AP® Psychology
2003 Scoring Guidelines

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AP® PSYCHOLOGY
2003 SCORING GUIDELINES

Question 1

General Principles
1. No circular definitions (e.g., can't use the concepts to define themselves).
2. Points generally will not be awarded when an answer directly contradicts correct information with incorrect information.
3. Answers must be presented in sentences, and sentences must be cogent enough for the student's meaning to come through. Graphs by themselves are not sufficient, but annotated graphs can constitute "descriptions" or "definitions."
4. Spelling and grammar mistakes do not reduce a student's score, but spelling must be close enough so that the reader is convinced of the word in question. Mistakes in word choice are not forgiven, even if the context suggests the student wrote the wrong word by accident.
5. Assume that the student is working with a frequency distribution with scores ordered.

A. Statistics are often used to describe and interpret the results of intelligence testing.

❖ *Describe three measures of central tendency (mean, median, and mode)*

> **Point 1**: Mean
> - the average score
> - the sum of the scores divided by the (total) number of scores ($\Sigma X / N$)

> **Point 2**: Median
> - the middle score
> - score that divides distribution in half

> **Point 3**: Mode
> - the most frequent score
> - score that shows up more than others

❖ **Point 4: Describe a skewed distribution**
> - An asymmetrical distribution of scores
>   Examples: "curve with a bump on the left and tail to the right"
>   "most scores are bunched to the left (or right) of the mean"
> - long tail in one direction
> - the mean is not the same as the median (or mode)
> - extreme scores pull the mean

> NOTES: a) Any description or example of a skewed distribution is OK.
>   b) Don't confuse with point #6.

> TRAP: Do not score "not normal."
>   (Distributions that are not normal can be symmetrical.)

❖ **Point 5**: **Relate the three measures of central tendency to a normal distribution**
> - Mean, median, and mode are the same ("very close," "very similar")

median
NOTES: a) Must mention all three measures (or say "all measures")   mode
        b) Description of normal distribution by itself is not sufficient Pt #7: 55   70   85   100   115   130   145

❖ **Point 6: Relate the three measures of central tendency to a positively skewed distribution**
- The mean is the largest
- The mode <u>or</u> the median are smaller than the mean
- The mean is a less useful measure
- The median is more useful

NOTES: a) Must compare, at least implicitly, the measures of central tendency
       b) Assume statements about a measure are referring to its value (magnitude), not frequency.

❖ **Point 7: An intelligence test for which the scores are normally distributed has a mean of 100 and a standard deviation of 15. Use this information to describe how the scores are distributed.**
- Most scores (or 60-75%) are within 15 points of the mean (of 100)
- The typical (average, normal) IQ score falls between 85 and 115

NOTES: a) Answer must properly apply standard deviation of 15 points in computing range around mean
       ± 2 s.d. = 70 and 130; ± 3 s.d. = 55 and 145 (see normal curve figure)

    TRAP: "In this distribution, the scores range from 85 to 115" does <u>not</u> score.
       (Only 68% of scores are within 85 to 115, not the entire range of scores.)

❖ **Point 8: In two normal distributions, the means are 100 for group I and 115 for group II. Can an individual in group I have a higher score than the mean score for group II? Explain.**
- Answer must recognize that not all scores in a distribution are at the mean
  - There can be an overlap between the groups because someone can have a score above the mean
  - The mean is only an average, some people score above and some below

NOTE: It is possible for a score from Group I to be higher than some scores in Group II, but it is not necessary. Answer can describe non-overlapping distributions.

TRAP: "standard deviation" by itself is not sufficient, but a complete example using the concept of a standard deviation is acceptable (e.g., "Depending upon the size of the s.d., scores larger than 115 are possible.")

B. Apply knowledge of psychological research in answering the following questions about intelligence scores.

❖ **Point 9: Explain why norms for standardized intelligence tests are periodically updated.**
- Changes in *knowledge* require tests to be re-normed.
  Examples (not exhaustive):
  - People have gotten smarter (Flynn effect)
  - The number of questions answered accurately has increased over the years.
  - Changes that affect IQ test scores of groups (e.g., socio-cultural or technological)
  - Changes in educational practices or techniques (that affect knowledge)
  - Keep material culturally relevant, remove references to obsolete issues
- Re-norm to maintain validity or reliability

TRAP: changes in *social* norm*s* alone (as opposed to *test* norms) are <u>not</u> reasons that test norms are updated (two different uses of the word "norm")

❖ **Point 10: Describe how to determine whether an intelligence test is biased.**

- Note that two groups (not individuals) differ on IQ test
  AND
  { specify procedure for determining potential bias **OR** provide example of a previous bias assessment }
  Examples:
  "If one group under-performs on an IQ test you must look to see if there are biased items."
  "Immigrants at Ellis Island did poorly on tests that were shown to have culturally-specific questions."

