

2025



AP[®] Psychology

Scoring Guidelines

Set 1

FRQ 1: Article Analysis Question (AAQ)

7 Points

General Considerations

- Answers must be cogent enough for the meaning to come through. Spelling and grammatical mistakes do not reduce a score, but spelling must be close enough so that the reader is convinced of the word.
- A student can earn points only if the student is clearly addressing the topic of the source material in their response.
- The response must apply the concept to the prompt. A definition alone will not earn the point, but a clear definition can support the application.
- Examples provided in the Scoring Guidelines for each of the points are not to be considered exhaustive.
- Within a question part, a response will not be penalized for incorrect information unless it directly contradicts correct information that otherwise would have earned the point(s). For example, if a student applies a concept by defining it in two contradictory ways (such as applying proactive interference as both interference from older and newer information), the point is not earned.

Reporting Category	Scoring Criteria	
Part A Research Method	0 points Does not accurately identify the research method used in the study	1 point Accurately identifies the research method used in the study
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response does not accurately identify the research method used in the study. - The response includes no identification of the research method used in the study.	Responses that earn this point: The response accurately identifies the research method used in the study as an experiment.
	Examples that do not earn this point: "The researchers used a correlational study." "The researchers studied memory."	Examples that earn this point: "The researchers used an experiment." "The researchers included a questionnaire in their experiment." "Since students were randomly assigned to groups, this was an experiment."

Reporting Category	Scoring Criteria	
Part B Research Variable (0–1 points)	0 points Does not state a measurable or quantifiable definition of the identified variable used in the study	1 point States a measurable or quantifiable definition of the identified variable as used in the study
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response states a definition of the identified variable in the study that is not measurable or quantifiable. - The response does not state a measurable or quantifiable definition of the identified variable as used in the study.	Responses that earn this point: - The response states that the operational definition of high misinformation is having 80% of the sentences in the narrative include incorrect information. - The response states that high misinformation is defined as having 32 misleading sentences.
	Examples that do not earn this point: <i>“The researchers studied how much misinformation people can handle.”</i> <i>“The researchers gave more misinformation to one group than another.”</i>	Examples that earn this point: <i>“The researchers operationally defined high misinformation as 80% of the sentences in the narrative including incorrect information.”</i> <i>“The researchers defined high misinformation as a story having 32 misleading sentences in it.”</i>

Reporting Category	Scoring Criteria	
Part C Statistic Interpretation (0–1 points)	0 points Does not accurately describe what the identified statistic indicates in relation to the study	1 point Accurately describes what the identified statistic indicates in relation to the study
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response restates the means for the high misinformation group and/or low misinformation group without directly relating them to the study. - The response does not accurately describe the meaning of the difference in means between the correct responses of the high misinformation group and the low misinformation group. - The response provides a definition of any mean within the study but does not accurately describe its meaning in relation to the study.	Responses that earn this point: - The response accurately describes exposure to a higher percentage of misinformation being associated with a lower mean percentage of correct responses to questions about the video. - The response accurately describes participants in the high misinformation group as having recalled less correct information (i.e., mean = 63%) about the video than those in the low misinformation group (i.e., mean = 74%).
	Examples that do not earn this point: <i>“The mean of the high misinformation group is 63%.” [No explanation of what that means in the study.]</i> <i>“The differences in the means between the groups shows that the high misinformation group did not rely on the misinformation when the low misinformation group did.”</i> <i>“The mean is the average of the responses in the study.”</i>	Examples that earn this point: <i>“The high misinformation group got less correct responses than the low misinformation group.”</i> <i>“The group that got 80% misinformation relied on more misleading information than the group with 20% misinformation, since the mean averages of the high misinformation group was 63% compared to 74% for the low misinformation group.”</i> <i>“The low misinformation group scored 11% higher in their correct responses than did the high misinformation group.”</i>

Reporting Category	Scoring Criteria	
Part D Ethical Guidelines (0–1 points)	0 points Does not accurately identify at least one ethical guideline applied by researchers in the study	1 point Accurately identifies at least one ethical guideline applied by researchers in the study
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response does not identify an ethical guideline applied by researchers in the study. - The response identifies an ethical guideline that researchers should have applied but was not mentioned in the study. - The response identifies an ethical guideline not applied by the researchers in the study. - The response identifies other features of the study that are not ethical guidelines.	Responses that earn this point: The response identifies that the researchers obtained informed consent.
	Examples that do not earn this point: <i>“It’s important to researchers to act ethically when conducting a study.”</i> <i>“The researchers should have debriefed participants at the end of the study.”</i> <i>“The researchers protected the confidentiality of the participants in the study.”</i> <i>“The researchers gave students course credit when they participated in the study, which is unethical.”</i>	Examples that earn this point: <i>“The researchers obtained informed consent from the participants.”</i> <i>“The article says that after the researchers obtained consent, the participants got to watch the video of the robbery.”</i>

Reporting Category	Scoring Criteria	
Part E Generalizability (0–1 points)	0 points Does not propose a claim regarding the generalizability of the study to a population (general or specific) OR Does not use specific and relevant evidence that references participant variables that would impact the generalizability of the study	1 point Explains the extent to which the study is generalizable using specific and relevant evidence referencing participant variables from the study
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response proposes no claim regarding the generalizability of the conclusion of the study. - The response proposes a claim regarding the generalizability of the conclusion of the study but makes no reference to a population (general or specific). - The response uses evidence that does not apply to the generalizability of the conclusion of the study (e.g., reliability, validity, sample size).	Responses that earn this point: - The response proposes a claim about generalizability that references a population (the “larger population” or a population relevant to the study’s participants) to explain the extent of the generalizability of the study. - The response proposes that the study is or is not generalizable to the population relevant to the study because of specific and relevant evidence derived from the participant information from the study.
	Examples that do not earn this point: “The study used both men and women.” [The response does not propose a claim about generalizability.] “The study is generalizable.” “The study is generalizable to the larger population.” “The study is generalizable because the sample was large.”	Examples that earn this point: “The study is generalizable to a larger population because the participant sample was diverse.” “The study is not generalizable because they only used university students in their study.”
	Additional Note: If students assert the study is “partly” generalizable or asserts the study is both generalizable and not generalizable, their evidence must support their assertion by showing ways the study is generalizable and is not generalizable to earn the point.	

