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AP[®]

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AP[®] Psychology

Scoring Guidelines

Set 1

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Question 1: Content Application**7 points****General Considerations**

1. Answers 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.
2. A student can earn points only if the student clearly conveys what part of the question is being answered. It is possible to infer the part of the question being answered if it is consistent with the order of the question.
3. The response must apply the concept to the prompt; a definition alone will not earn the point.
4. Examples provided in the Scoring Guidelines for each of the points are not to be considered exhaustive.
5. Within a bulleted question part, a student will not be penalized for misinformation unless it *directly contradicts* correct information that would otherwise have earned a point. For example, if a response applies a concept in two contradictory ways (such as identifying both the measured variables as the independent variable or describing proactive interference as interference from both older and newer information), the point is not earned.
6. Within a bulleted question part, if the response addresses details from a scenario other than the one in the prompt, the point is not earned.

Part A Malia has an assignment to write a research paper for a class. She has several weeks to work on the paper before turning in the finished product.

Explain how each of the following could apply to Malia’s completion of the assignment.

Albert Bandura’s theory of self-efficacy**1 point**

The response must indicate that Malia believes that she has the ability to write a good paper and that facilitates her finishing the assignment.

OR

The response can indicate that a lack of belief in her ability to write a good paper makes it less likely she would finish the assignment.

Acceptable explanations include:

- *Malia believes she can write a good paper, so she does her research and gets a good grade from her teacher.*
- *Malia is unsure whether she can write a good paper, so she procrastinates and ends up not doing well.*

Unacceptable explanations include:

Responses that refer to confidence, self-confidence, self-esteem, intelligence, or more general abilities.

- *Malia is confident about her paper.*
- *Self-efficacy is how Malia feels about herself. If she has a high amount of self-efficacy, she will be more likely to complete the project.*

A low score on the Big Five trait of neuroticism**1 point**

The response must indicate a description of low neuroticism and connect it to completion of the paper (either helping her or hindering her).

Acceptable explanations include:

Responses that include calmness, security, being self-satisfied, emotional stability, low anxiety, or low on depression.

- *Malia exhibits a sense of calm so she can complete her project on time.*

Unacceptable explanations include:

Responses that refer to aspects of any of the other Big Five trait factors.

- *Malia is very diligent, which helps her complete the project.*
-

External locus of control**1 point**

The response must indicate that Malia believes that outcomes are determined by forces outside of her control (e.g., fate, luck, destiny, circumstances, other people) and that affects her completion of the paper.

Acceptable explanations include:

- *Malia thinks that fate determines her life, so she doesn't take proactive steps to do her paper.*
- *Malia thinks that random factors determine her life, so she doesn't put in the effort to complete the assignment.*
- *Malia believes that the teacher is biased against her and so she doesn't even try to complete the paper.*

Unacceptable explanations include:

- *Malia knows that she controls her destiny.*
 - *Malia is worried that she will have bad luck.*
 - *Malia has no control over how her paper is graded, so she could do poorly.*
-

Divergent thinking**1 point**

The response must indicate that Malia generates multiple or creative solutions, and this affects her completion of the paper.

Acceptable explanations include:

Responses that refer to examples of creativity, including innovative thinking, brainstorming, "thinking outside the box," etc.

- *Malia considers many different topics for her research paper/uses an innovative approach to help her to do well on the assignment.*

Unacceptable explanations include:

Responses that refer to convergent thinking.

- *Malia knows there is one best way to write a good paper.*
-

Efferent neurons**1 point**

The response must indicate that efferent (motor) neurons contribute to some element of motor movement which affects Malia's completion of her paper.

Acceptable explanations include:

- *Malia's efferent neurons help her move her fingers, so she can type her paper.*

Unacceptable explanations include:

- *Malia's efferent neurons help her feel where the paper is.*
-

Part B Malia’s teacher, Mr. Barry, has many papers to grade.

Explain how each of the following might apply to his success in grading the papers.

Incentive Theory

1 point

The response must indicate that a desired activity or an external reward motivates Mr. Barry, and this helps him complete the grading.

Acceptable explanations include:

- *Mr. Barry sets a goal that if he completes his grading, he can watch his favorite television show.*
- *After every five papers he corrects, Mr. Barry rewards himself with five minutes on his favorite social media account.*

Unacceptable explanations include:

The response refers to intrinsic motivation.

- *Mr. Barry really wants to give his students feedback, so he grades all the papers in one night.*
-

Crystallized Intelligence

1 point

The response must indicate that accumulated knowledge (facts, general information, or vocabulary) helps Mr. Barry successfully grade the papers or that a lack of accumulated knowledge hinders his success.

Acceptable explanations include:

Responses that refer to wisdom, increased knowledge, and experience as examples of accumulated knowledge.

- *Mr. Barry can grade papers quickly because he is able to remember lots of facts about the topic he is grading.*
- *Mr. Barry is wise because he has learned so much in his life, which helps him grade papers faster.*

Unacceptable explanations include:

Responses that refer to general intelligence, or to fluid intelligence.

- *Mr. Barry grades papers faster because he is an experienced grader.*
 - *Mr. Barry is capable of thinking very quickly and thus can grade a large number of papers in one night.*
-

Total for question 1 7 points

Question 2: Research Methodology**7 points****General Considerations**

1. Answers 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.
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6. Within a bulleted question part, if the response addresses details from a scenario other than the one in the prompt, the point is not earned.

Part A Mr. Gomez decides to conduct a study with his sixth-grade math class, after first obtaining informed consent. Half of his students happen to arrive early for class (group 1), so he uses the time to give them some extra problem-solving tips. The next week he compares their scores on a quiz with the scores of the students who arrived on time (group 2) and did not receive the tips. The students’ grades are represented in the table below. Mr. Gomez comes to the conclusion that the problem-solving tips led to higher scores on the quiz. Mr. Gomez posts the table of grades on the door of his classroom to emphasize that the tips helped improve the students’ grades.

Group 1	Grade on Quiz	Group 2	Grade on Quiz
Jaime	4	Lynda	3
Steven	5	Adam	4
Thomas	3	Sami	1
Elizabeth	3	Marlena	1
Marwa	7	Kiara	5
Frances	6	Caylin	4
Fekru	3	Darin	2
David	6	Chinami	4

Identify the dependent variable presented in the study.**1 point**

The response must indicate score on the quiz as the dependent variable.

Acceptable explanations include:

- *The dependent variable is the score the students earn on the quiz.*

Unacceptable explanations include:

- *The dependent variable is the one that is measured.*
 - *The dependent variable is the problem-solving tips.*
-

Explain how the study could be modified to be an experiment.**1 point**

The response must indicate that the study could be modified by adding random assignment to make it an experiment.

Acceptable explanations include:

- *The study needs to have random assignment in each experimental condition in order for it to be an experiment.*
- *Mr. Gomez would need to put people in groups randomly in order to make this an experiment.*

Unacceptable explanations include:

Responses that refer to the manipulation of a variable without discussion of random assignment.

Responses that refer to flaws in research design, such as sampling bias, or other confounding variables.

- *Mr. Gomez manipulated his variable, which makes it an experiment.*
 - *Mr. Gomez might avoid bias by randomly selecting people for his study.*
 - *Mr. Gomez would have to make sure that both groups received instructions for the quiz at the same time.*
-

Compare the mode of Group 1 to the mode of Group 2.**1 point**

The response must indicate either that the mode of Group 1 is lower than the mode of Group 2 (or vice versa).

OR

The response must indicate that the mode of Group 1 is 3, and the mode of Group 2 is 4.

Acceptable explanations include:

- *The mode of group 1 is lower than group 2.*
- *Group 1's mode is 3 and Group 2's mode is 4, so they are different.*

Unacceptable explanations include:

- *The groups modes are irrelevant.*
-

Identify the measure of central tendency that needs to be calculated to determine the standard deviation. **1 point**

The response must indicate that the mean is the measure of central tendency that is calculated to determine the standard deviation.

Acceptable explanations include:

- *Mr. Gomez must calculate the mean in order to determine the standard deviation.*
- *The mean.*

Unacceptable explanations include:

Responses that refer to any other measures of central tendency besides the mean.

- *Mr. Gomez must calculate the mode to determine the standard deviation.*
 - *The median.*
-

Explain the ethical flaw that is explicitly presented in the study. **1 point**

The response must indicate that Mr. Gomez posted the students' grade (or did not maintain confidentiality/anonymity of the students' grades).

Acceptable explanations include:

- *Mr. Gomez posted every kid's name with their score.*

Unacceptable explanations include:

- *Mr. Gomez did harm to his students in this study.*
-

Explain how metacognition could apply to the scenario.**1 point**

The response must indicate that an individual in the scenario thinks about their own thinking.

Acceptable explanations include:

Responses that refer to cognitive strategies that may be used to improve scores on their quizzes, awareness of their knowledge or understanding, monitoring progress of their learning, etc.

- *Students in this study might keep track of how well they do, so they can study better for each test.*

Unacceptable explanations include:

Responses that refer to trying to do better, working harder, or listening better without discussion of the individual's thinking about their thinking.

Responses that refer to thinking about anything other than an individual's own thinking or the word "study" by itself without reference to some metacognitive process.

Responses that refer to anyone else's thinking about an individual's thinking.

- *Students will need to work harder as they learn so they can do better.*
 - *Students study more throughout the term.*
 - *Students listen to what the teacher says about their thinking, which helps them do better.*
-

Part B Suppose Mr. Gomez had conducted this study as an experiment without any flaws and obtained the same results and that the results were statistically significant.

Explain how the findings depicted in the table above could support the theory of levels of processing.

1 point

The response must indicate either that Mr. Gomez used problem-solving tips that promoted deep processing and increased scores.

OR

The response must indicate that the group that did not receive the tips used shallow processing and scored worse.

Acceptable explanations include:

- *Students who used the problem-solving strategies used deep processing and that helped them learn more in class.*
- *Mr. Gomez’s strategies worked well because they helped students process things more deeply.*
- *Students who did not use the problem-solving strategies used shallow processing and learned less in class.*

Unacceptable explanations include:

- *Students who process things on multiple levels can learn better.*
- *Students who use their long-term memory do better than students who use their short-term memory.*

Total for question 2 7 points