

Open Book Climate Science Exam Grading Areas (100 points per question)

Category	Description	Points
Scientific Accuracy	Accurate, relevant, and current scientific facts and explanations	30
Depth of Understanding	Shows deep comprehension, insight, and explanation beyond surface-level detail	25
Use of Evidence	Supports arguments with appropriate data, case studies, or real-world examples	20
Organization & Clarity	Logical structure; clear, coherent arguments with proper flow	15
Mechanics & Grammar	Proper grammar, punctuation, and sentence structure	5
Citation/Sources	Proper attribution of sources	5

Scoring Guidelines (per question)

Category	Excellent (Full marks)	Good (Mid marks)	Needs Improvement (Low marks)
Scientific Accuracy	30 pts: All facts accurate	20 pts: Mostly accurate	15 – 0 pts: Major factual errors
Depth of Understanding	25 pts: Insightful & deep	15 pts: Some insight	10 - 0 pts: Surface level / unclear
Use of Evidence	20 pts: Strong examples	10pts: Some examples	5 to 0 pts: Lacks support
Organization & Clarity	15 pts: Clear, logical	10 pts: Somewhat clear	5 to 0 pts: Disorganized
Mechanics & Grammar	5 pts: Flawless	3 pts: Few errors	1 to 0 pts: Distracting errors
Citation/Sources	5 pts: Used appropriately	3 pts: Not well used	0 pts: Not included

Additional parameters:

1. Scientific Accuracy

- Are the facts correct?
- Does the candidate use appropriate climate science terminology?
- Are cause-effect relationships explained properly?

2. Depth of Understanding

- Does the candidate show insight into the topic?
- Are concepts explained beyond surface-level understanding?
- Are examples used appropriately?

3. Evidence / Examples

- Are claims supported with data, case studies, or real-world examples?

- Are examples relevant and well-integrated?
- 4. **Organization and Clarity**
 - Is the answer structured logically (e.g. introduction, body, conclusion)?
 - Are transitions clear and does the answer stay on topic?
- 5. **Grammar/Language**
 - Is the answer clearly written with minimal grammatical errors?
 - Is scientific language used correctly?

Section 2: Climate Report

Candidates apply science to evaluate a real-world scenario. Candidates are given two scenarios to choose from or may submit their own report as long as it meets the report guidelines. [Here is a link](#) to the CCSP report guidelines. Scores in each area are averaged for a final score.

<u>Criteria</u>	<u>Points</u>
Application of scientific concepts	100
Critical thinking and evaluation	100
Use of evidence or case-specific details	100
Clear argument and organization	100

Rubric:

Category	Excellent (Full marks)	Good (Mid marks)	Needs Improvement (Low marks)
Scientific Concepts	100 pts: All facts accurate	90 – 70 pts: Mostly accurate	69 – 0 pts: Major factual errors
Critical Thinking	100 pts: Insightful & deep	90 – 70 pts: Some insight	69 – 0 pts: Surface level / unclear
Use of Evidence	100 pts: Strong examples	90 – 70 pts: Some examples	69 – 0 pts: Lacks support
Organization	100 pts: Clear, logical	90 – 70 pts: Somewhat clear	69 – 0 pts: Disorganized

Section 3: Oral Exam (1 hour)

Applicants achieving a passing grade on the combined written exam and technical report are qualified for an oral exam. The oral exam will be conducted virtually and a panel of at least 3 Board members is required. The exam will include the following:

- Introduction of candidate - what have they been doing (10 minutes)
- Discussion on exam questions where candidate scored below a 70
- Discussion of climate science report
- Ethics Question

Rubric

Following each examination the participating members vote individually on their recommendation for each candidate. The ballot poses a series of questions, each of which require the grader to assign a numerical value from 1 to 10.

Certification will be recommended if a majority of graders have scored the candidate at or above 7 points in each of the categories.

Qualitative Scoring Guidance for Each Question:

- | | |
|-----|---|
| 1–3 | Poor; unsatisfactory performance, large weaknesses in most elements with few or no strengths |
| 4–6 | Substandard. Unsatisfactory performance, several weaknesses on key concepts. Some strengths but may be limited in scope |
| 7 | Fair; satisfactory performance, minimal weaknesses but minimal strengths |
| 8–9 | Very Good; satisfactory performance, several strengths with few weaknesses |
| 10 | Excellent; stellar performance, numerous strengths, no significant weaknesses |

KNOWLEDGE

Did the candidate demonstrate the level of climatological knowledge and professional competence expected of a CCSP including core and specialty knowledge?

Consider the following factors in your evaluation:

- *Discussion related to climatological knowledge questions on the written exam*
- *Discussion related to the climate science report*
- *Answers to questions probing candidate's core knowledge and professed area(s) of expertise/practice*

CHARACTER/ETHICS

Did the candidate demonstrate the professional maturity, critical thinking, and understanding of professional ethics expected of CCSPs?

Consider the following factors in your evaluation:

- *Answers to hypothetical scenarios posed by the moderator relevant to ethics/professional practice*
- *Discussion related to any of the ethics/professional practice questions on the written exam*
- *Discussion related to candidate's knowledge of relevant AMS policy/professional practice questions*

PROFESSIONAL MATURITY/COMMUNICATION SKILLS

Did the candidate demonstrate the sound professional maturity and the good oral communication skills (i.e., poise, clarity, and overall demeanor) expected of a CCSP?

Consider the following factors in your evaluation:

- *Candidate 10-minute presentation*
- *Overall oral communication skills demonstrated throughout discussions*
- *Discussion related to historical record and plan for continuing professional development*
- *Apparent level of preparation for oral exam*
- *Candidate's questions and feedback to the Board*