

# **AP PSYCHOLOGY**

Scoring Packet

Practice Test

**VERSION 2**

## Section II: Free Response

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### Overview by the Chief Faculty Consultant

Both free-response questions were extremely challenging. In particular, many students experienced difficulties on question 2; the mean score for that question was 2.64 out of a possible 10 points. However, although it was a tough question, it did an excellent job of discriminating among the top students and differentiating them from the average students. Students who did well on question 2 were the same students who did well on the exam as a whole. Consequently, the difficulty level of the two questions did not alter the relative standings of students. The top students were able to perform well on all portions of the exam, and faculty consultants commented on the excellent essays written by top students in response to both question 1 and question 2. In general, students seemed well prepared for the overall exam.

The AP Psychology Development Committee and faculty consultants continue to voice a desire that the exam questions require, and student responses evidence, a high degree of psychological knowledge and sophistication. Answers that use generalities and “buzz words” and could be produced by “the person on the street” are not acceptable. The questions and the rubrics increasingly call for use of psychological terms with evidence that the student understands the meaning and use of these terms by explanation, example, or the citation of relevant psychological theory and/or research.

### Question 1

The intent of this question was twofold. First, the student was asked to show knowledge of the various biological and learning mechanisms that control or influence eating behavior and body weight. Then the student was asked to apply one biological and one

learning mechanism to a program of weight management. The mechanisms involved in eating behavior and body weight are standard topics in all introductory textbooks and courses. The second part of the question asks that the student act as an applied psychologist by using these academic factors in a real world problem.

Students handled both aspects of the question well. They showed good understanding of the various mechanisms, both biological and learning, involved in eating behavior and body weight. The rubric looked for the use of fairly specific mechanisms and did not credit generalities that could be learned by reading popular literature. For instance, to receive credit for the role of body or brain chemistry in eating and body weight, the student had to name a specific substance (such as blood glucose) or a specific neurotransmitter (such as serotonin) and state whether it increased or decreased eating and/or body weight. Despite the rigor of the rubric, students did quite well in meeting this level of specificity. Similarly with the role of genetics, the rubric asked that the student do more than just rephrase the question. Thus, merely stating that a person’s eating behavior and body weight could be due to an inherited tendency or predisposition was considered too vague to score. Instead, the rubric required that the student identify a specific mechanism that might be genetically determined such as body weight, set point, or metabolic weight.

A similar high standard was required for an acceptable explanation of the role of psychological factors. The student had to go beyond merely using the same term or its synonym. For instance, saying that a child models the eating behavior of her mother does not add anything beyond what is stated in the question. However, stating that a child sees her mother eating high calorie foods and adopts this eating habit describes the process of modeling and demonstrates the student’s understanding of the concept.

## Question 1 Scoring Guidelines

Answers to both Part A and B **must be cogent arguments**. The essay should explain by definition and/or example rather than merely mention mechanisms and their effects on eating habits and body weight.

### Part A

#### Point 1: Body/brain chemistry

Name a specific body/brain chemical (e.g., hormone, neurotransmitter) and identify its directional effect on an eating-related behavior, hunger, or body weight.

#### Exception:

Saying that substances released from the pituitary (or an appropriate endocrine gland, e.g., thyroid) affect eating-related behaviors or body weight is *acceptable without identifying the specific hormone*.

#### Examples:

If no direction is specified for a substance, assume its presence.

Blood glucose Cholecystokinin (CCK) Norepinephrine Dopamine Serotonin Glucagon Leptin	When levels of these substances are low, hunger or eating results  When levels of these substances are high, satiety (fullness) results
Insulin Neuropeptide Y	When levels of these substances are high, hunger or eating results When levels of these substances are low, satiety (fullness) results

#### Too vague to score:

- “Low blood sugar” (no explanation).
- “Blood sugar relates to hunger” (doesn’t specify direction of effect).
- “Marijuana causes munchies” (exogenous drugs don’t score).