- Compare IQ test performance of various groups to their performance on a separate, unbiased measure (criterion validity test)

- The test does not <u>predict</u> accurately future performance of a group (predictive validity test)

- Compare IQ scores of two groups. If no group different exists, test is not biased.
  (e.g., "Take a random sample. If scores are similar between ethnic or other groups, the test is not biased.")

NOTES: a) Question doesn't ask <u>whether</u> a bias exists or <u>why</u> it may exist, but how to determine (how do you know) if a bias exists.
b) A successful answer must deal with groups and not individuals.

DO NOT SCORE: a) A simple difference between two groups on an IQ test is not evidence of bias.
b) An individual's analysis of the items on the test for face validity is not sufficient.
<u>The test has to have been given</u> to note that two groups differ.

Question 2

A. Define the following psychological concepts.
- Cognitive dissonance
- Conformity
- Incentive motivation
- Negative reinforcement
- Physiological addiction

B. Use one specific example for each of the concepts in part A to explain how the concept might relate to either the development or the continuation of a smoking habit. It is not necessary to use the same example for each concept.

Scoring Rubric

General Principles
1. Information must be presented in context for points to be scored. Definition points may not be awarded within the context of smoking examples.
2. Definition points may be earned with robust, nonsmoking-related examples, and robust examples can lead to a point if they clarify incomplete or ambiguous definitions.
3. Example points generally establish either the development or continuation of a smoking habit. Development can refer to the entire "life" of a smoking habit, from beginning to smoke to smoking cessation. Words like "addicted" or "addiction" imply the continuation of smoking.
4. Answers must be presented in sentences, and sentences must be cogent enough for the student's meaning to come through. Spelling and grammatical mistakes do not reduce a student's score, but spelling must be close enough so that the reader is convinced of the word in question.
5. Points will generally not be awarded when a student directly contradicts correct information with incorrect information. However, for the definition points, an incorrect example will not cause the student to lose a point earned with a correct definition.

Cognitive Dissonance

Point 1 (definition). Definition must establish *both*
  - A. A discrepancy between two thoughts (accept "feelings") or thoughts and actions *and*
  - B. A resulting tension, discomfort, anxiety, or aversive state. This can be established by language that indicates an attempt to "solve a problem," "close a gap," etc.

Point 2 (example application). Smoking behavior might be in conflict with information, cognition, or behavior, which leads to a resultant change that reduces dissonance/tension and produces development or continuation of smoking.

Question 2 (cont'd.)

Conformity

Point 3 (definition). Group standards or indirect pressure lead a person to *change or adjust behavior or beliefs* to bring them in line with a group.
- Do <u>not</u> score answers that fail to establish a change or adjustment (e.g., conformity is when one behaves in a certain way to follow others or because others are doing it). Indicators of change or adjustment include phrases like "One behaves to fit into the group" or "One molds one's behavior to the group."
- Do <u>not</u> score changes due to direct pressure (compliance or obedience).

Point 4 (example application). Smoking behavior may *change* as a result of the influence of group standards or indirect pressure from a social group.
- "I smoke because my friends do" does <u>not</u> score.
- " I now smoke because me friends do" does score.

Incentive Motivation

Point 5 (definition). Behavior results from (accept "is motivated by") the desire to attain an external reward or goal object. The reward or goal object must be known in advance.
- "A behavior is followed by a reward" does <u>not</u> score.
- "A person does something to obtain a reward" does score.

Point 6 (example application). The student must explain how an external incentive can produce the development, continuation, or cessation of smoking behavior. Examples may include characteristics of tobacco products (e.g., taste), marketing promotions (e.g., branded clothing), or social benefits (e.g., acceptance).
- It is sufficient to use the term "reward" as an example of an incentive.
- Do <u>not</u> score internal incentives (e.g., "I smoke because it provides relaxation" or "I smoke because of how it makes me feel"), but assume that an incentive is external unless there is language to indicate otherwise.
- Do score the point if a student argues that tobacco itself can be used as an incentive for other behaviors (e.g., "A person smokes more if he rewards himself with cigarettes for finishing other tasks").

Negative Reinforcement

Point 7 (definition). The strengthening, continuation, or reinforcing of a behavior when the behavior is followed by the removal of a stimulus (often identified as aversive or unpleasant).

Point 8 (example application). Smoking-related behaviors are influenced because they provide escape from or avoidance of stress, tension, anxiety, withdrawal symptoms, or other unpleasant stimuli.

Question 2 (cont'd.)

Physiological Addiction

Point 9 (definition). A physical dependence characterized by withdrawal (when continued use of a drug is needed to prevent withdrawal symptoms), tolerance (the need for increasing amounts of a drug over time to achieve the same effect), or a body's attempt to maintain a homeostatic state influenced by a drug.
- "A person can't go without a drug" does <u>not</u> score.
- "A person can't function normally without the drug" does <u>not</u> score
- "A person will get sick without the drug" does score.

Point 10 (example application). The physiological mechanism (e.g., withdrawal, tolerance, or homeostasis) must be used to explain why a person would continue to smoke.