
 - b. He would look for the answer where there was an equal number of answers above and below that answer.
 - c. He would add up all the scores and divide that value by 100. For example, adding up everyone's score equaled 622, so the mean would be $622/100$ or 6.22.
 - d. He would add up all the scores and divide by the square root of the number of participants.
 - e. This is a trick question because there is not enough information in the question to be able to determine the mean value.

ANS: C DIF: Moderate

36. The standard deviation is
- a. a measure of the central tendency of a data set.
 - b. a way to identify outliers or extreme data points in a data set.
 - c. a measure of variance in a data set.
 - d. a way of randomly picking research participants for an experiment.
 - e. a way of identifying confounding variables in an experimental design.

ANS: C DIF: Moderate

37. Philip is a graduate student who is conducting research on stress in undergraduate students. His hypothesis is that freshmen will score higher on a measure of stress than seniors. After collecting data from both groups, he runs a statistical test to determine if the data supports or fails to support

his hypothesis. Which following factors will play critical roles in his statistical analysis?

- a. the variance in the data set
- b. the age of the individuals in each group
- c. a measure of central tendency like the mean score of each group
- d. the number of participants in each group
- e. More than one of the above will be critical in the statistical analysis.

ANS: E DIF: Hard

38. _____ is a measure of the strength of a research design by the degree that the same or similar results will be observed if the experiment is conducted again at a different time.

- a. Validity
- b. Consistency
- c. Standard deviation
- d. Reliability
- e. Conformity

ANS: D DIF: Moderate

39. The degree to which an experimental design tests what it was designed to test is known as the experiment's:

- a. reliability
- b. appropriateness
- c. accuracy
- d. intentionality
- e. validity

ANS: E DIF: Moderate

40. In science, a _____ is a statement of explanation that is supported by evidence but may also change as new evidence is acquired.

- a. hypothesis
- b. theory
- c. fact
- d. idea
- e. conjecture

ANS: B DIF: Easy

41. Although not supported by experimental evidence, _____ are types of "alternative" medicines that people use as a treatment for physical and psychological ailments. It is a pseudoscience that only temporarily reduces symptoms because of the placebo effect.
- a. pseudophils
 - b. homocillin
 - c. prazopathy
 - d. zenophils
 - e. homeopathy

ANS: E DIF: Easy

42. Psychology, and other sciences, have a problem with replicating past experimental findings. Which of the following are ways to help remedy this problem?
- a. publish results that do not support the original hypothesis of the experiment
 - b. require the submission of raw data so others can also analyze results
 - c. conduct meta-analyses to give a more reliable picture of findings in an area
 - d. encourage researchers to conduct replication experiments
 - e. All of the above are true.

ANS: E DIF: Easy

Completion Questions

43. The idea that knowledge begins with observation of the natural world is known as _____. It's also the first step in the scientific method.

ANS: empiricism DIF: Moderate

44. Thoughts, emotions, and consciousness are a product of what the physical brain does is known as _____. It is contradictory to René Descartes's view that the mind and the brain are separate.

ANS: monism DIF: Moderate

45. _____ was a school of thought about psychology and the workings of the human mind that focuses on the purpose behind behaviors and thoughts. This way of thinking was highly influenced by Charles Darwin's theory of natural selection.

ANS: Functionalism DIF: Moderate

46. Ivan Pavlov, Edward Thorndike, B. F. Skinner, and John Watson all tended to follow the field of _____.

ANS: behaviorism DIF: Hard

47. The _____ revolution was a movement in psychology that was a push back to the ideas of behaviorism. This revolution focused on the thoughts, memories, and inner workings of the mind.

ANS: cognitive DIF: Moderate

48. _____ is a subfield in psychology that focuses on understanding behavior through investigations of the function of the brain, brain chemistry, and genetics.

ANS: biopsychology DIF: Moderate

49. A psychologist is interested in how a person's ethnic identity, race, and language affect their behavior and mental processes. This psychologist would most likely be in the subdiscipline of _____.

ANS: cultural psychology DIF: Moderate

50. The five stages of the scientific methods in order are: 1. empiricism, 2. _____, 3. experimentation, 4. theorizing, and 5. replication.