Reporting Category	Scoring Criteria		
Part F Argumentation (0–2 points)	0 points Does not accurately explain how the results of the study support or refute the psychological concept or hypothesis presented in the question.	1 point Uses the results of the study but does not explain how the psychological concept or hypothesis is supported or refuted. OR Explains that the psychological concept or hypothesis is supported or refuted but does not use any results from the study.	2 points Uses a specific result from the study to explain how the results support or refute the psychological concept or hypothesis presented in the question. The results are accurately interpreted.
	Decision Rules and Scoring Notes		
	Responses that earn 0 points: - The response does not explain how at least one of the research findings supports or refutes the misinformation effect. - The response does not accurately explain how at least one of the research findings supports or refutes the misinformation effect.	Responses that earn 1 point: - The response proposes that the evidence alone is sufficient to demonstrate the misinformation effect without additional explanation. - The response uses at least one of the research findings to explain the misinformation effect. However, the interpretation of the results of the study includes some inaccuracies.	Responses that earn 2 points: The response uses at least one of the research findings to accurately explain the misinformation effect. The results of the study are accurately interpreted.
	Examples that earn 0 points: “The study shows that the misinformation effect happens in the study.” “Since each group got 7% incorrect on the questionnaire, the misinformation effect is refuted.” [Does not accurately support or refute misinformation effect.] “The study shows that people are susceptible to misinformation.”	Examples that earn 1 point: “The high misinformation group answered more questions using misleading information.” [Evidence only.] “This study supports the misinformation effect, which is when people remember incorrect information that is presented to them.” [Explanation without evidence.]	Examples that earn 2 points: “The study showed that the misinformation effect is supported because the data shows that participants in the high misinformation group were more likely to use the misleading information when answering questions (30%) than those in the low misinformation group (19%).” “This study provides evidence for the misinformation effect because it shows that when participants were exposed to a high level of misinformation, they were more likely to incorporate misleading information into their memories.” “One of the research findings that refutes the misinformation effect is that the participants performed best if they had distrusted the accuracy of the summary. The more that they were presented with misinformation, the more distrustful that they were, which meant that they had resisted more information in comparison to those who didn’t receive as much misinformation.”

FRQ 2: Evidence-Based Question (EBQ)

7 Points

General Considerations

- Answers must be cogent enough for the meaning to come through. Spelling and grammatical mistakes do not reduce a score, but spelling must be close enough so that the reader is convinced of the word.
- A student can earn points only if the student is clearly addressing the topic of the source material in their response.
- The response must apply the concept to the prompt. A definition alone will not earn the point, but a clear definition can support the application.
- Examples provided in the Scoring Guidelines for each of the points are not to be considered exhaustive.
- Within a question part, a response will not be penalized for incorrect information unless it directly contradicts correct information that otherwise would have earned the point(s). For example, if a student applies a concept by defining it in two contradictory ways (such as applying proactive interference as both interference from older and newer information), the point is not earned.

Reporting Category	Scoring Criteria	
Part A Claim (0–1 points)	0 points	1 point
	Does not propose a claim that is relevant to the question	Proposes a claim that is relevant to the question
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response describes the question without making a claim. - The response proposes a claim unrelated to the question. - The response proposes an oversimplified conclusion or evidence from a provided source.	Responses that earn this point: - The response proposes specific effects on the question. - The response proposes a claim that suggests a positive or negative effect on the question. - The response proposes recommendations for the application of the question.
	Examples that do not earn this point: “Does the presence of others influence performance?” “Using animals in research can tell us a lot about ourselves.” “Studying the factors that influence performance is important to social psychologists.”	Examples that earn this point: “The presence of others makes a difference in whether someone performs well on a specific task or set of tasks.” “When someone else is present during a performance, it is more likely that the participant will perform well.” “The presence of others will make them do worse at what they are doing.” “People should have an audience for tasks they are good at.”
	Additional Note: A claim that meets the criteria can be awarded the point regardless of whether the responses in Parts B and C successfully support the claim.	

Reporting Category	Scoring Criteria	
Part B (i) Evidence (0–1 points)	0 points	1 point
	Does not identify nor correctly cite one piece of specific evidence from one of the provided sources to support the claim. Any evidence provided is not relevant to the question.	Uses one piece of correctly cited, specific, accurate, and relevant evidence from one of the provided sources to support the claim.
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response identifies no evidence. - The evidence is not correctly cited. - The evidence is nonspecific or inaccurate. - The response provides evidence not relevant to the claim.	Responses that earn this point: The evidence is correctly cited and provides specific and accurate evidence relevant to the claim.
	Examples that do not earn this point: “The presence of others impacts what we do.” [No evidence.] “The baboon study shows that the presence of other baboons made the baboons do worse on the task that required more cognitive control.” [No citation.] “The baboons were influenced by other baboons.” [Nonspecific evidence.] “In Source 2, researchers used rewards to change the baboon’s behavior.” [Evidence not relevant to the claim.]	Examples that earn this point: “The results of the bar graph (Source 1) show a longer amount of time for participants to complete a new and difficult task in front of an audience than when they were alone.” “According to Source 3, performance was improved when participants were observed by an evaluator and when they were monitored electronically.” “According to Source 2, researchers found that the delayed reaction time was greatest for male baboons in the presence of older males with a higher social rank.” “According to Source 1, participants were able to perform a well-learned task quicker than those who were alone.”
	Additional Notes: - Responses that use a correct citation style other than the methods prescribed by the question can earn this point for citing the source. “Accurate evidence” refers to the accuracy of the general pattern of the evidence cited. Since citing specific numbers is not required to score the point, slight errors in reporting specific data can still score when the direction of the difference or relationship of the data cited is correct.	

Reporting Category	Scoring Criteria		
Part B (ii) Explanation and Application (Reasoning) (0–2 points)	0 points Does not explain the relationship between the evidence and the claim	1 point Explains the relationship between the evidence and the claim	2 points Applies a psychological perspective, theory, concept, or research finding to explain how the evidence supports the claim
	Decision Rules and Scoring Notes		
	Responses that earn 0 points: - The response does not accurately interpret the evidence. - The response identifies evidence without explanation of how it relates to the claim. - The response provides opinions with no reference to the sources provided.	Responses that earn 1 point: The response correctly interprets the evidence in supporting the claim, but does not apply a psychological perspective, theory, concept, or research finding.	Responses that earn 2 points: The response correctly interprets the evidence and correctly applies a psychological perspective, theory, concept, or research finding.
	Examples that earn 0 points: “Performance on tasks is not impacted by the presence of others.” “When people feel they are being directly evaluated by either an in-person or electronic observer, they perform better.” “It’s good to have others around when you are completing a task.”	Examples that earn 1 point: “The evidence demonstrates that the presence of others is generally helpful for improving performance, but if a task is difficult, performance can suffer.” “Since the time needed to complete the new and difficult task increased in the presence of others, this shows that the presence of others has a negative effect on performance.” “The studies show that if you are an expert at something, having an audience helps.”	Examples that earn 2 points: “The study showed that participants who completed the task when being observed detected more correct pairs than those who did it alone. This is called social facilitation.” “The reason for the delayed reaction times of younger male baboons was probably due to social norms. Because the younger males must be submissive to dominant older males, their awareness of that made their performance worse.” “The study showed that participants were able to perform a well-learned task such as putting on their socks quicker than those who were alone. This is an example of the Yerkes-Dodson Theory, which states that well-learned tasks can be performed well even if under high states of arousal such as being watched.”
Additional Notes: - The explanation and application points can be earned even if the response did not earn the point in B (i) due to incorrectly cited and/or non-specific evidence. - The psychological perspective, theory, concept, or research finding must be explicitly identified in the <i>AP Psychology Course and Exam Description</i> (2024). - The presence of a citation indicates the sentence or phrase is intended to be evidence. All text before the citation will be considered evidence. Text after a citation will be considered reasoning, unless accompanied by another citation. - Concepts used in the sources that are not eligible to be used for the application point are “confederate,” “statistically significant,” and “operant conditioning.”			

