



INFORMATION BOOKLET FOR ADMINISTERING AND SCORING REGENTS EXAMINATIONS IN THE SCIENCES

Living Environment
Physical Setting/Chemistry
Physical Setting/Earth Science
Physical Setting/Physics

GENERAL INFORMATION

The general procedures to be followed in administering Regents Examinations are provided in the publications *Regents Examinations*, *Regents Competency Tests*, and *Proficiency Examinations: School Administrator's Manual, 2001 Edition*, and *Directions for Administering and Scoring Regents Examinations*. These publications may be accessed on the Department's web site at: <http://www.emsc.nysed.gov/osa/hsinfogen/hsinfogenarch/sam2001.pdf> and at <http://www.emsc.nysed.gov/osa/hsgen.html>, respectively.

If you have questions about **general test administration procedures** for Regents Examinations in the sciences for which you are unable to find answers in this information booklet or on our web site, you may send an inquiry by e-mail to emscassessinfo@mail.nysed.gov or you may call the Office of State Assessment at 518-474-8220 or 518-474-5099.

If you have questions about **rating** Regents Examinations in the sciences for which you are unable to find answers in this information booklet or on our web site, you may send an inquiry by e-mail to emsccurric@mail.nysed.gov or you may call the Office of Curriculum, Instruction and Instructional Technology at 518-474-5922.

All school personnel who will be administering and scoring these examinations must have a copy of this information booklet. This information booklet may be photocopied.

DESCRIPTIONS OF THE TESTS

Living Environment

The Living Environment Examination is based on the publication *The Living Environment Core Curriculum*. The following table shows the types of questions and the raw-score credit allotment for each part of the examination:

Part	Question Type	Number of Questions	Total Number of Raw-Score Credits
A	multiple choice	30	30
B-1	multiple choice	4-12	25
B-2	multiple choice and open ended	4-16	
C	open ended	5-10	17
D	multiple choice and open ended	5-13	13
		TOTAL	85

The total-test raw score will be converted to a scaled score using a conversion chart provided for each administration on the Department's web site: <http://www.emsc.nysed.gov/osa>.

Students are to record their answers to Part A and Part B–1 on the detachable answer sheet printed as the last page of the examination booklet. For each question in Part A and Part B–1, students are to choose the word or expression that, of those given, best completes the statement or answers the question and write its number on the appropriate line on the answer sheet. Students are to record their responses to all questions in Part B–2, Part C and Part D in the test booklet. Students may use scrap paper to work out their answers to the questions, but they must record all answers on the answer sheet and in the examination booklet. Each student who wishes to have one must have a four-function or scientific calculator available for his or her exclusive use during the entire scheduled period for this examination. Students are not permitted to use graphing calculators or to have access to any science reference materials such as class notes or written reports of any of their laboratory activities when taking this examination.

Physical Setting/Chemistry

The Physical Setting/Chemistry Examination is based on the publication *Physical Setting/Chemistry Core Curriculum*. The following table shows the types of questions and the raw-score credit allotment for each part of the examination:

Part	Question Type	Number of Questions	Total Number of Raw-Score Credits
A	multiple choice	30-35	30-35
B–1	multiple choice	15-20	30-35
B–2	open ended	7-15	
C	open ended	15-20	15-22
		TOTAL	85

For the written test, students are to record their answers to the multiple-choice questions in Part A and Part B–1 on the detachable answer sheet printed as the last page of the test booklet. For each multiple-choice question, they are to choose the word or expression that, of those given, best completes the statement or answers the question and write its number on the appropriate line on the answer sheet. They are to write their responses to the open-ended questions in Part B–2 and Part C in the separate answer booklet. (The answer booklets are printed on ivory paper and are shrink-wrapped in the same package with the examination booklets.) Before beginning the examination, students should detach the answer sheet from the examination booklet.

Students may use scrap paper to work out the answers to the questions, but they must record all answers on the separate answer sheet and in the answer booklet.

Each student must be provided with a copy of the *2002 Reference Tables for Physical Setting/Chemistry* and must have a four-function or scientific calculator available for his or her exclusive use during the entire scheduled time for the examination. Students are not permitted to use graphing calculators when taking this examination.

Physical Setting/Earth Science

The Physical Setting/Earth Science Examination, based on the publication *Physical Setting/Earth Science Core Curriculum*, consists of two components: a performance test and a written test.

Performance Test: The 2001 edition of the Earth Science Performance Test is to be administered during the last two weeks of the course, but no later than the day before the administration of the written test. Specific directions for administering and scoring the performance test are provided in the *Directions for Administering and Scoring*, printed on blue paper, and in the Rating Guide, printed on yellow paper. Teachers are strongly encouraged to review the performance test before administering or rating the test. The student's raw score on the performance test is to be entered in the box both on the student's performance test answer booklet and on the student's answer booklet for the written test. The maximum total raw score for the performance test is 23 points.