ANS: hypothesize DIF: Moderate

51. Dr. Kowalski wants to conduct an experiment on human participants. To ensure she follows the rules for the ethical treatment of participants, she

writes a proposal with detailed methods. This is evaluated by the college's _____.

ANS: internal review board

DIF: Moderate

52. To reduce biases and subjective interpretation of results, experiments are often run where the participants and the researchers themselves are unaware of which participants are getting which level of an independent variable until the end of the experiment. This is known as a _____ experimental design.

ANS: double-blind

DIF: Moderate

Short Answer Questions

53. Compare and contrast structuralism and functionalism as historical approaches to psychology.

ANS:

Structuralism is the approach taken by Wilhelm Wundt, who thought that complex aspects of psychology could be understood by investigating fundamental or simple units of the mind, such as how human senses and perception worked.

Functionalism was the idea that the best way to understand complex aspects of psychology was to focus on theories about what functions, behaviors, and thoughts served. Functionalism was founded by William James, who was highly influenced by Darwin's theory of natural selection.

When thinking about the mind and behavior, structuralism looks for building blocks, and functionalism looks at motives and usefulness.

DIF: Moderate

54. Describe how behaviorists approached psychology and how this approach led to the cognitive revolution.

ANS:

Behaviorism focuses on how humans and other animals change behavior through experiencing specific stimuli and receiving rewards and punishments for their actions. Behaviorists often use animal models in highly controlled experiments. Some thought that behaviorists focused too heavily on behavior and reinforcement. This led to the cognitive revolution, which focused more on the working mind.

DIF: Moderate

55. Explain the humanistic approach to psychology and why it was a departure from behaviorism and psychoanalysis.

ANS:

A humanistic approach is an approach to psychology and therapy that emphasizes a person's greatest potential and the idea that humans have control and agency over their behaviors and emotions. In other words, we have free will to be the best version of ourselves. This was a departure from psychoanalysis, which tended to focus on a person's darker side related to repressed sexual desires and aggressive tendencies. It was also a departure from behaviorism, which focused on how behaviors are mindlessly shaped through reinforcement, which discounted free will.

DIF: Moderate

56. Explain the difference between a holistic and reductionistic approach to psychology.

ANS:

A holistic approach looks at larger and more complex observations that are difficult to understand by looking at the components. These might be issues related to social psychology, consciousness, perception, or child development.

The reductionistic approach is more interested in the fundamental components of behavior. This might be the activity of a single neuron, principles of associative learning, or theories of psychophysics. Biopsychologists are often more reductionistic than holistic in their approaches and interests.

DIF: Easy

57. You are asked to design an experiment to investigate whether short-term memory is improved by drinking beverages containing caffeine. You have three types of beverages: one with no caffeine, one with 50 mg of caffeine, and one with 100 mg of caffeine. Ten minutes after drinking the beverage, participants are asked to memorize 30 words and recall as many as possible two minutes later. Describe the procedures for this experiment using a within-subjects design and describe the procedure using a between-subjects design.

ANS:

Within-subjects design: Each participant would come back on three separate days. Each day, they would drink a different beverage and try to remember and recall different words. Each participant would drink all three types of beverages and attempt to remember and recall a list of words after each type of beverage.

Between-subjects design: There would be three groups of participants. Members of each group would be assigned to drink one, but not all, of the three types of beverages. Each participant in this experiment would only drink one beverage and try to remember and recall the words once.

DIF: Moderate

58. Describe the five steps of the scientific method.

ANS:

- Empiricism: make observations of the natural world.
- Hypothesis: from observations, create a testable hypothesis.
- Experimentation: design a well-controlled experiment with levels of manipulations or independent variables and accurate measurements or dependent variables. Control for the problem of subjectivity. Quantify and analyze the results.
- Theory: use results to create or modify theories.
- Replication: modify and repeat the experiment. Conduct a meta-analysis of similar experiments.

DIF: Easy

59. Suppose a psychologist is interested in age-related symptoms of depression. They are particularly interested in comparing adolescents at the age of 15 compared to young adults who are 25 years old. They have participants fill out a survey with ten questions related to symptoms of depression. In this experiment, identify the independent and dependent variables. Describe how they might do this study using a longitudinal research design or a cross-sectional design.