Reporting Category	Scoring Criteria	
Part C (i) Evidence (0–1 points)	0 points Does not identify nor correctly cite a different piece of specific evidence from either of the other two provided sources to support the claim	1 point Uses a different piece of correctly cited, specific, accurate, and relevant evidence from either of the other two provided sources to support the claim
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response identifies no evidence. - The evidence is not correctly cited. - The evidence is nonspecific or inaccurate. - The evidence is from the same source as the one used in Part B. - The response provides evidence not relevant to the claim.	Responses that earn this point: The response provides specific, accurate, and correctly cited evidence relevant to the claim that is from a different source than the one used in Part B.
	Examples that do not earn this point: “The presence of others impacts what we do.” [No evidence.] “In one study, people who just thought they were being monitored performed better.” [No citation.] “Research shows that behavior changes when in a group.” [Nonspecific evidence.] “In Source 2, researchers found that baboons performed worse on the conflicting trial task when they were in the presence of other baboons.” [The response used the same source as used in Part B.] “In Source 2, researchers used rewards to change the baboon’s behavior.” [Evidence not relevant to the claim.]	Examples that earn this point: “Source 3 shows that when people believe they are being monitored, either by a human or a web cam, they will perform better on a task than when they think they are not being monitored.” “Source 2 shows that when the baboons did the harder task, they did worse in the presence of other baboons.” “When participants were taking off and putting on their shoes, they did better with an audience (Source 1).”
Additional Note: - Responses that use a correct citation style other than the methods prescribed by the question can earn this point for citing the source. “Accurate evidence” refers to the accuracy of the general pattern of the evidence cited. Since citing specific numbers is not required to score the point, slight errors in reporting specific data can still score when the direction of the difference or relationship of the data cited is correct.		

Reporting Category	Scoring Criteria		
Part C (ii) Explanation and Application (Reasoning) (0–2 points)	0 points Does not explain the relationship between the evidence and the claim	1 point Explains the relationship between the evidence and the claim	2 points Applies a different psychological perspective, theory, concept, or research finding to explain how the evidence supports the claim. The psychological perspective, theory, concept, or research finding is not the same one used in Part B (ii).
	Decision Rules and Scoring Notes		
	Responses that earn 0 points: - The response does not accurately interpret the evidence. - The response identifies evidence without explanation of how it relates to the claim. - The response provides opinions with no reference to the sources provided.	Responses that earn 1 point: - The response correctly interprets the evidence, but does not apply a psychological perspective, theory, concept, or research finding. - The response applies the same psychological perspective, theory, concept, or research finding that was used in Part B; however, the response explains the relationship between the evidence and the claim that does not rely on the application.	Responses that earn 2 points: The response correctly interprets the evidence and applies a psychological perspective, theory, concept, or research finding that is different from the one used in Part B.
	Examples that earn 0 points: <i>“The evidence supports my claim.”</i> <i>“The evidence shows baboons perform better if they are being watched.”</i> [The response provides an incorrect interpretation of the evidence.]	Examples that earn 1 point: <i>“The research shows that being in the presence of others improves performance if you are doing a task that is well-learned.”</i> <i>The research shows that if you are doing something with superiors watching, you will do worse.”</i> <i>“The research shows that whether you are being watched live or by video, you will do better on an easy task such as subtraction.”</i>	Examples that earn 2 points: <i>“When doing an easy, well-learned task, like putting on or taking off your own shoes, people might be extrinsically motivated to complete the task better in order to get the approval of others.”</i> <i>“Since the baboons performed worse in front of an audience, that could be an example of increased distress, which could get in the way of their ability to complete a complex task.”</i> <i>“The participants in Source 3 did an easy task, such as subtraction, better when they were being watched directly than when they were alone. The participants were not affected by an imaginary audience where people think that others are watching and judging them.”</i>
Additional Notes: - The explanation and application points can be earned even if the response did not earn the point in C (i) due to incorrectly cited and/or non-specific evidence. - The explanation and application points can be earned if the response uses the same source in both Parts B and C, provided that the evidence used in Part B and Part C is different. - The psychological perspective, theory, concept, or research finding must be explicitly identified in the <i>AP Psychology Course and Exam Description (2024)</i> and is different from the perspective, theory, concept, or research finding used in Part B. - The presence of a citation indicates the sentence or phrase is intended to be evidence. All text prior to the citation will be considered evidence. Text after a citation will be considered reasoning, unless accompanied by another citation. - Concepts used in the sources that are not eligible to be used for the application point are “confederate,” “statistically significant,” and “experimental design.”			

2025



AP[®] Psychology

Scoring Guidelines

Set 2

FRQ 1: Article Analysis Question (AAQ)

7 Points

General Considerations

- Answers must be cogent enough for the meaning to come through. Spelling and grammatical mistakes do not reduce a score, but spelling must be close enough so that the reader is convinced of the word.
- A student can earn points only if the student is clearly addressing the topic of the source material in their response.
- The response must apply the concept to the prompt. A definition alone will not earn the point, but a clear definition can support the application.
- Examples provided in the Scoring Guidelines for each of the points are not to be considered exhaustive.
- Within a question part, a response will not be penalized for incorrect information unless it directly contradicts correct information that otherwise would have earned the point(s). For example, if a student applies a concept by defining it in two contradictory ways (such as applying proactive interference as both interference from older and newer information), the point is not earned.

Reporting Category	Scoring Criteria	
Part A Research Method (0–1 points)	0 points	1 point
	Does not accurately identify the research method used in the study	Accurately identifies the research method used in the study
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response does not accurately identify the research method used in the study. - The response includes no identification of the research method used in the study.	Responses that earn this point: The response accurately identifies the research method used in the study as an experiment.
	Examples that do not earn this point: <i>“The research method used in the study is a case study since the researchers are examining a dog’s reactions to a person’s emotions.”</i> [Incorrect research method.] <i>“The researchers studied whether a dog’s reaction to a person’s emotions differ based on the dog’s experience with the person.”</i> <i>“The research method in this study is the experimental method, but they were specifically using a naturalistic observation.”</i> [Direct contradiction.]	Examples that earn this point: <i>“The researchers used an experiment.”</i> <i>“The researchers used a within-subject experiment.”</i>

Reporting Category	Scoring Criteria	
Part B Research Variable (0–1 points)	0 points	1 point
	Does not state a measurable or quantifiable definition of the identified variable used in the study	States a measurable or quantifiable definition of the identified variable as used in the study
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response states a definition of person-oriented dog behaviors in the study that is not measurable or quantifiable. - The response does not state a measurable or quantifiable definition of person-oriented dog behaviors as used in the study.	Responses that earn this point: - The response states that person-oriented dog behaviors are defined as the number of times a dog looked at a person, contacted a person, approached a person, and/or vocalized at a person in the study. - The response states researchers measured person-oriented dog behaviors as the dog looking at, making contact, approaching, or vocalizing at the people.
	Examples that do not earn this point: <i>“The researchers studied how emotionally close the dogs were to their owners.”</i> <i>“The operational definition of person-oriented dog behavior is the 2-minute lighthearted conversation the stranger-researcher and the owner had.”</i> <i>“The operational definition of person-oriented dog behaviors includes passive behavior like lying down or sitting.”</i>	Examples that earn this point: <i>“The researchers operationally defined person-oriented dog behaviors as the number of times they looked at the person or barked at the person.”</i> <i>“The researchers defined person-oriented dog behaviors as making contact or approaching the people.”</i>

