

## **Brady Allred Project 1 Test Plan (Project 3 located below).**

The purpose of this final exam is to assess students' comprehensive understanding of key concepts, theories, and applications in psychology, covering major topics such as biopsychology, developmental psychology, social psychology, and psychological disorders. It evaluates students' ability to recall important psychological terms and figures, understand and explain theoretical perspectives, apply principles to real-world situations, and critically analyze and evaluate psychological phenomena. The exam serves as a summative assessment of the course's learning objectives and will determine students' readiness for more advanced studies in psychology by measuring both foundational knowledge and higher-order cognitive skills.

### **Key Content Outline:**

#### **1. Foundations of Psychology**

- Definition and scope of psychology
- Major theoretical perspectives:
  - **Psychodynamic (Freud)**
  - **Behavioral (Skinner, Pavlov)**
  - **Cognitive (Piaget)**
  - **Humanistic (Maslow, Rogers)**
- Key historical figures and their contributions

#### **2. Biopsychology and Neuroscience**

- Structure and function of the nervous system:
  - **Neurons, synapses, and neurotransmitters (e.g., serotonin, dopamine)**
  - **Brain structures (e.g., hippocampus, amygdala) and their role in behavior**
- Interaction between the nervous and endocrine systems

#### **3. Developmental Psychology**

- **Piaget's cognitive development theory**
- **Erikson's psychosocial stages**

- Key stages of development: **infancy, adolescence, adulthood**
- Nature vs. nurture debate

#### 4. Sensation and Perception

- Principles of sensation and perception
- Sensory systems: **vision, hearing, taste, smell, touch**
- Perception processes and their impact on interpreting sensory input

#### 5. Learning and Memory

- **Classical (Pavlov) and operant conditioning (Skinner)**
- Cognitive approaches to learning
- Types of memory: **sensory, short-term, long-term**
- Memory processes: **encoding, storage, retrieval**

#### 6. Personality Psychology

- Major theories:
  - **Freud's psychoanalytic theory**
  - **The Big Five personality traits**
  - **Maslow's hierarchy of needs**
- Methods of assessing personality: **self-report inventories, projective tests**

#### 7. Psychological Disorders

- Types of disorders:
  - **Anxiety disorders (e.g., generalized anxiety, OCD)**
  - **Mood disorders (e.g., depression, bipolar disorder)**
  - **Schizophrenia**
- Biological, psychological, and sociocultural causes of mental illness

#### 8. Social Psychology

- Social cognition and attribution theory
- Group dynamics: **conformity (Asch), obedience (Milgram)**

- Prejudice, discrimination, and stereotypes
  - **Prosocial behavior and aggression**
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## **General Instructional Objectives (GIOs) and Specific Learning Outcomes (SLOs)**

### **GIO 1: Demonstrate knowledge of key concepts, theories, and figures in psychology.**

- **SLO 1.1:** Define foundational psychological concepts and terms.
- **SLO 1.2:** Compare and contrast major theoretical perspectives in psychology (e.g., psychodynamic vs. behavioral).
- **SLO 1.3:** Recall contributions of major figures such as Freud, Skinner, and Piaget.

### **GIO 2: Explain the biological bases of behavior and mental processes.**

- **SLO 2.1:** Describe the structure and function of the nervous system, including key brain structures.
- **SLO 2.2:** Explain how neurotransmitters (e.g., dopamine, serotonin) influence behavior.
- **SLO 2.3:** Identify the relationship between the nervous and endocrine systems and their effects on behavior.

### **GIO 3: Analyze human development across the lifespan.**

- **SLO 3.1:** Compare Piaget's stages of cognitive development and Erikson's psychosocial stages.
- **SLO 3.2:** Analyze the role of nature and nurture in human development.
- **SLO 3.3:** Apply developmental theories to real-life examples of developmental milestones.

### **GIO 4: Apply principles of learning and memory.**

- **SLO 4.1:** Differentiate between classical and operant conditioning.
- **SLO 4.2:** Apply principles of reinforcement and punishment to examples of behavior modification.
- **SLO 4.3:** Illustrate the processes of encoding, storage, and retrieval in memory.

### **GIO 5: Evaluate psychological disorders and their treatments.**

- **SLO 5.1:** Identify symptoms and diagnostic criteria for major psychological disorders.
- **SLO 5.2:** Compare biological, psychological, and sociocultural causes of mental illness.
- **SLO 5.3:** Evaluate different treatment approaches, including therapy and medication.

**GIO 6: Analyze the influence of social factors on behavior.**

- **SLO 6.1:** Explain the principles of social cognition and attribution theory.
  - **SLO 6.2:** Analyze research on group dynamics, including conformity and obedience.
  - **SLO 6.3:** Evaluate the impact of prejudice and discrimination in society.
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**Table of Specifications for the Final Exam.**

Content Area	Know	Understand	Apply	Analyze	Evaluate	Total Items	Percentage of Total
<b>1. Foundations of Psychology</b>	3	2	1	1	1	8	15%
<b>2. Biopsychology and Neuroscience</b>	3	2	2	1	1	9	16%
<b>3. Developmental Psychology</b>	2	2	2	1	1	8	15%
<b>4. Sensation and Perception</b>	2	2	1	1	-	6	11%
<b>5. Learning and Memory</b>	2	2	2	2	1	9	16%
<b>6. Personality Psychology</b>	2	2	1	1	-	6	11%
<b>7. Psychological Disorders</b>	2	2	1	2	1	8	15%
<b>8. Social Psychology</b>	2	2	1	1	1	7	13%

Total	18	16	11	10	6	61	100%
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## Project 3

### Item 1

**Type:** Multiple Choice

**SLO:** 1.3 - Recall contributions of major figures such as Freud, Skinner, and Piaget.

**Bloom's Level:** Knowledge (Remembering)

**Question:**

1. Which psychologist is best known for developing the theory of psychoanalysis?  
A) B.F. Skinner  
B) Jean Piaget  
**C) Sigmund Freud**  
D) Carl Rogers

**Correct Answer:** C) Sigmund Freud

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### Item 2

**Type:** True/False (Alternative Response)

**SLO:** 2.1 - Describe the structure and function of the nervous system, including key brain structures.

**Bloom's Level:** Knowledge (Remembering)

**Question:**

2. The amygdala is involved in processing emotions such as fear and aggression.

**True or False?**

**Correct Answer:** True

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### Item 3

**Type:** Fill-in-the-Blank (Supply Type)

**SLO:** 4.3 - Illustrate the processes of encoding, storage, and retrieval in memory.

**Bloom's Level:** Knowledge (Remembering)

**Question:**

3. What is the mental process called that involves maintaining information in memory over time?

**Correct Answer:** Storage

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#### **Item 4**

**Type:** Multiple Choice

**SLO:** 1.2 - Compare and contrast major theoretical perspectives in psychology.

**Bloom's Level:** Understanding

**Question:**

4. Which statement best distinguishes the behavioral perspective from the psychodynamic perspective in psychology?

- A) Behavioral focuses on unconscious motivations; psychodynamic focuses on observable behaviors.
- B) Behavioral emphasizes learned behaviors through conditioning; psychodynamic focuses on unconscious drives.
- C) Both emphasize childhood experiences but differ in their approach to cognition.
- D) Both focus on self-actualization and human potential.

**Correct Answer:** B) Behavioral emphasizes learned behaviors through conditioning; psychodynamic focuses on unconscious drives.

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#### **Item 5**

**Type:** Multiple Choice

**SLO:** 2.2 - Explain how neurotransmitters influence behavior.

**Bloom's Level:** Remembering

**Question:**

5. What psychological disorder are low levels of the neurotransmitter serotonin most closely associated with?

A) Schizophrenia

**B) Depression**

C) Parkinson's disease

D) Anxiety disorders

**Correct Answer:** B) Depression

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**Item 6**

**Type:** Matching

**SLO:** 4.1 - Differentiate between classical and operant conditioning.

**Bloom's Level:** Application

**Question:**

6. Match each scenario with the type of conditioning it exemplifies. Each response may be used once, more than once, or not at all.

**Instructions:** For each scenario, select the correct type of conditioning.

**Scenarios:**

1. A dog salivates when it hears a bell because it has learned to associate the bell with food.
2. A student studies hard to receive good grades, which have been rewarding in the past.
3. A child learns to fear a white rat after it is paired with a loud noise.