ANS:

The independent variable is the different ages (15 and 25) while the dependent variable is the scores on the 10-question survey about depression symptoms. The longitudinal design would have the same participants fill out the survey when they were 15 years old and again at the age of 25. The cross-sectional design would have a different group of participants fill out the survey. One group would be 15 years old, and the other group would be 25 years old.

DIF: Moderate

Essay Questions

60. There are several subdisciplines in psychology that focus on basic research. Pick five subdisciplines and provide an example of what a researcher in this field would study.

ANS:

- **Biopsychology:** A researcher in this area would be interested in studying the neuroscience of behavior and mental processes. They might use animal models to investigate the activity of certain brain structures or neuroimaging devices to look at the working brain of a person.
- **Learning:** A researcher in this area would be interested in how experiments change behavior. They often use animal models to look at how reinforcement shape behaviors in highly controlled laboratory experiments.
- **Cognitive Psychology:** Researchers in this area use humans and other animals to investigate memory, decision making, language, intelligence, and the nature of consciousness.

- Developmental Psychology: Researchers in this area would be particularly interested in age-related changes to aspects of psychology from early infancy to late adulthood.
- Human Sexuality: Experiments conducted in this subfield relate to sexual behavior, sexual orientation, and gender.
- Personality psychology: A researcher in this area would be interested in individual differences in emotional expression and regulation, values, attitudes, social preferences, and self-perception. Personality psychologists often use well-established personality tests when conducting research.
- Social psychology: Researchers in this subfield would be interested in how a person's behavior, emotions, thoughts, and decision-making influence and are influenced by other people.
- Cultural psychology: A researcher in this area would be interested in studying how a person's culture, race, religion, and ethnic identity influence aspects of their emotions and mental processes. For example, a researcher might investigate how a person's culture might influence how they seek mental health services.
- Psychopathology: Researchers in this area would be often interested in psychological problems such as depression, anxiety, or schizophrenia. Psychopathologists might be interested in assessments, underlying causes, or treatment.

DIF: Hard

61. Describe some of the challenges facing research in psychology, such as the WEIRD problem, publication biases, and the replication crisis.

ANS:

The WEIRD problem is that past and even present research have used participant pools that lack diversity. Participant pools tend to come from Western, educated, industrialized, rich, and democratic societies, yet the results of many experiments are thought to generalize the general population of all countries.

Publication biases are problems with how the papers are chosen for publication. There tends to be a bias to publish positive results—results that support the hypotheses of the experiment. There are also strong and often

coercive incentives for scientists to get more publications, leading to intentional or unintentional selection or manipulation of data.

The replication crisis is that the findings of many published research papers are not found again when the study is replicated. This leads to an erosion of confidence in the findings of research in psychology. This replication crisis is likely due, in part, to problems of publication biases and pressures to publish.

DIF: Hard

62. Provide examples of careers in applied approach to psychology. Describe the education needed for specific positions and what they do in their jobs.

ANS:

- Clinical Psychology: Clinical psychologists typically earn a Ph.D., log many hours of supervised field experience, and pass state exams to be licensed. They work directly with treating clients with psychological disorders or help clients deal with trauma or grief. A clinical psychologist may also work in academia and be involved in research.
- Psychiatry: This requires a medical degree (MD). People studying psychiatry typically do rotations in other specialties in medicine before becoming a psychiatrist. They work directly with clients and patients with psychological disorders. Unlike other applied psychology careers, psychiatrists can prescribe medication.
- Counselor: This is a therapist who works directly with clients on mental health issues. Counselors require a master's degree, many hours of supervised work with clients, and passing licensing exams.
- Applied behavior analysis (ABA): This requires a master's degree, supervised hours, and licensing. People in this field use behavior modification techniques and tend to work with children on the autism spectrum.
- School psychologists: This requires an EdS degree that typically takes at least three years. School psychologist work with K-12 education, evaluating and creating ways to help students with learning and behavioral problems.

DIF: Moderate