Reporting Category	Scoring Criteria	
Part C Statistic Interpretation (0–1 points)	0 points	1 point
	Does not accurately describe what the identified statistic indicates in relation to the study	Accurately describes what the identified statistic indicates in relation to the study
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response restates the mean of the person-oriented behaviors for the laughing group as compared to the talking group without directly relating them to the study. - The response does not accurately describe what the mean of the person-oriented behaviors for the laughing group as compared to the talking group indicates in relation to the study. - The response provides a definition of the mean of the person-oriented behaviors for the laughing group as compared to the talking group but does not accurately describe what it indicates in relation to the study.	Responses that earn this point: - The response accurately describes the mean of the person-oriented behaviors for the laughing trials as being larger than the mean of the talking trials, which indicates that the dogs showed more person-oriented behaviors when the people laughed than when they were just talking. - The response accurately describes the means for the laughing and talking trials as not significantly different from each other, meaning that the difference in means between the talking trial and the laughing trial was likely due to chance or not due to the emotion.
	Examples that do not earn this point: <i>“The mean of the laughing group is 1.3 and the mean for the talking group is .75.”</i> <i>“The mean of the laughing group is significantly more than the mean of the talking group.”</i> [No explanation of what that indicates in the study.] <i>“The mean is the average of the responses in the study. The dogs in the laughing group had a mean of 1.4 person-oriented behaviors.”</i>	Examples that earn this point: <i>“The dogs showed more person-oriented behaviors to people who were laughing than those who were just talking.”</i> <i>“The dogs responded more to laughing than to talking.”</i> <i>“Since the difference between the means of the laughing and talking trials was not significant, this means that the difference in means was probably due to chance.”</i> <i>“There was not a significant difference between the two. This just indicates that the animal’s response was not due to laughing or talking.”</i>

Reporting Category	Scoring Criteria	
Part D Ethical Guidelines (0–1 points)	0 points Does not accurately identify at least one ethical guideline applied by researchers in the study	1 point Accurately identifies at least one ethical guideline applied by researchers in the study
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response does not identify an ethical guideline applied by researchers in the study. - The response identifies an ethical guideline that researchers should have applied but was not mentioned in the study. - The response identifies an ethical guideline not applied by the researchers in the study. - The response identifies other features of the study that are not ethical guidelines.	Responses that earn this point: - The response identifies informed consent as an ethical guideline applied by researchers in the study. - The response identifies doing no unnecessary harm to the animals as an ethical guideline applied by the researchers in the study.
	Examples that do not earn this point: <i>“It’s important to researchers to act ethically when conducting a study.”</i> <i>“The researchers should have obtained the dog’s consent.”</i> <i>“The researchers protected the confidentiality of the participants in the study.”</i> <i>“The researchers gave dog biscuits as compensation, which is unethical.”</i>	Examples that earn this point: <i>“The researchers obtained informed consent from the dog owners.”</i> <i>“The researchers made sure they did no harm to the animals, who could not give consent to be studied.”</i> <i>“The researchers had the stranger and the dog owner have a cheerful conversation between trials to reset the emotional tone of the experience for both the dogs and the owners. This demonstrates that the researchers took steps to protect the participants from harm.”</i>

Reporting Category	Scoring Criteria	
Part E Generalizability (0–1 points)	0 points Does not propose a claim regarding the generalizability of the study to a population (general or specific) OR Does not use specific and relevant evidence that references participant variables that would impact the generalizability of the study	1 point Explains the extent to which the study is generalizable using specific and relevant evidence referencing participant variables from the study
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response proposes no claim regarding the generalizability of the conclusion of the study. - The response proposes a claim regarding the generalizability of the conclusion of the study but makes no reference to a population (general or specific). - The response uses evidence that does not apply to the generalizability of the conclusion of the study (e.g., reliability, validity, sample size).	Responses that earn this point: - The response proposes a claim about generalizability that references a population (the “larger population” or a population relevant to the study’s participants) to explain the extent of the generalizability of the study. - The response proposes that the study is or is not generalizable to the population relevant to the study because of specific and relevant evidence derived from the participant information from the study.
	Examples that do not earn this point: <i>“The study yielded some good results.”</i> <i>“The study is generalizable.”</i> <i>“The study is generalizable because they had a large sample size.”</i>	Examples that earn this point: <i>“The study is generalizable to dogs of all kinds because they used several different kinds of dogs in the study.”</i> <i>“The study is only generalizable to nonaggressive dog breeds because although they used a variety of dogs, they recruited only nonaggressive dogs for their sample.”</i> <i>“The study is not generalizable to dog owners younger than 25 or older than 60.”</i>
Additional Note: If students assert the study is “partly” generalizable or asserts the study is both generalizable and not generalizable, their evidence must support their assertion by showing ways the study is generalizable and is not generalizable to earn the point.		

Reporting Category	Scoring Criteria		
Part F Argumentation (0–2 points)	0 points Does not accurately explain how the results of the study support or refute the psychological concept or hypothesis presented in the question	1 point Uses the results of the study but does not explain how the psychological concept or hypothesis is supported or refuted OR Explains that the psychological concept or hypothesis is supported or refuted but does not use any results from the study	2 points Uses a specific result from the study to explain how the results support or refute the psychological concept or hypothesis presented in the question. The results are accurately interpreted.
	Decision Rules and Scoring Notes		
	Responses that earn 0 points: - The response does not explain how at least one of the research findings supports or refutes the idea that dogs' expression of person-oriented behaviors demonstrates stimulus discrimination in operant conditioning. - The response does not accurately explain how at least one of the research findings supports or refutes the idea that dogs' expression of person-oriented behaviors demonstrates stimulus discrimination in operant conditioning.	Responses that earn 1 point: - The response proposes that the evidence alone is sufficient to demonstrate the idea that dogs' expression of person-oriented behaviors demonstrates stimulus discrimination in operant conditioning without additional explanation. - The response uses at least one of the research findings to support or refute the idea that dogs' expression of person-oriented behaviors demonstrates stimulus discrimination in operant conditioning. However, the interpretation of the results of the study includes some inaccuracies.	Responses that earn 2 points: The response accurately interprets at least one of the research findings to explain the idea that dogs' expression of person-oriented behaviors demonstrates stimulus discrimination in operant conditioning.
	Examples that earn 0 points: "The study shows that stimulus discrimination happens in the study." "The dogs are demonstrating stimulus discrimination in how they respond to the people in the study."	Examples that earn 1 point: "The study showed that dogs can tell the difference between the emotions their owners show." [No evidence from the study.] "The study shows that the dogs' responses to crying were significantly more than when the people were laughing or talking." [No explanation.] "The study shows the dogs responded to crying more than laughing or talking only to their owners, showing that they discriminate which type of emotion to respond to." [Inaccurate interpretation of results.] "This study showed that they did not discriminate between the owners and the strangers." [No evidence from the study.]	Examples that earn 2 points: "The study shows that the dogs showed person-oriented behaviors more toward people who were crying than people who were laughing or talking, which supports the idea that dogs have learned to discriminate." "The dogs responded more to crying than laughing, so they discriminated between the emotions." "The study showed the dogs offered more person-oriented behaviors to the crying person than the laughing person, which means they had stimulus discrimination about the emotions that were being expressed." "The research findings refute the main hypothesis, as the hypothesis was that a dog's reaction would differ based on how well they knew the person, and while they did slightly differ, they stayed relatively the same throughout each test."