#### Other considerations:

- Trap: Metabolism is a process, not a chemical. Do not score.
- Accept abbreviations (e.g., CCK). Allow for reasonable permutations.
- Ignore (do not penalize) misstatements about a specific chemical agent in an otherwise correct answer (e.g., glucose as a neurotransmitter or CCK from stomach).
- Exogenous drugs don’t score, but watch for the naming of a specific endogenous mechanism (e.g., “Prozac decreases hunger by increasing serotonin” scores because of the correct reference to serotonin, but “Prozac decreases hunger” is not sufficient).

## Point 2: Brain structure

A. Name the lateral hypothalamus, ventromedial hypothalamus, or other specific brain structure and explain its role in the regulation of eating or body weight.

OR

B. Identify the hypothalamus as regulating eating/body weight in both directions (concept of dual function of hunger and satiety).

### Examples:

A. Specific brain structure

- Lateral hypothalamus (LH) as eating center (e.g., “stimulation produces eating” or “damage leads to no eating”).
- Ventromedial hypothalamus (VMH) as satiety center (e.g., “stimulation results in satiety” or “lesion produces overeating”).
- Reference to the pituitary controlling metabolism.

B. Dual function of hypothalamus

- “The hypothalamus regulates both eating and satiety.”
- “Damage to the hypothalamus can either increase eating or produce a feeling of fullness.”

### Too vague to score:

- “Brain damage causes obesity” (no mechanism specified).
- “Stimulation of the hypothalamus increases hunger” (only one function acknowledged).
- “The hypothalamus regulates eating” (dual role not acknowledged).

### Other considerations:

- Trap: Metabolism is a process, not a brain structure. Don't score.
- Score sensory deficits only if appropriate brain structure or neural pathway is specified (e.g., “if the olfactory bulb is damaged, a person will eat less because food is less appealing”).
- Accept abbreviations (e.g., LH, VMH) and allow for reasonable permutations.

## Point 3: Genetics

Identify one of the following as being genetically-determined:

1. Body weight set point
2. Metabolic rate (BMR).
3. Number of fat cells
4. Obese (OB) gene (accept chromosome 15)
5. Other scientifically-established, genetically-based disorders that have a direct effect on eating habits or body weight (e.g., diabetes, hyperthyroidism, hypothyroidism)

### Too vague to score:

- Inherited tendency or predisposition without reference to one of the acceptable effects, e.g., “a person is genetically programmed to be obese.”

**Other considerations:**

- Trap: Size of fat cells (not number). Don't score.
- Trap: Can't inherit behaviors (Lamarckian). Don't score.

**Point 4: Reinforcement**

*Identify a behavior related to eating or body-weight regulation and explain how it is acquired or maintained by reinforcement (or diminished by punishment). The mechanism of reinforcement can be defined conceptually or established by example.*

**Reinforcement mechanism:**

Terms like "positive reinforcement" and "reward" are sufficient definitions, but "reinforcement" alone is not because it adds nothing to the language of the question. In this latter case, specification of the reinforcer and its relationship to the behavior is necessary.

**Allowable relationships:**

- Eating (or not eating) behaviors can be reinforced (or punished). Examples: "Eating habits are positively reinforced by parents;" "Poor eating habits are punished by scolding;" "Eating tasty foods is reinforcing, which encourages consumption of those foods."
- Taste aversions can develop, modifying eating habits. For example: "Chemotherapy patients may learn to avoid foods eaten during therapy."
- Food can be used consistently as a reinforcer, thereby changing the recipient's body weight. For example: "A child is given candy for doing daily chores and gains weight."
- Delay of reinforcement affects degree of learning associated with eating. For example: "Eating fruit instead of candy does not immediately improve health so it may be difficult to change eating habits."

**Too vague to score:**

- "Eating reduces stress" (no reinforcement mechanism identified).
- Child's eating habits reinforced by parents (mechanism of reinforcement not established).