A student who took the performance test as part of a prior administration of a Regents Examination in Earth Science may use the performance test score for that administration, or the student may take the performance test again. A student who has taken the performance test more than once as part of prior administrations of this examination may use only the most recent performance test score. If a student who has taken the performance test as part of a prior administration of this examination wishes to retake the performance test, the student must be given the opportunity to do so. However, if the student chooses to take the performance test again, then the more recent score must be used in determining the student's final score.

Written Test: The following table shows the types of questions and the raw-score credit allotment for each part of the written test:

Part	Question Type	Number of Questions	Total Number of Raw-Score Credits
A	multiple choice	35	35
B-1	multiple choice	14-18	30
B-2	open ended	7-15	
C	open ended	10-20	20
		TOTAL	85

For the written test, students are to record their answers to the multiple-choice questions in Part A and Part B-1 on the detachable answer sheet printed as the last page of the test booklet. For each multiple-choice question, students are to choose the word or expression that, of those given, best completes the statement or answers the question and write its number on the appropriate line on the answer sheet. Students are to record their responses to all open-ended questions in Part B-2 and Part C in the separate answer booklet. (The answer booklets are printed on ivory paper and are shrink-wrapped in the same package with the examination booklets.) Before beginning the examination, students should detach the answer sheet from the examination booklet.

Students may use scrap paper to work out the answers to the questions, but they must record all answers on the separate answer sheet and in the answer booklet. Each student must be provided with a copy of the 2001 edition of the *Earth Science Reference Tables* and must have a four-function or scientific calculator for his or her exclusive use during the entire scheduled time for this examination. Students are not permitted to use graphing calculators when taking this examination.

Physical Setting/Physics

The Physical Setting/Physics Examination is based on the publication *Physical Setting/Physics Core Curriculum*. The following table shows the types of questions and the raw-score credit allotment for each part of the examination:

Part	Question Type	Number of Questions	Total Number of Raw-Score Credits
A	multiple choice	35	35
B-1	multiple choice	8-15	30
B-2	open ended and multiple choice	10-18	
C	open ended	9-17	20
		TOTAL	85

The total raw score will be converted to a scaled score using a conversion chart provided for each administration on the Department's web site: <http://www.emsc.nysed.gov/osa>.

For the written test, students are to record their answers to the multiple-choice questions in Part A and Part B-1 on the detachable answer sheet printed as the last page of the test booklet. For each multiple-choice question, students are to choose the word or expression that, of those given, best completes the statement or answers the question and write its number on the appropriate line on the answer sheet. Students are to record responses to all questions in Part B-2 and Part C in the answer booklet printed in the center of the examination booklet. Before beginning the examination, students should detach the answer sheet and the answer booklet from the examination booklet.

Students may use scrap paper to work out the answers to the questions, but they must record all answers on the separate answer sheet and in the answer booklet.

Each student must be provided with a copy of the 2002 edition of the *Reference Tables for Physical Setting/Physics*. Each student must also have a scientific or graphing calculator, protractor, and centimeter ruler for his or her exclusive use during the entire scheduled time for this examination.

ADMINISTERING THE EXAMINATIONS

Students are to answer all questions in all parts of the Regents Examinations in the sciences. No choice is permitted. All work should be written in ink except for graphs and drawings, which should be done in pencil.

Four-function or scientific calculators must be available to all students taking a Regents Examination in Living Environment, Physical Setting/Chemistry, or Physical Setting/Earth Science. Students are not permitted to use graphing calculators when taking any of these three Regents Examinations. A scientific or graphing calculator must be available to all students taking the Physical Setting/Physics Examination. The memory of any calculator with programming capability must be cleared or reset when students enter the testing room. The use of operating manuals, instruction or formula cards, or other information concerning the operation of calculators is not permitted. Calculators that can be used to communicate with other calculators are not permitted.

Students are to be allowed a maximum of three hours to complete each examination.

SCORING THE EXAMINATIONS

Each examination must be scored by a committee of science teachers. It is strongly recommended that the committee scoring each of the science Regents Examinations be composed of teachers of that area of science. Each committee must consist of at least two teachers. Each of these teachers should be responsible for scoring a selected number of the open-ended questions. No one teacher is to score all the open-ended questions on a student's answer paper. The more teachers serving on a committee, the fewer questions each teacher scores. This process yields more consistent and reliable scores and allows scoring to proceed more quickly.

When student papers are scored in cooperation with another school, answer papers may be transported to the cooperating school. It remains the principal's responsibility to ensure the security of such papers while they are out of the building.