		"The difference between 75% and 73% is not a lot, which refutes that the dogs demonstrate stimulus discrimination, as they did not respond differently to who was crying, the owner or the stranger."
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FRQ 2: Evidence-Based Question (EBQ)

7 Points

General Considerations

- Answers must be cogent enough for the meaning to come through. Spelling and grammatical mistakes do not reduce a score, but spelling must be close enough so that the reader is convinced of the word.
- A student can earn points only if the student is clearly addressing the topic of the source material in their response.
- The response must apply the concept to the prompt. A definition alone will not earn the point, but a clear definition can support the application.
- Examples provided in the Scoring Guidelines for each of the points are not to be considered exhaustive.
- Within a question part, a response will not be penalized for incorrect information unless it directly contradicts correct information that otherwise would have earned the point(s). For example, if a student applies a concept by defining it in two contradictory ways (such as applying proactive interference as both interference from older and newer information), the point is not earned.

Reporting Category	Scoring Criteria	
Part A Claim (0–1 points)	0 points Does not propose a claim that is relevant to the question	1 point Proposes a claim that is relevant to the question
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response describes the question without making a claim. - The response proposes a claim unrelated to the question. - The response proposes an oversimplified conclusion or evidence from a provided source.	Responses that earn this point: - The response proposes specific effects on the question. - The response proposes a claim that suggests a positive or negative effect on the question. - The response proposes recommendations for the application of the question.
	Examples that do not earn this point: "Studying the factors that influence helping behavior is important to social psychologists." "People should help others during an emergency." "Social conditions allow people to feel more likely to help because it makes themselves feel better."	Examples that earn this point: "People are most likely to help another person in an emergency due to social norms." "The fewer people that are present during an emergency, the more likely someone will help." "To receive help during an emergency, research shows that the number of people present makes a difference."
Additional Note: A claim that meets the criteria can be awarded the points regardless of whether the responses in Parts B and C successfully support the claim.		

Reporting Category	Scoring Criteria	
Part B (i) Evidence (0–1 points)	0 points Does not identify nor correctly cite one piece of specific evidence from one of the provided sources to support the claim. Any evidence provided is not relevant to the question.	1 point Uses one piece of correctly cited, specific, accurate, and relevant evidence from one of the provided sources to support the claim
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response identifies no evidence. - The evidence is not correctly cited. - The evidence is nonspecific or inaccurate. - The response provides evidence not relevant to the claim.	Responses that earn this point: The evidence is correctly cited and provides specific and accurate evidence relevant to the claim.
	Examples that do not earn this point: “Research shows helping people is a good thing to do. (Source 1).” [No evidence.] “According to Source 2, which was a meta-analysis of 53 articles, helping is more likely to occur when fewer people witnessing a situation are present. Groups with 3 or more members were least likely to intervene in a situation.” [Incorrect source cited.] “In one study, they found that 85% of participants who thought they were alone called for help.” [No citation.] “In one study, people helped others more. (Source 1).” [Nonspecific evidence.] “It’s good to avoid dangerous situations (Source 3).” [Evidence not relevant to the claim.]	Examples that earn this point: “In Source 3, researchers found that when people know each other they are more likely to help in an emergency situation.” “In Source 1, they found that 85% of the participants who thought they were alone in witnessing an emergency reported the emergency and called for help. However, 31% of those who thought 4 other bystanders were present reported the emergency and called for help.” “According to Source 2, at least one person intervened 90.9% of the time and the number of people was positively correlated with chances of intervention.”
	Additional Notes: - Responses that use a correct citation style other than the methods prescribed by the question can earn this point for citing the source. “Accurate evidence” refers to the accuracy of the general pattern of the evidence cited. Since citing specific numbers is not required to score the point, slight errors in reporting specific data can still score when the direction of the difference or relationship of the data cited is correct.	

Reporting Category	Scoring Criteria		
Part B (ii) Explanation and Application (Reasoning) (0–2 points)	0 points Does not explain the relationship between the evidence and the claim	1 point Explains the relationship between the evidence and the claim	2 points Applies a psychological perspective, theory, concept, or research finding to explain how the evidence supports the claim
	Decision Rules and Scoring Notes		
	Responses that earn 0 points: - The response does not accurately interpret the evidence. - The response identifies evidence without explanation of how it relates to the claim. - The response provides opinions with no reference to the sources provided.	Responses that earn 1 point: The response correctly interprets the evidence in supporting the claim, but does not apply a psychological perspective, theory, concept, or research finding.	Responses that earn 2 points: The response correctly interprets the evidence and correctly applies a psychological perspective, theory, concept, or research finding.
	Examples that earn 0 points: “The study showed that people say they want to help even when they don’t really do it.” “Researchers found that at least one person intervened in 90.9% of the situations.” “The evidence shows that helping is good to do.”	Examples that earn 1 point: “The study showed that the more people that are present in an emergency, the less likely an individual will help.” “It didn’t seem to matter if the people witnessing the event were friends or just acquaintances. If they knew each other they were more likely to help the person.”	Examples that earn 2 points: “Onlookers to an emergency that know each other might be more likely to help a victim because of in-group bias. They identify the other onlooker as part of their group and immediately trust them believing that they can work together to help someone.” “Their findings show that the more bystanders that are around during an emergency, the less likely someone will help. This is called the bystander effect.”
	Additional Notes: - The explanation and application points can be earned even if the response did not earn the point in B (i) due to incorrectly cited and/or non-specific evidence. - The psychological perspective, theory, concept, or research finding must be explicitly identified in the <i>AP Psychology Course and Exam Description</i> (2024). - The presence of a citation indicates the sentence or phrase is intended to be evidence. All text before the citation will be considered evidence. Text after a citation will be considered reasoning, unless accompanied by another citation. - Concepts used in the sources that are not eligible to be used for the application point are “confederate,” “independent variable,” “dependent variable,” “experiment,” and “meta-analysis.”		