**Point 5: Modeling**

*Acquisition of a behavior related to eating or body weight regulation through observational learning/role modeling*

**Examples:**

- "A child sees her father eating cheeseburgers and adopts this eating habit."
- "A person hears that his favorite athlete eats a special food and begins eating this item."
- "A person reads that a model eats only salads and does the same."

**Too vague to score:**

- “Your parents eat too much and you do too” (no modeling mechanism identified).
- “I want to be a model” (no eating-related behavior specified).
- “A child models the eating habits of her mother” (repeats the word “model” from the question without adding additional explanation).

**Other considerations:**

- Mechanism must be explicit — person must observe/see/hear about/be exposed to another’s behavior.
- Can be a good or bad outcome on eating-related behavior or behaviors associated with body weight regulation.
- No credit for simply parroting the word “model” unless an appropriate example or explanation is given.

**Point 6: Cultural factors**

*Indicate how cultural pressures, expectations, or norms influence eating-related behavior or standards for body weight. The concept of cultural pressure on an individual must be explicit.*

**Examples:**

- “A thin body ideal in America encourages people to diet.”
- “Cultural variations in diet dictate what is eaten.”

**Too vague to score:**

- “In the United States, people are thin” (no pressure).
- “The media pressures people to look like models” (no reference to body weight).
- “Anorexia is caused by the media.”

**Other considerations:**

- Cultural standard must make explicit reference to eating habit or body weight (e.g., thin, not just beauty).
- Trap: Fitness is *not* synonymous with eating habits or body weight regulation.
- Treat societal factors as cultural.

**Part B**

*An essay must give a cogent argument showing how the selected mechanism has the potential to manage weight. Management requires an attempt at behavioral regulation; it is not established by merely stating that certain biological or learning factors are difficult or impossible to overcome.*

*The essay must identify a selected mechanism (biological or learning).*

**Special consideration:**

- Students often combine biological and learning mechanisms in one paragraph. Points can be awarded for both as long as each mechanism is identified as biological or learning and a strategy for management of each is clear.

### **Point 7: Biological implications**

#### **Examples:**

- Strategies designed to correct a physiological dysfunction are identified (e.g., a diabetic using insulin).
- "Monitoring one's diet to counter a genetic predisposition to obesity."

#### **Too vague to score:**

- "Inheriting a slow metabolism will make it hard to lose weight" (no action/strategy of weight management):

### **Point 8: Learning implications**

#### **Examples:**

- "Learning to eat a balanced diet as a child makes it easier to maintain proper weight."
- "Anorexics actively seek/defend unhealthy body weight."
- "Children in Spain walk a lot and eat a large meal only at lunch, so they are seldom fat."

#### **Too vague to score:**

- "A young woman succumbing to cultural pressure to look thin, becomes anorexic" (no mention of weight management).

## Question 2

This question proved to be very difficult for all but the most capable students. The typical student showed limited recall of the concepts in this question and consequently was not able to apply them to interpret the results of the experiment. On the other hand, capable students (as defined by scores on the multiple-choice section and question 1) were able to recall these concepts, give clear and accurate definitions, and correctly apply them to the experimental results. The question also differentiated among these top students (students receiving scores of 4 and 5 on the exam). Faculty consultants were immensely impressed by the clarity and cogency of these top essays.

Most of the concepts on this question deal with cognition. The results of the question suggest that many teachers do not give adequate weight to this section of psychology. It is hard, otherwise, to explain their students' difficulty in recalling the frequently and widely discussed concepts of schema and retroactive interference. The area of cognition has been called a "third wave" in the history of contemporary psychology

and has revolutionized our understanding of the science and its application to the world we live in. It might behoove more teachers to pay at least as much attention to this area of psychology as they obviously do to behavioral and biological orientations.

