

## Checklist/Guidelines for Study Event Test-Writing

### Format/Style:

Specific formatting such as LaTeX is not required, but please pay attention to the following points that the test/answer key/answer sheet should have.

#### **Test:**

- Test has at minimum 80 independently-earnable points
- Each question should have its point value indicated clearly
- Test has at least 3 clearly-indicated tie-breaker questions (there is no restriction on where the tie-breaker questions should be located throughout the test)
- Questions have adequate spacing
  - Please be sure to have at least a line or two between each question for ease of reading
- Test has a mix of (1) multiple choices, (2) fill-ins, (3) short responses, in general (there may be exceptions based on the test)
- Consistent answer labeling (i.e. multiple choice answers should be labeled using **either** a, b, c, d, e, **OR** 1, 2, 3, 4, 5)
- Correct numbering of questions
- Consistent font use throughout the entire test
  - avoid **THIS**, **THIS**, *this*, *this*, *this* or the infamous *Comic Sans*
- Ensure that all pages are numbered on the top right corner
  - Ideal header: "Team Number \_\_\_\_ Page \_automated\_"
- No questions are cut off or span multiple pages. Page breaks should not divide questions.

#### **Answer Key:**

- Numbering of questions and lettering of answer choices **MUST** correspond to the actual test
- Do not have all different answers listed on the same line (it slows down grading!)
- Are there clear rubrics or grade breakdowns for short answer/open-ended questions?  
Answer key should have *little ambiguity* regarding how points are assigned, and be clear enough for volunteers with little prior knowledge.

Example of a bad answer key:

1) woodchuck 1b) chuck woods (c) if a woodchuck (1d) could chuck wood 2a) life  
2b) sally c) sells (d) seashells (e) by the seashores (f) 21 pounds 3) a 4) b (5) e (6) a  
7) true true false false true true T F

#### **Answer Sheet:**

- Does the answer sheet exist as a separate page? Students should not write their answers directly on the test!
- Does the answer sheet have a header for Team Name, Number, Student Names and final score?
- Does each section have a place to write point totals (or points deducted)?
- Does the answer sheet match the numbering system in the test and rubric? For multiple choice questions it's okay to leave a line for the student to write the corresponding letter (not necessary to make a Scantron type section).

In general, ask yourself: from first glance, is this a test you would take? You'd want the test to first please the eyes, beckon to the excitement of the high schoolers, and then let the high schoolers know the test is not an easy matter. The answer key should be as straightforward as possible.

Volunteers will help grade; the example of a bad answer key above should never be on any final key. The answer key should be clear enough that volunteer with no prior experience will know how to grade the test.

## Content:

### **Test:**

- Does the test have a mix of hard, medium, and easy questions?
  - Goal is to get a large separation of scores between all teams, rather than scores all clustered together!
  - Around 20-30% of the questions should be relatively easy questions.
  - 50% of the questions can be hard questions.
  - Students should NOT be finishing early! It is better to have more questions than less. However, tests should not be excessively long as to be unfeasible for any team to come close to finishing. Please use your own judgment!
  - A single “silly freebie” is permissible! :)
- Does the test encompass all or most of the topics in the rules manual?
  - Does the test have all tasks specified in the rules?
  - Are the question topics weighted according to the rules, if specified? (Ex. 33% of the questions must be on topic X, 33% of questions must be on topic Y etc.)
- Does the test have topics prohibited by the rules sheet?
  - Look over rules sheet to see if topics are specifically prohibited, either entirely, or at a certain competition level (Regional, State, National). We are following rules for the REGIONAL level, unless otherwise specified by your content director. The rulebook is also attached in this email!
  - Ensure all questions are related to the event and not off-topic.
- Are multiple choice questions phrased clearly?
  - Questions should have a clear, correct answer choice.
- Are open-ended/short answer questions specific enough?
  - Try not to have an excessive number of open-ended questions, as it may slow down grading.
- Please try to have at least one quantitative question in qualitative-oriented tests
  - Graphs and/or data interpretation are examples of such.
- If outside sources are used for graphs and data, ensure source is cited.
- Point specification: next to each question, its point value must be explicitly stated (i.e. [1 point], [2 points])
  - in general, short response has more point values (i.e. [5 points])
  - regardless of the difficulty, all same-type questions should be assigned the same point value (it is up to the test-taker to first strategically do all the ones they find easy)
- Diagrams: must be of the highest quality available, clear, readable, identifiable
- Tiebreaker question(s): These will only be graded **only in the event of a tie**. This should be made clear to competitors on the test. Common approaches to tiebreaker questions include:
  - Hard or tricky problem
  - Open-ended answer, judged based on accuracy/relevancy/completeness
  - Information dump/list

**Answer Key:**

- Avoid answers that require students to put down multiple choices (Ex. The correct answer requires writing both “A” and “C”)
  - Have an answer choice for the combination of answers to allow. This allows for faster grading and is easier regarding assigning point values.
  - For example, use “Both A and C” or “All of the above” as answer choices.
- Fill-in-the-blanks: specify variations of answers if applicable, include the DO NOT ACCEPT answers (answers that will be ruthlessly marked wrong with no exceptions)
- Short-answers: they are ideally graded by the event supervisors, but make sure there is a point breakdown checklist (to avoid as much arbitrary grading as possible)
  - For example, if the question is a 5-point question, assign certain detail or requirement to each point
  - Please remember that volunteers will be helping to grade the tests -- any short-answer should have a breakdown clear enough that any volunteer should be able to assign points, or the question should be designated for grading by the supervisors exclusively!