Reporting Category	Scoring Criteria	
Part C (i) Evidence (0–1 points)	0 points Does not identify nor correctly cite a different piece of specific evidence from either of the other two provided sources to support the claim	1 point Uses a different piece of correctly cited, specific, accurate, and relevant evidence from either of the other two provided sources to support the claim
	Decision Rules and Scoring Notes	
	Responses that do not earn this point: - The response identifies no evidence. - The evidence is not correctly cited. - The evidence is nonspecific or inaccurate. - The evidence is from the same source as the one used in Part B. - The response provides evidence not relevant to the claim.	Responses that earn this point: The response provides specific, accurate, and correctly cited evidence relevant to the claim that is from a different source than the one used in Part B.
	Examples that do not earn this point: “Research shows helping people is a good thing to do (Source 1).” [No evidence.] “In Source 3, they found that 85% of participants who thought they were alone called for help.” [Incorrect citation.] “In one study, they found that 85% of participants who thought they were alone called for help.” [No citation.] “In one study, people helped others more (Source 1).” [Nonspecific evidence.] “In Source 1, they found that 85% of the participants who thought they were alone in witnessing an emergency reported the emergency and called for help.” [The response used the same source as used in Part B.] “It’s good to avoid dangerous situations (Source 2).” [Evidence not relevant to the claim.]	Examples that earn this point: “In Source 2 there is support for the research findings that the more bystanders present the more likely the person will give aid in an emergency.” “Source 3 found that people are more likely to help in a situation where there are other people around who they know as friends.” “According to Source 3, one additional person present in a situation increased the chances that someone would help.”
	Additional Notes: - Responses that use a correct citation style other than the methods prescribed by the question can earn this point for citing the source. “Accurate evidence” refers to the accuracy of the general pattern of the evidence cited. Since citing specific numbers is not required to score the point, slight errors in reporting specific data can still score when the direction of the difference or relationship of the data cited is correct.	

Reporting Category	Scoring Criteria		
Part C (ii) Explanation and Application (Reasoning) (0–2 points)	0 points Does not explain the relationship between the evidence and the claim	1 point Explains the relationship between the evidence and the claim	2 points Applies a different psychological perspective, theory, concept, or research finding to explain how the evidence supports the claim. The psychological perspective, theory, concept, or research finding is not the same one used in Part B (ii).
	Decision Rules and Scoring Notes		
	Responses that earn 0 points: - The response does not accurately interpret the evidence. - The response identifies evidence without explanation of how it relates to the claim. - The response provides opinions with no reference to the sources provided.	Responses that earn 1 point: - The response correctly interprets the evidence, but does not apply a psychological perspective, theory, concept, or research finding. - The response applies the same psychological perspective, theory, concept, or research finding that was used in Part B; however, the response explains the relationship between the evidence and the claim that does not rely on the application.	Responses that earn 2 points: The response correctly interprets the evidence and applies a psychological perspective, theory, concept, or research finding that is different from the one used in Part B.
	Examples that earn 0 points: “These findings suggest that emergencies do not matter when deciding to help.” “The evidence shows that people do help others in emergencies.” “I think it is important for people to help those who need help.”	Examples that earn 1 point: “These findings support the idea that when there are more people present in an emergency, the less likely a person will help.” “This pattern suggests people are not going to help if the other people present are unfamiliar.” “This finding suggests people are more willing to help in more dangerous situations.”	Examples that earn 2 points: “The finding that the more bystanders present, the more likely that they will help a person in need supports the idea of conformity. When one person makes a move to help, the others in the group feel that unspoken pressure to also join in and help.” “This evidence supports my claim because according to the sociocultural perspective, people are more likely to help when there are others around, especially in collectivist cultures.” “The finding that the more bystanders that are present the greater likelihood that help will be given contradicts the first source. This study showed that in a larger group of onlookers, the diffusion of responsibility doesn’t always happen.”
	Additional Notes: - The explanation and application points can be earned even if the response did not earn the point in C (i) due to incorrectly cited and/or non-specific evidence. - The explanation and application points can be earned if the response uses the same source in both Parts B and C, provided that the evidence used in Part B and Part C is different. - The psychological perspective, theory, concept, or research finding must be explicitly identified in the <i>AP Psychology Course and Exam Description (2024)</i> and is different from the perspective, theory, concept, or research finding used in Part B. - The presence of a citation indicates the sentence or phrase is intended to be evidence. All text prior to the citation will be considered evidence. Text after a citation will be considered reasoning, unless accompanied by another citation.		
	Concepts used in the sources that are not eligible to be used for the application point are “confederate,” “independent variable,” “dependent variable,” “experiment,” and “meta-analysis.”		

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

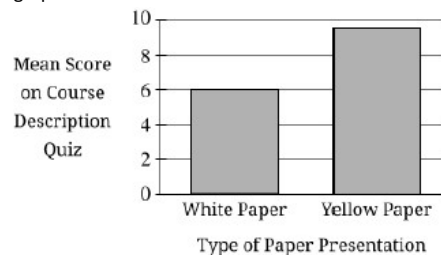
1. Answers must be cogent enough for the meaning to come through. Spelling and grammatical mistakes do not reduce a score, but spelling must be close enough so that the reader is convinced of the word.
2. A response can earn points only if the student clearly conveys what part of the question is being 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, but a clear definition can support the application.
4. Examples provided in the Scoring Guidelines for each of the points are not to be considered exhaustive.

5. Within a point, a response will not be penalized for incorrect information unless it *directly contradicts* correct information that would have otherwise earned a point. For example, if a response applies a concept in two contradictory ways (such as identifying both the independent and dependent variables as the independent variable or describing proactive interference as interference from both older and newer information), the point is not earned.

NOTE: In certain cases, a response will not score if it includes a correct answer amongst multiple incorrect answers related to the same general concept/theory (e.g., a response that describes the Big Five trait of conscientiousness as being diligent, trusting, highly emotional, outgoing, and intellectually curious).

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 Professor Gonzalez hypothesizes that students will remember more information from his detailed course description if it is printed on yellow paper than if it is printed on standard white paper. To test this hypothesis, he put the names of all his students into a bowl, then drew out names to assign them to two different groups. He gave one group of the students in his class a course description printed on white paper and gave the other group of students a course description printed on yellow paper. Students were instructed to thoroughly read the description outside of class in preparation for their next class. In the next class, he gave all students a ten-question quiz asking them about the information found on the course description. Professor Gonzalez then compared the number of correct answers for each group of students. The statistically significant results are depicted in the graph.

**State the operational definition of the dependent variable.****1 point**

Response must indicate that the dependent variable is operationally defined as the student's score on the course description quiz.

Acceptable explanations include:

- *The dependent variable is operationally defined as the score on the course description quiz.*
- *The dependent variable is the quiz score/grade on the quiz.*
- *The number of correct answers on the quiz is the dependent variable.*

Unacceptable explanations include:

- *The dependent variable is the type of paper used.*
- *The student's result on the quiz, and that's the dependent variable.*
- *The mean score on the quiz.*

Identify the experimental group.**1 point**

Response must indicate that the experimental group is the group with the course description printed on yellow paper.

Acceptable explanations include:

- *The experimental group is the people who have the yellow paper.*

Unacceptable explanations include:

Responses that state the yellow paper without indicating the people/group.

- *The experimental group is the yellow paper.*

Responses that state a control group instead of an experimental group.

- *Example: The control group is the group with the yellow paper.*

References to taking the quiz on yellow paper do not score.

In addition to the manipulation of an independent variable, identify the procedure Professor Gonzalez used to make this study a true experiment.**1 point**

Response must indicate that the procedure used to make this a true experiment is random assignment.

Acceptable explanations include:

- *Professor Gonzalez randomly assigned the participants to groups.*
- *Professor Gonzalez put people in groups randomly.*
- *Professor Gonzalez puts the names of all students into a bowl and pulls them out of a bowl.*

Unacceptable explanations include:

Responses that refer to random selection/sampling.

- *Professor Gonzalez used random selection to make this a true experiment.*

Explain how the data as presented in the graph do or do not support Professor Gonzalez's hypothesis. **1 point**

Response must indicate that data support the hypothesis because the experimental group (i.e., the yellow paper group) scored higher on the test.

Acceptable explanations include:

- *Professor Gonzalez thought that the experimental group would score higher, and they did, so the data support the hypothesis.*
- *The bar for the yellow paper group is higher than the bar for the white paper group, which supports the hypothesis.*
- *The control group/white paper group scored lower than the experimental group/yellow paper group, which is what Professor Gonzalez expected.*

Unacceptable explanations include:

Responses that do not provide an explanation for data supporting the hypothesis.

- *The data do not support the hypothesis.*
- *The data **support the hypothesis** (needs to make clear what the hypothesis was).*

Part B Explain how each of the following might relate to a student's performance on any quiz.

Context-dependent memory

1 point

Response must indicate that the student's memory retrieval is affected if some external element (e.g., room, sensory cues, equipment) that is present when the information was learned/encoded is present/the same or absent/not the same as when they take a quiz.

Acceptable explanations include:

- *If students learn the information in a particular classroom, they should take a quiz in that same classroom so they can use the surroundings to cue them for their memories.*
- *If a student chews gum while studying, they should chew gum while taking a quiz.*
- *If students sit in different seats taking the quiz than when they learned that information, they will do worse on the quiz.*

Unacceptable explanations include:

- *Students must consider context in order to remember things well enough for their quiz.*

Responses that refer only to mood-dependent or state-dependent memory.

- *If a student is happy while learning the information, they will do better if they are happy when they take the quiz.*

Yerkes-Dodson law

1 point

Response must indicate that students would perform best under a level of optimal arousal.

OR

Response must indicate that students would perform worse if they were under- or over-aroused.

Synonyms for "under-aroused" can include a reference to the amount (e.g., too little, under, insufficient).

Synonyms for "over-aroused" can include a reference to the amount (e.g., too much, overly, super).

Acceptable explanations include:

- *Students might be too aroused on the quiz, so they don't do well.*
- *Students may be at their optimal arousal, so they end up doing well on the quiz.*
- *Students are extremely disinterested/very bored in the class, so they don't do well on a quiz.*
- *Students who have a high level of arousal perform poorly on the quiz.*

Unacceptable explanations include:

Responses that refer to arousal without quantity (i.e., too much, too little).

- *Students may be relaxed, so they do well on the quiz.*
- *Students who are excited do poorly on the quiz.*

Low level of the Big Five trait of conscientiousness

1 point

Response must indicate that a low level of an enduring characteristic of conscientiousness would hinder student performance on the quiz (e.g., not being diligent, being less hardworking, being unorganized, being undisciplined, being irresponsible, being unprepared, etc.).

Acceptable explanations include:

- *Students who aren't hardworking may be hindered from doing well on the quiz.*

Unacceptable explanations include:

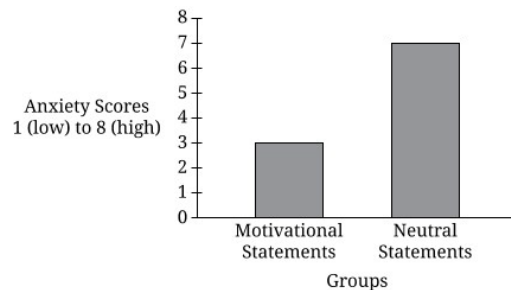
- *Students who are diligent do better on the quiz.*
- *Students who did not study hard did poorly on the quiz.*

Total for question 2 7 points

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

1. Answers must be cogent enough for the meaning to come through. Spelling and grammatical mistakes do not reduce a score, but spelling must be close enough so that the reader is convinced of the word.
2. A response 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, but a clear definition can support the application.
4. Examples provided in the Scoring Guidelines for each of the points are not to be considered exhaustive.
5. Within a point, a response will not be penalized for incorrect information unless it *directly contradicts* correct information that would have otherwise earned a point. For example, if a response applies a concept in two contradictory ways (such as identifying both the independent and dependent variables as the independent variable or describing proactive interference as interference from both older and newer information), the point is not earned.
NOTE: In certain cases, a response will not score if it includes a correct answer amongst multiple incorrect answers related to the same general concept/theory (e.g., a response that describes the Big Five trait of conscientiousness as being diligent, trusting, highly emotional, outgoing, and intellectually curious).
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 Dr. Dawson is a psychologist who believes that students who read motivational statements before a test will experience lower levels of anxiety as compared with students who read neutral statements. To examine this belief, he conducted a study. In the study, he randomly assigned half of the participants to read motivational statements and the other half to read neutral statements. Immediately after reading the statements, all of the students completed a survey about their current level of anxiety (1 = low; 8 = high) and then took the test. Dr. Dawson found statistically significant results that are depicted in the graph.

**State a valid operational definition of the dependent variable in this study.****1 point**

Response must indicate that anxiety is defined by their score on the scale/survey of their anxiety.

Acceptable explanations include:

- The dependent variable can be operationally defined as the score on the anxiety scale.
- The dependent variable is the score on the scale/survey.
- The dependent variable is the anxiety score from 1 to 8 (or 1 to 10).

Unacceptable explanations include:

Responses that do not mention the scale/survey.

- The operational definition is the level of anxiety.
- The operational definition is the anxiety score.

Identify the control group in this study.**1 point**

Response must indicate that the control group is the group that reads the neutral statements.

Acceptable explanations include:

- The control group is the group that reads neutral statements.
- The control group is the group that does not read positive statements.

Unacceptable explanations include:

Responses that indicate the experimental group.

- The control group is the group that reads the positive statements.
- The control group is the group that does not read the neutral statements.

Explain why the study would be considered an experiment.**1 point**

Response must indicate that the study is experimental because an independent variable is manipulated, and/or the participants were randomly assigned to the groups in the study.

Acceptable explanations include:

- The study is experimental because the students are randomly assigned to two conditions.
- The study is an experiment because a variable was manipulated.

Unacceptable explanations include:

The response indicates random selection/sampling.

- The study is experimental because they were randomly chosen to participate.
- The study is experimental because it tests a hypothesis.

Explain how the results of the study do or do not support Dr. Dawson's hypothesis.**1 point**

Response must indicate that Dr. Dawson's hypothesis is supported because either the motivational statement group had lower anxiety or the neutral statement group had higher anxiety.

Acceptable explanations include:

- *Dr. Dawson's hypothesis is supported because the motivational group had lower anxiety.*
- *Dr. Dawson's hypothesis is supported because the neutral statement group had higher anxiety.*

Unacceptable explanations include:

- *The results do not support Dr. Dawson's hypothesis.*
- *Dr. Dawson's hypothesis is supported because the motivational group had higher anxiety.*
- *Dr. Dawson's hypothesis is supported because the motivational group had low anxiety.*

Part B The test Dr. Dawson gave was a vocabulary test. Explain how the following terms might relate to the students who performed poorly on the test in this study.