One final note: The fact that a concept is not in every textbook, is in a chapter that is not always covered, and/or is not in older textbooks is not a cogent argument against testing students' knowledge of the concept. It is vital that AP teachers keep up with major developments in psychology and go beyond the textbook in their efforts to acquaint their students with these new developments. Of course, many AP teachers do not enjoy the luxury of being able to use new, up-to-date textbooks each year. In such cases, they should continue to press their administration for the purchase of the most recent textbooks, or supplement older textbooks with more recent materials, so that the students in their school district are able to compete successfully with students from school districts that do provide their AP students with current textbooks.

## Question 2 Scoring Guidelines

- Definition for each term is 1 point and each application is 1 point; they are not dependent on each other. The application must be identified with the correct term and linked back to the experiment.
- Definition is an odd number point and application is an even number point.
- The first four concepts are from the subject's point of view and the last concept is from the experimenter's point of view.

### Schema — Points 1 and 2

#### Definition (1 point):

A framework used to organize information.

Concept		Process for input of information
template structure framework set plan model expectations representations blueprints set of ideas mental set network	OR	organizing interpreting incorporating ordering shaping predicting



**Not acceptable:**

- Perception alone will not do it (e.g., “the way you perceive”).
- Mind set, preconceived ideas, patterns of thought.
- Example is not a definition.
- Outcome only — understanding, how I see the world, knowledge.

**Application (1 point):**

Participants have formed the expectation that the male is the aggressor. Outcome is acceptable in the application.

**Retroactive Interference — Points 3 and 4**

**Definition (1 point):**

Information that is presented *after* the presentation of information to be remembered interferes with or blocks old information.

*The definition of retroactive interference can be phrased in terms of information without specific reference to memory processes.*

- Disruptive effect of new learning on old information.
- New information distorts old information.

**Application (1 point):**

The photographs that were presented after the photo of the “public park” might interfere with or block the details of the “public park” photo.

**Representativeness Heuristic — Points 5 and 6**

**Definition (1 point):**

A rule of thumb for judging the likelihood of events based on how well something fits a prototype. That is, how similar are people (or an individual) in the event to prototypical views of such people?

*Defining the representative heuristic as a concept, conclusion, or reasoning process is acceptable. These are presented, respectively, in the boxes below.*

- |  |
|--|
| ■ “rule of thumb,” or “problem-solving strategy,” or “cognitive shortcut” may stand alone. |
|--|

OR

- |   |
|---|
| ■ a judgment, decision, solution, or conclusion based on how well an observation or event fits one of the following: a prototype, schema, cultural norm, or stereotype. |
|---|

OR

■ judging, deciding, solving, figuring out or processing in line with what one	normally	experiences in most situations as related to the issue of male-female aggression depicted in the photographs.
	typically	
	generally	
	usually	

**Not acceptable:**

- References to perception or perceptual experiences alone.
- References to memory, remembering, or recall (e.g., “remembering things that stand out the most”).
- Individual is representative of a population or group (i.e., the representativeness heuristic does not refer to how an individual may or may not be representative of a population; this is not representative sampling).

**Application (1 point):**

Aggressive men/non-aggressive women are seen as more “typical.” An aggressive man fits this prototype, an aggressive woman does not. Hence, participants conclude that the man is the aggressor or that the woman is not the aggressor. Participant chooses, decides, judges, perceives, or selects a strategy which leads to the conclusion that the male is the aggressor (or that the woman is not the aggressor as depicted in the photograph). Answers must relate the error to this study and context.

**Confirmation Bias — Points 7 and 8**

**Definition (1 point):**

Attending to information that supports one’s preconceptions. You pay attention to information that confirms your preconceptions and/or ignore information that does not.

■ Tendency to search for information or cues that	confirm	our	ideas.
	support		beliefs.
	go hand in hand with		preconceptions.

OR

■ Pay attention to information that confirms our bias.
--

OR

■ Ignore or reject information that is contrary to beliefs or that	interferes with	new information.
	prejudices	
	blocks	
	distorts	

**Not acceptable:**

- Something that confirms our bias.
- Identifying experimenter bias.