**Types of Conditioning:**

A) Classical Conditioning

B) Operant Conditioning

**Answers:**

1. A) Classical Conditioning

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- 2. B) Operant Conditioning
  - 3. A) Classical Conditioning
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### **Item 7**

**Type:** Multiple Choice

**SLO:** 4.2 - Apply principles of reinforcement and punishment to behavior modification.

**Bloom's Level:** Application

**Question:**

- 7. A teacher wants to increase student participation. She gives extra credit points to students who contribute. Which technique is she using?

- A) **Positive reinforcement**
- B) Negative reinforcement
- C) Positive punishment
- D) Negative punishment

**Correct Answer:** A) Positive reinforcement

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### **Item 8**

**Type:** Multiple Choice

**SLO:** 3.3 - Apply developmental theories to real-life examples.

**Bloom's Level:** Application

**Question:**

- 8. If a child understands that changing the shape of clay doesn't change its amount, which Piagetian stage are they in?

- A) Sensorimotor
- B) Preoperational
- C) **Concrete operational**
- D) Formal operational

**Correct Answer:** C) Concrete operational

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### **Item 9**

**Type:** True/False (Alternative Response)

**SLO:** 6.1 - Explain principles of social cognition and attribution theory.

**Bloom's Level:** Understanding

**Question:**

9. Attribution theory suggests people attribute others' behaviors to internal factors while attributing their own to external factors.

**True or False?**

**Correct Answer:** True

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### **Item 10**

**Type:** Multiple Choice

**SLO:** 5.1 - Identify symptoms and diagnostic criteria for major psychological disorders.

**Bloom's Level:** Knowledge (Remembering)

**Question:**

10. Which disorder is characterized by persistent sadness, loss of interest, and fatigue?  
A) Bipolar disorder  
B) Generalized anxiety disorder  
**C) Major depressive disorder**  
D) Obsessive-compulsive disorder
- Correct Answer:** C) Major depressive disorder
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### **Item 11**

**Type:** Multiple Choice

**SLO:** 6.2 - Analyze research on group dynamics, including conformity and obedience.

**Bloom's Level:** Understanding

**Question:**

11. In Milgram's experiments, why were participants administered electric shocks?
- A) They were inherently aggressive.
  - B) They conformed to group behavior.
  - C) **They were following orders from an authority figure.**
  - D) They wanted monetary rewards.

**Correct Answer:** C) They were following orders from an authority figure.

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**Interpretive Exercise**

**Introduction:**

**Case Study:**

Emily is a 35-year-old woman who recently moved to a new city to start a job as a marketing manager at a high-profile company. She has been experiencing persistent feelings of anxiety and stress since the move. Emily has a family history of mental health issues; her father struggled with depression, and her grandmother was diagnosed with generalized anxiety disorder.

At her new job, Emily faces intense pressure to perform, with tight deadlines and high expectations from her superiors. She often works late hours and feels that her contributions are not adequately recognized. This has led to feelings of inadequacy and low self-esteem.

Emily's relocation also meant leaving behind her close friends and support network. She finds it challenging to make new friends due to her demanding work schedule and feelings of social anxiety. The cultural environment at her workplace is competitive rather than collaborative, which exacerbates her sense of isolation.

Additionally, Emily comes from a culture that stigmatizes mental health issues, viewing them as a sign of personal weakness. This cultural belief makes her reluctant to seek professional help or discuss her struggles with others. She copes by immersing herself even further into her work, leading to burnout.

Recently, Emily has started experiencing physical symptoms such as headaches, fatigue, and insomnia. She is considering quitting her job but fears the stigma of being seen as a failure. Emily feels trapped and is unsure of how to improve her situation.

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### **Item 12**

**Type:** Multiple Choice

**SLO:** 5.2 - Compare causes of mental illness.

**Bloom's Level:** Analysis

12. Which specific detail from Emily's case represents a **biological** cause of her mental health condition?

- A) Emily often works late hours due to tight deadlines at her new job.
- B) Emily experiences physical symptoms like headaches and insomnia.
- C) **Emily's father struggled with depression, and her grandmother had generalized anxiety disorder.**
- D) Emily feels isolated after leaving her close friends and support network.

**Correct Answer:** C) Emily's father struggled with depression, and her grandmother had generalized anxiety disorder.

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### **Item 13**

**Type:** Multiple Choice

**SLO:** 5.2 - Compare causes of mental illness.

**Bloom's Level:** Analysis

13. In the context of Emily's situation, what could be a **sociocultural** factor contributing to her mental health challenges?

- A) Emily feels that her contributions at work are not adequately recognized, leading to low self-esteem.
- B) **Emily's cultural background stigmatizes mental health issues, viewing them as a sign of personal weakness.**
- C) Emily experiences physical symptoms such as fatigue and headaches due to burnout.
- D) Emily's demanding work schedule prevents her from making new friends.

**Correct Answer:** B) Emily's cultural background stigmatizes mental health issues, viewing them as a sign of personal weakness.

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### **Item 14**

**Type:** Multiple Choice

**SLO:** 5.2 - Compare causes of mental illness.

**Bloom's Level:** Analysis

14. Analyzing Emily's experience, what could be a **psychological** cause contributing to her mental health issues?

- A) Emily's family history of mental health conditions.
- B) The competitive culture at her workplace exacerbates her sense of isolation.
- C) **Emily's feelings of inadequacy and low self-esteem due to lack of recognition at work.**
- D) Cultural stigma prevents Emily from seeking professional help.

**Correct Answer:** C) Emily's feelings of inadequacy and low self-esteem due to lack of recognition at work.

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### Item 15

**Type:** Multiple Choice

**SLO:** 5.3 - Evaluate different treatment approaches.

**Bloom's Level:** Evaluation

15. Which treatment plan would **best** address the multiple causes of Emily's mental health condition, including biological, psychological, and sociocultural factors?

- A) Prescribing medication to manage her anxiety symptoms
- B) Engaging in cognitive-behavioral therapy focused on work performance
- C) **Combining medication with culturally sensitive therapy and social support strategies**
- D) Encouraging her to adjust to the workplace culture independently

**Correct Answer:** C) Combining medication with culturally sensitive therapy and social support strategies

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### Summary of Items:

- **Remembering:** Questions 1, 2, 3, 5, 10
- **Understanding:** Questions 4, 9, 11
- **Applying:** Questions 6, 7, 8

- **Analyzing:** Questions 12, 13, 14
- **Evaluating:** Question 15
- **Interpretive Exercise:** Items 12-15

Each item aligns with a specific SLO and adheres to the provided item-writing guidelines.

#### AI Reflection.

This was by far the most difficult of the projects we have done so far to get right with the AI. There are many fine details that need to be considered such as item guidelines, blooms levels, and matching to SLO's. Initially, I tried to get the latest chat gpt model to compute the whole thing at once, and it did a reasonable job. It mismatched some of the blooms levels, mostly at the higher levels. It also was not very efficient at writing an interpretive exercise. In both cases, I had to go back and provide specific instructions for what I wanted the questions to look like and accomplish, having it write a more comprehensive interpretive exercise, and rewriting the questions to also fit multiple choice item guidelines. There were some items that it was easier to just go and edit myself rather than have the ai produce something new. Something else interesting that I found was different models of chat gpt came up with different levels of blooms taxonomy for the questions citing different reasons. I think in many cases people do this as well, and the different levels of blooms are not terribly clear cut.

A different approach that might have yielded more accurate results from the AI on the first attempt would have been to select the individual outcomes and specify what kind of item I wanted to create for each one, doing one item at a time with specific guidelines. I think this would have prevented some of the confusion and information overload for the AI, but at the same time I don't know that it would have ended up saving any time because such an approach would take longer. I opted not to use a custom gpt for this exercise for that reason. I have found the results produced by the latest preview model are significantly closer to what I want in a product compared to the older models that the custom gpt's currently operate on.

I am still of the opinion that using AI in this way is not training incompetence, because I still needed to analyze and evaluate each item to determine if it fits the guidelines provided. I will say, that it is easier for a reason. There is something difficult about synthesizing things that I don't think analytical or evaluative skills quite prepare you for. I think that to really build skills in creating items with applicable guidelines, one should not use AI. In theory, I

do feel that I could sit down and write an item on my own, however AI is most useful in instructional design if the designer doesn't know the content, but does know how to create test items.