General Considerations

1. Answers must be presented in sentences, and sentences must be cogent enough for the student’s meaning to come through. Spelling and grammatical mistakes do not reduce a student’s score, but spelling must be close enough so that the reader is convinced of the word.
2. Within a point, a student will not be penalized for misinformation unless it directly contradicts correct information that would otherwise have scored the point.
3. A student can score points only if the student clearly conveys which part of the question is being answered. However, it is also possible to infer what part of the question is being answered if the response is consistent with the order of the question.
4. Rubric examples provided for each point are not exhaustive.

Part A: How might the following explain why people may easily accept the conclusion of the study?

**Point 1: Confirmation bias**

A student’s response must indicate that people may easily accept the conclusion of the study (sugar causes hyperactivity) if the conclusion supports their previously held beliefs (e.g., if they expect that sugar would cause hyperactivity, then they will be more likely to accept the conclusion).

*Examples:*

Score “People will pay more attention to the results of this study because it supports what they already believe.”

Do not score references to the researchers’ bias.

**Point 2: Availability heuristic**

A student’s response must illustrate that an example about sugar causing hyperactivity that readily comes to mind would lead to acceptance of the conclusion of the study (e.g., examples that “pop into mind” or are easily recalled because they are recent, vivid, or distinctive).

Note: Reference to the availability of information alone is not sufficient; a connection must be made to the immediacy of recalling it.

*Example:*

Do not score “They are more likely to believe it because it was on T.V.”

**Point 3: Misunderstanding of correlational studies**

A student’s response must indicate a failure to understand that correlation does not imply causation.
Part B: As a follow-up study, the researchers are designing an experiment to test whether sugar causes hyperactivity. For this experiment, students were asked to accomplish the following three tasks.

Point 4: State a possible hypothesis

The student’s hypothesis must include a statement of causal relationship between sugar (cause) and hyperactivity (effect). The student must indicate that something that is done with sugar (increased, decreased, given, eaten, etc.) has an effect on hyperactivity. Exception: When stating a null hypothesis, the student does not have to indicate that anything is done with sugar. The hypothesis can be in the form of a research question.

Examples:
Score “Sugar has no effect on hyperactivity.” As mentioned above, the student does not have to indicate that anything is done with sugar when stating a null hypothesis.

Do not score references to hyperactivity causing sugar consumption.

Point 5: Operationally define the dependent variable

The student must describe how a specific indicator for hyperactivity will be measured (e.g., number of times out of a chair, times switching task, self-report scale, or any quantifiable indicator).

Example:
Do not score general descriptions of hyperactivity, such as “activity,” “behavior,” or “movement” as a specific measurable indicator of hyperactivity.

Point 6: Describe how random assignment can be achieved

The student’s response must indicate that subjects have equal chance of being placed into groups or conditions.

Examples:
Score “equal chance” if stated or described by a specific procedure (e.g., drawing names from a hat, using a number generator/table, rolling dice) that places participants into groups by chance.

Do not score descriptions of random selection.
Part C: Graph a possible result. (2 points)

Point 7: Label the axes

To receive credit for this point, the graph must be correctly labeled with sugar on the X (horizontal) axis and hyperactivity (or a potential measurement of hyperactivity) on the Y (vertical) axis. Note: Students may label the X axis by using a legend.

Example:

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Hyperactivity

Sugar
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Point 8: Result on graph

To receive credit for this point, the bars on the graph must be relatively the same length.

Example:
Question 2

General Considerations

1. Answers must be presented in sentences, and sentences must be cogent enough for the student’s meaning to come through. Spelling and grammatical mistakes do not reduce a student’s score, but spelling must be close enough that the reader is convinced of the word.
2. Do not score students’ notes made on the question section of the booklet. Score only what has been written in the blanks provided in the booklet.
3. Definitions alone will not score, but they may be used to enhance the application.
4. Within a point, a student will not be penalized for misinformation unless it directly contradicts correct information that would otherwise have scored a point. A correct application with incorrect definition is not considered a direct contradiction and should score the point.
5. Rubric examples provided for each point are not to be considered exhaustive.
6. A student can score 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.
7. The appropriate context of each section (A, B, C) must be explicitly established.

Part A: Student’s response must apply to the decision.

Point 1: Prefrontal cortex

Student must specify an active cognitive process (e.g., decision making, executive functioning, planning, logical thinking, judgment, inhibition, evaluating, integrating, influence of personality, intentional retrieval).

Examples:

Score “Chandler and Alex might use their prefrontal cortex to evaluate the pros and cons of all the houses they look at.”

Do not score “decision” or “decide” or “making a decision” as a cognitive process, but each may establish the context of the application (“decision making” is sufficient as a cognitive process because it is actively deliberative, but it does not establish context by itself).

Do not score “thinking” or “memory” by itself.

Point 2: Algorithm

Student must specify a step-by-step procedure (e.g., formula, equation, set of rules, trying every option) for making the decision.

Examples:

Score “Chandler and Alex developed a formula to determine how much house they could afford.”

Do not score random or trial-and-error processes (non-systematic; e.g., “Chandler and Alex might have used an algorithm by driving around town until they find a house for sale”).
Question 2 (continued)

Part B: Student’s response must apply to the moving process.

Point 3: Social loafing

Student must link the presence of other(s) to low or diminished effort (group AND low or diminished effort are required).

Examples:

Score “Their friends all slacked off in the packing because they assumed someone else would do the work.”

Do not score examples of social inhibition (low effort due to anxiety, distraction, etc.).

Do not score division of labor resulting in less work per individual (e.g., “Because they had so many friends helping them pack, it was easier for everyone”).

Point 4: Alarm stage of the GAS

Student must refer to an accurate physiological stress response (e.g., sympathetic nervous system activation, arousal, accelerated heart rate, decreased digestion, fight-or-flight, illness).

Examples:

Score “Once they realized they had less time to move, they entered the alarm stage, and their adrenalin got released so they could work faster.”

Do not score stress, anxiety, worry, concern, panic, etc.

Do not score rushing, moving faster, etc.

Part C: Student’s response must include an example that illustrates the concept in the context of life in the new home or neighborhood.

Point 5: Proactive interference

Student’s example must show that specific old cognitions or behaviors inhibit learning or remembering new cognitions or behaviors; example may refer to either acquisition or recall.

Examples:

Score “Chandler and Alex have a hard time remembering their new address because they keep thinking of their old one.”

Do not score an example where new interferes with old (retroactive interference).
**Point 6: Habituation**

Student’s example must refer to a decrease in responsiveness (e.g., behaviors, attention, noticing) to a specific persistent or recurring stimulus.

*Examples:*

*Score* “Over time, Chandler and Alex stop being annoyed by the noise of the train that passes by every morning because they have become habituated to it.”

*Do not score* “getting used to…” by itself without a clear decline in responsiveness.

*Do not score* “adjust” or “adapt” (non-directional).

**Point 7: Normative social influence**

Student’s example must refer to a specific behavior (or attitude/opinion) that is in agreement with the group **AND** motivated by the desire to fit in or be liked.

*Examples:*

*Score* “After living in their new neighborhood for a while, Chandler and Alex see that their neighbors all have flags out, and because they want to be accepted, they put one out too.”

*Score* examples with either actual or perceived group expectations.

*Do not score* “conformity” by itself.

*Do not score* “norm” or “normal” without a stated desire to fit in or be liked.

*Do not score* compliance (obeying a direct request or command).

*Do not score* behavior influenced by the desire to be correct or accurate (informational social influence).