**Application (1 point):**

Participants pay attention to the aggression in the “public park” photo, but do not pay attention to the fact that the woman is the aggressor because that does not fit their preconceptions.

**Framing — Points 9 and 10**

**Definition (1 point):**

The way a question is posed (how it is “framed”) can alter judgment, decision-making, and recall.

■ The way an issue or question is	posed	can	alter	the participant's response.
	framed		change	
	asked		influence	
	presented		affect	

**Not acceptable:**

- Procedural manipulation (e.g., changing sequence of photographs, changing the location of the experiment).
- Body language or other nonverbal communication.

**Application (1 point):**

The way the experimenter asks the question or describes the procedure will influence the participant's description of the photo. The open-ended question may allow preconceived notions to have maximum effect.

## Table 4.2 – Scoring Worksheet-AP Psychology (page 63)

Please use the following in place of the scoring worksheet found on page 63 in the AP 1999 Psychology Released Exam. The worksheet found within the printed book itself should not be used because beginning with the May 2011 administration of AP Exams, the method for scoring the multiple-choice section has changed. Beginning in 2011, total scores on the multiple-choice section are based on the number of questions answered correctly. Points are no longer deducted for incorrect answers and, as always, no points are awarded for unanswered questions.

### Section I: Multiple-Choice

$$\frac{\text{Number Correct (out of 98)}}{\text{Multiple-Choice Score}} \times 1.0204 = \text{Weighted Section I Score (do not round)}$$

### Section II: Free Response

$$\text{Question 1 (out of 8)} \times 3.1250 = \text{(Do not round)}$$

$$\text{Question 2 (out of 10)} \times 2.5000 = \text{(Do not round)}$$

$$\text{Sum} = \text{Weighted Section II Score (Do not round)}$$

<b>AP Score Conversion Chart Psychology 1999</b>	
Composite Score Range	AP Score
99 -150	5
81-98	4
64-80	3
47-63	2
0-46	1

\*The candidates' scores are weighted according to formulas determined in advance each year by the Development Committee to yield raw composite scores; the Chief Faculty Consultant is responsible for converting composite scores to the 5-point AP scale.

### Composite Score

$$\text{Weighted Section I Score} + \text{Weighted Section II Score} = \text{Composite Score (Round to nearest whole number)}$$

**Table 4.4—Section I Scores and AP Scores (page 64)**

Due to the changes in multiple-choice scoring, the range of scores in Table 4.4 have changed, though the percentages remain the same. Please find the revised range of multiple-choice scores in the table below.

For a given range of multiple-choice scores, this table shows the percentage of students receiving each AP score. If you have calculated the multiple-choice score (**Weighted Section I Score**) by using the formula shown in Table 4.2, you can use this table to figure out the most likely score that the student would receive based only on that multiple-choice score.

Multiple-Choice Score	AP Score					Total
	1	2	3	4	5	
74 to 100	0.0%	0.0%	0.0%	15.8%	84.2%	16.2%
61 to 73	0.0%	0.0%	14.6%	70.2%	15.2%	25.6%
50 to 60	0.0%	11.2%	71.6%	17.3%	0.0%	26.0%
39 to 49	6.6%	73.6%	19.7%	0.1%	0.0%	20.2%
0 to 38	80.4%	19.5%	0.1%	0.0%	0.0%	12.0%
Total	11.0%	20.1%	26.4%	25.0%	17.5%	100.0%

**How AP Scores Are Determined (page 62):  
A Change to How the Score on Section I is Calculated**

The information on how AP scores are determined have remained largely unchanged. The only portion that has changed is step one, described on page 62, which indicates how the score on Section I is calculated. Points are not deducted for incorrect answers in the multiple-choice section. The maximum possible weighted score on Section I is 100 points, and it accounts for two-thirds of the maximum possible composite score.

NOTE: Please refer to the printed book for a full explanation of how AP scores are determined, including a detailed description of all the steps in the process of calculating the composite score and converting it to an AP score.