External locus of control**1 point**

Response must indicate that students may perform poorly because they believe that factors outside of themselves (e.g., fate, luck, destiny, circumstances, other people) are responsible for their performance.

Acceptable explanations include:

- *Students who believe that fate determines their scores on the test won't perform as well.*
- *Students who believe that the unfairness of their teacher determines their score won't pass the test.*

Unacceptable explanations include:

Responses that do not include a cognitive component (e.g., perception, belief, thought) do not score.

- *Students did badly because the questions were too hard.*

Responses that refer to internal locus of control do not score.

- *Students believe they can control how they do on the test.*

Responses that refer to lack of control without mention of an outside factor do not score.

- *The students may think there is nothing they can do, so they perform worse on the test.*
- *The students did poorly on the quiz because they believed they lacked the ability to do well.*

Stage one of Selye's general adaptation syndrome**1 point**

Response must indicate that the students' sympathetic nervous system or some specific aspect of their sympathetic nervous system is activated which interferes with taking the test.

OR

Response indicates that the students' fight-or-flight mechanism is activated, which interferes with them taking the test.

NOTE: Students are not required to identify the name of the stage in order to earn the point.

Acceptable explanations include:

- *Students' fight or flight response might engage if they perceive the test as being a threat, so they might score lower than if they weren't stressed.*
- *Students' heart rates increased, and they performed poorly.*

Unacceptable explanations include:

Responses that do not indicate poor performance on the test do not score.

Responses that refer to being "alarmed," "stressed," or "aroused" but do not indicate a physiological element do not score.

- *The student was too alarmed or too aroused to perform well on the test.*
- *Students with anxiety might get sick because they've resisted stress so much.*

Crystallized intelligence**1 point**

Response must indicate that a lack of crystallized intelligence (e.g., accumulated knowledge, facts, general information, or vocabulary) could have hindered student performance on the test.

Acceptable explanations include:

- *Students who study the wrong vocabulary perform poorly.*
- *Students who do not have prior knowledge do poorly on the test.*

Unacceptable explanations include:

Responses that refer to general intelligence or fluid intelligence do not score.

- *Students may not be able to come up with abstract answers quickly, so they score low on the test.*

Responses that refer to memories unrelated to knowledge on the test do not score.

- *The memory of a past bad experience on a test makes them perform poorly on the vocabulary test.*

Total for question 2**7 points**

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

- Answers must be cogent enough for the meaning to come through. Spelling and grammatical mistakes do not reduce a score, but spelling must be close enough so that the reader is convinced of the word.
- A response 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.
- The response must apply the concept to the prompt. A definition alone will not earn the point, but a clear definition can support the application.
- Examples provided in the Scoring Guidelines for each of the points are not to be considered exhaustive.
- Within a point, a response will not be penalized for incorrect information unless it *directly contradicts* correct information that would have otherwise earned a point. For example, if a response applies a concept in two contradictory ways (such as identifying both the independent and dependent variables as the independent variable or describing proactive interference as interference from both older and newer information), the point is not earned.

NOTE: In certain cases, a response will not score if it includes a correct answer among multiple incorrect answers related to the same general concept/theory (e.g., a response that describes the Big Five trait of conscientiousness as being diligent, trusting, highly emotional, outgoing, and intellectually curious).

- 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.

Michael is the regional manager for a car company and needs to give a presentation to the president of the company about how different management styles might relate to the total number of sales of the company's new electric car. He hires an industrial/organizational psychologist to study three stores, each in a different city. Each store's manager has their own distinct management style:

- In Store A, the manager has a supportive style (open and warm).
- In Store B, the manager has a strict style (rigid and severe).
- In Store C, the manager, who is Michael's good friend, has a distant style (permissive and disengaged).

The number of electric cars sold at each store over a five-month period is shown in the table.

ELECTRIC CARS SOLD BY STORE			
Month	Store A (supportive style)	Store B (strict style)	Store C (distant style)
January	9	7	3
February	7	8	2
March	9	5	5
April	5	3	4

Explain why this study is not a true experiment.**1 point**

Response must indicate that this study is not an experiment because the researcher did NOT use random assignment.

OR

Response must indicate that the study did not include the manipulation of a variable.

Acceptable explanations include:

- The study is not a true experiment because the psychologist did not randomly assign participants to his groups.*
- The study used stores that already existed instead of manipulating an independent variable.*
- The independent variable was not manipulated by the researcher in this study.*

Unacceptable explanations include:

- Michael didn't use random selection, so his study is not an experiment.*

Identify the implied dependent variable for the study if the study had been a true experiment.**1 point**

Response must indicate that the number of cars sold would be the dependent variable.

Acceptable explanations include:

- The DV would be the number of cars bought by customers.*
- The DV is cars sold.*
- The DV is sales.*

Unacceptable explanations include:

- The DV would be the stores.*
- The DV is cars.*
- The DV is leadership style.*

Calculate the mean of Store B's sales.**1 point**

Response must indicate that the mean for Store B is 5.

Acceptable explanations include:

- The mean is five.*

Unacceptable explanations include:

Responses that indicate any other number than 5 or other representation of the number five that is not English/Arabic numerals.

- The mean is 12.*

Explain why the location of the store is a confounding variable in this study.**1 point**

Response must indicate that the location of the store is affecting the dependent variable in some specified way.

Acceptable explanations include:

- *Each management style was also in a different city, and people in each city may have different tastes in items and will purchase things differently.*
- *Cities with more people would most likely sell more units.*
- *Store A is in a higher-income area, so more cars are sold there.*

Unacceptable explanations include:

- *The location of the stores was confounding because some people couldn't go to all the stores.*
- *There may not be charging stations in some parts of the city where Store B is located.*

Explain how the halo effect could influence Michael's interpretation of the findings.**1 point**

Response must indicate that Michael's previous positive perception of Store C's manager will cause him to think more positively toward Store C's sales data than he otherwise would.

Acceptable explanations include:

- *Michael's good feeling about the manager at Store C will make him think the data for that store are wrong.*
- *Michael is good friends with the manager of Store C, so that causes him to make a positive evaluation of the store's performance.*

Unacceptable explanations include:

- *Michael views the manager positively, but the data lead him to think he may have chosen a bad manager.*

Explain why the hiring of an industrial/organizational psychologist was appropriate for this study.**1 point**

Response must indicate that I/O psychologists are interested in optimizing or improving performance **OR** solving problems in the workplace.

Acceptable explanations include:

- *This study is about which management style leads to the most sales, so an I/O psychologist would be best to help solve this problem.*
- *Michael wants to identify ways to improve managers' performance, and an I/O psychologist can help him with this goal.*

Unacceptable explanations include:

- *I/O psychologists study the workplace.*

Explain how Michael could use positive reinforcement to help him finish his presentation by the deadline.**1 point**

Response must indicate Michael could reward himself with something that he likes each time he works on his presentation to make it more likely that he will keep working.

Acceptable explanations include:

- *Michael treats himself to a small piece of candy after he works for 20 minutes to encourage himself to keep working.*

Unacceptable explanations include:

- *Michael is positive with himself about finishing the report on time.*
- *Michael treats himself to candy after working on his presentation.*
- *Michael eats a piece of candy and then begins to work on his presentation.*

Total for question 2 7 points