Each examination will be accompanied by a scoring key and rating guide that includes the answers to the multiple-choice questions and rubrics for scoring each of the open-ended questions. Teachers should become thoroughly familiar with the rubrics for the questions they are scoring before rating students' responses.

Students' responses must be scored strictly according to the scoring key and rating guide. No credit should be granted for a multiple-choice question if a student gives more than one answer. If a student gives more than one answer for an open-ended question, only the first answer should be rated. For open-ended questions, credit may be allowed for responses other than those given in the scoring key and rating guide if the response is a scientifically accurate answer to the question and demonstrates adequate knowledge as indicated by the examples in the rating guide. Fractional credit is not allowed. Only whole-number credit may be given to a response. Units need not be given when the wording of the question allows such omissions.

For the Regents Examinations in the sciences, the answer sheets provide appropriate boxes for recording the scores for each part of the written test, the total raw score, and the final (scaled) score. The answer sheet for the Physical Setting/Earth Science Examination also includes a box for recording the performance test score.

DETERMINING THE STUDENT'S FINAL EXAMINATION SCORE

For the Regents Examinations in the sciences, a chart for converting the student's raw score(s) to a scaled score is provided for each administration on the Department's web site: <http://www.emsc.nysed.gov/osa>. The scaled score is the student's final examination score. Because the scaled scores corresponding to raw scores in the conversion chart change from one examination administration to another, it is *crucial* that, for each administration, you use *only* the conversion chart provided for that administration to determine the student's final score. Take extreme care in recording the student's score on each part of each examination, adding these scores to determine the total written-test raw score, and using the conversion chart to obtain the correct scaled score.

Appendixes I through IV include more specific information about determining the student's final examination score for the Regents Examinations in the sciences.

Appendix I

Determining the Student's Final Examination Score for the Living Environment Examination

A box like the one shown to the right will appear on the student's answer sheet for the Living Environment Examination.

Record the student's scores for Part A, Part B-1, Part B-2, Part C and Part D on the designated lines. Add the five scores for these parts and enter the total in the box labeled "Total Raw Score." The maximum total raw score for the test is 85.

To determine the student's final examination score, use the chart provided for each administration on the Department's web site: <http://www.emsc.nysed.gov/osa>. Locate the student's total-test raw score in the column labeled "Raw Score" and then locate the scaled score that corresponds to that raw score. The scaled score is the student's final examination score. Record this score in the box labeled "Final Score."

Part	Maximum Score	Student's Score
A	30	
B-1		
B-2		
C	17	
D	13	
Total Raw Score (maximum Raw Score: 85)		<input style="width: 50px; height: 20px;" type="text"/>
Final Score (from conversion chart)		<input style="width: 50px; height: 20px;" type="text"/>
Raters' Initials		
Rater 1 Rater 2		

The format of the chart is illustrated below. The chart provided on the Department's web site for each administration of this examination will include scores ranging from 0 to 100 within the cells of the chart. It is *crucial* that, for each administration, you use *only* the conversion chart provided for that specific administration to determine the student's final examination score.

**Regents Examination in Living Environment
Chart for Converting Total Test Raw Scores to
Final Examination Scores (Scaled Scores)**

Raw Score	Scaled Score	Raw Score	Scaled Score	Raw Score	Scaled Score
85	100	56		27	
84		55		26	
83		54		25	
82		53		24	
81		52		23	
80		51		22	
79		50		21	
78		49		20	
77		48		19	
76		47		18	
75		46		17	
74		45		16	
73		44		15	
72		43		14	
71		42		13	
70		41		12	
69		40		11	
68		39		10	
67		38		9	
66		37		8	
65		36		7	
64		35		6	
63		34		5	
62		33		4	
61		32		3	
60		31		2	
59		30		1	
58		29		0	
57		28			

Appendix II

Determining the Student's Final Examination Score for the Physical Setting/Chemistry Examination

A box like the one shown to the right will appear on the student's answer booklet for the Physical Setting/Chemistry Examination.

Record the student's scores for Part A, Part B-1, Part B-2 and Part C on the designated lines. Add the four scores for these parts and enter the total in the box labeled "Total Written Test Score." The maximum total raw score for the written test is 85.

To determine the student's final examination score, use the chart provided for each administration on the Department's web site: <http://www.emsc.nysed.gov/osa>. Locate the student's total-test raw score in the column labeled "Raw Score" and then locate the scaled score that corresponds to that raw score. The scaled score is the student's final examination score. Record this score in the box labeled "Final Score."

Part	Maximum Score	Student's Score
A		
B-1		
B-2		
C		
Total Written Test Score (maximum Raw Score: 85)		<input style="width: 50px; height: 20px;" type="text"/>
Final Score (from conversion chart)		<input style="width: 50px; height: 20px;" type="text"/>
Raters' