CollegeBoard AP

AP® Psychology
2009 Scoring Guidelines

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Question 1

Dimitri and Linda are trying to learn a new routine to compete successfully in a dance competition. Give an example of how each of the following could affect their performance. Definitions without application do not score.

- Extrinsic motivation
- Punishment
- Proactive interference
- Endorphins
- Vestibular system
- Divergent thinking
- Introversion

General Considerations

1. Answers must be presented in sentences, and sentences must be cogent enough for students' meaning to be apparent. Spelling and grammatical mistakes do not reduce students' scores, but spelling must be close enough so that the reader is convinced of the word intended.
2. Within a point, students will not be penalized for misinformation unless it *directly contradicts* correct information that would otherwise have scored a point.
3. Students can score points only if information is presented in *context*. This means that they must clearly convey which part of the question is being answered.
    - Example: A student who correctly explains that "Dimitri and Linda want to win the dance trophy" but who does not identify this as extrinsic motivation, does not earn the point. (In some cases, however, it is possible to infer context from the structure of the essay.)
4. Definitions without application are not sufficient to score points. A definition may contribute to the answer, but students must also provide a specific example related to some aspect of dance independent of the definition.
    - Example: "The old routine they learned would interfere with their ability to remember the new dance routine." (A specific example is provided: old versus new dance routine.)
    - *Do not score*: "Old information they have learned could interfere with learning any new information." (No specific example is provided.)
5. Because definitions alone do not score points, if a student provides an incorrect definition but a correct application, score the point based on the application.
6. The application is not limited to the dance "performance" (it could include practice, choreography, judging, audience influence, etc.). However, reference to "Linda and Dimitri," "the duo," or "them" cannot be used as an indicator of dance "performance." There must be a direct application to some aspect of dancing.
7. Examples provided for each of the following points are not exhaustive.

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Question 1 (continued)

Point 1: Extrinsic motivation
To earn this point, students must identify, within the context of dancing, an incentive (e.g., receiving rewards, money, trophy, crowd approval, television exposure, winning the competition) **OR** an external source of motivation (e.g., dancing for parents or dance instructor).

Example:
"Dimitri and Linda may be competing to win a trophy."

Do not score:
- A discussion of intrinsic motivation or internal motives
  Example: "Dimitri and Linda are involved in the competition because they love to dance."
- A mention of "rewarding themselves," unless it is clear that the "reward" is external.

Point 2: Punishment
To score this point the student must identify
  1. a dance-related behavior
       AND
  2. an aversive event **OR** the removal of a pleasant stimulus.

Example:
"Linda and Dimitri must do push-ups when they make mistakes in the routine."

Do not score:
- Negative reinforcement (an *increase* in resulting behavior at removal or avoidance of aversive stimuli)
  Example: "Dimitri and Linda don't want to get booed, so they work to perfect their performance."
- Absence of a behavior (a failure to do something, "not winning," "not making mistakes," "missing practice," "failing to learn the dance routine")
  Example: "Linda and Dimitri will be grounded if they don't win the competition."

Point 3: Proactive interference
To earn this point, students must establish that information about a previous dance experience (e.g., routines, rules) is preventing the recall of newer dance-related information.

Example:
"Dimitri and Linda start doing moves from an old routine and forget the moves for the new routine they learned for the competition."

Do not score:
- Retroactive interference (recently learned material interferes with the ability to recall older information)
  Example: "The new dance routine interferes with recall of the old routine."

Point 4: Endorphins

To earn this point, students must establish, in the context of dancing, that endorphins control pain **OR** produce feelings of pleasure (e.g., "runner's high," boosted mood, positive feelings) **OR** function as a positive reinforcer. (Students must specifically state "positive reinforcer" in their applications.)

Examples:

"Endorphins can help Linda overcome pain from an injury so she can keep dancing."
"Endorphins would make Dimitri and Linda happy with their performance."

Do not score:
- Other physiological states (anxiety, relaxation, arousal, excitement, attention)
- Nonspecific description of hormones
- Confusion of endorphins with adrenaline or serotonin
- Drug use or "taking endorphins"

Point 5: Vestibular system

To earn this point, students must establish that this system influences dancing by providing a sense of balance (e.g., equilibrium, information about position of the head in relation to gravity) **OR** disruption that leads to dizziness.

Examples:

"The vestibular system helps us keep our balance, which is necessary for Linda and Dimitri as they do different dance moves."
"Overstimulation of the vestibular system can cause Linda to feel dizzy after Dimitri spins her during the performance."

Do not score:
- Discussion of kinesthesis (information about the location of body parts in relation to one another)
- Discussion of the cerebellum without reference to the function of the vestibular system
- Discussion of the inner ear in relation to hearing rather than balance

Point 6: Divergent thinking

To earn this point, students must demonstrate that such thinking, which allows a person to consider many possible solutions, influences some aspect of dancing **OR** creativity in dance performance.

Examples:

"Divergent thinking can affect the dance routine by helping Linda and Dimitri think outside the box for new and better dance routines."
"The dance performance includes new and creative steps never seen by the judges before."

Do not score:
- Discussion of convergent thinking (limiting one's choices, looking for the "right" answer)
- Distractions ("thinking about something else")
- Differing "opinions" between individuals

Point 7: Introversion

To earn this point, students must describe how having an introverted personality (e.g., reserved, less sociable, withdrawn, quiet, solitary, needs time alone to recharge, concerned with own thoughts and experiences, more shy, anxious, reactive nervous system) may affect factors related to dancing or the dancer.

Examples:

"Dimitri struggles with shyness that makes it hard to be in front of people, so he is reluctant to perform in public."

"Raised anxiety levels for introverts will hamper the quality of the public performance."

"If Linda is an introvert, she might feel intimidated by all the people who are watching her every move."

"Dimitri might be introverted, which would make dancing more difficult because Linda would not be getting any feedback."

Do not score:

- Discussion of extraverted personalities (e.g., outgoing, enjoy social situations)
- "Introspection" alone

Question 2

James is in a driver's education course preparing to take his driving test. The course includes both book work and driving on the road to prepare students for a written test and a road test.

(a) Describe how each of the following might influence his ability to drive a car during the road test. Definitions without application do not score.
- Cognitive map
- Cerebellum
- Observational learning
- Human factors

(b) Describe how each of the following are related to the results of the written test. Definitions without application do not score.
- Reticular formation
- Predictive validity
- Semantic memory

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2. Within a point, students will not be penalized for misinformation unless it *directly contradicts* correct information that would otherwise have scored a point.
3. Students can score points only if information is presented in *context*. This means that they must clearly convey which part of the question is being answered before a point can be earned.

For points 1–4, applications must refer to the ability to DRIVE A CAR.

Point 1: Cognitive map
Students must include the following elements in their answers:
Reference to some sort of mental representation of spatial information (e.g., layout of environment) **AND** how it influences the ability to drive a car.

Examples:
"The picture of the road in his head makes it easier for James to anticipate any turns or obstacles in his path."
"James uses a mental representation of his environment that helps him to drive."
"James pictures the neighborhood in his mind and is able to find a new route to his destination."
"James's memory of the layout of the dashboard of his car may help him to drive more efficiently."

Do not score:
- Step-by-step plan
- Mental image (by itself)
- An answer that could refer to a paper map or GPS (global positioning system)

Point 2: Cerebellum

Students must include the following elements in their answers:
Reference to the cerebellum's role in at least one of the following: balance, coordination, motor movements, physical responses and actions, procedural memory, or reflexes **AND** how it influences the ability to drive a car.

Examples:
"James will be able to coordinate his hand and foot movement to maneuver the car."
"James will depend on his balance to drive the car."
"James uses procedural memory to operate the vehicle."

Do not score:
- Descriptions of brain processes not related to those listed above

Point 3: Observational learning

Students must include the following elements in their answers:
Reference to watching/observing another doing something associated with driving **AND** how that observed behavior influences the ability to drive a car.

Examples:
"James observes someone driving and learns to drive."
"After watching his parents drive, James picked up driving habits."
"While watching videos during the driver's education course, James will model the driving behavior seen in the video."
"After witnessing his brother getting scolded for driving too fast, James drives no faster than the speed limit."

Do not score:
- Statements that do not specifically link the observational component to the ability to drive a car or that do not link the observation to something associated with driving
  Examples:
  "By watching others drive, a student can learn through observational learning."
  "James observes someone and learns to drive."

Point 4: Human factors

Students must include the following elements in their answers:
Reference to some kind of design element **AND** how it influences the ability to drive a car.

Examples:
"Because the road signs are different colors, James can distinguish between them while driving."
"James's car has many controls that are too far out of his reach; it is poorly designed; or its technology is too complicated, so that it compromises his driving abilities."
"James drives better when operating an automatic transmission."

> **For points 5–7, applications must refer to the results of the WRITTEN TEST.**

Point 5: Reticular formation

Students must include the following elements in their answers:
Reference to at least one process such as attentiveness, arousal, sleep, autonomic nervous system **AND** how it is related to the results of the written test.

Examples:
"The reticular formation makes James more/less alert, and he performs better/worse on the exam."
"James's reticular formation makes him fall asleep, which adversely affects his performance on the exam."

Do not score:
- Descriptions of brain processes not related to those listed above

Point 6: Predictive validity

Students must include the following in their answers:
Reference to how the scores on the written test predict or are predicted by either driving performance, performance on the road test, or the driver's education course grade. Any type of predictive relationship (high score predicts high performance, high score predicts low performance, etc.) will score.

Examples:
"A high score on the written test predicts that James will be a good driver."
"A low score on the road test predicts that James will score high on the written test."
"James earns an A in his driver's ed class, which predicts that he will score high on the written test."

Do not score:
- Responses that discuss other types of validity
  Examples:
  "The test has high predictive validity if it measures what it is supposed to measure."
  "If James studies what he expects will be on the test, and he passes the test, the test has predictive validity."
  "The test has predictive validity if it measures whether James knows what he needs to know about driving."

Point 7: Semantic memory

Students must include the following elements in their answers:
Reference to knowledge (e.g., facts, concepts, definitions, or language rules) **AND** how it is related to the results of the test.

Examples:
"James had good knowledge of the course material and was able to score well on the written test."
"James did not have a good grasp of the course content and did not perform well on the written test."

Do not score:
- Descriptions of semantic encoding (processes that help James remember) without a description of semantic memory
- Descriptions of episodic memory without a description of semantic memory
- The words "information" or "meaning" without a more specific reference to knowledge (see above)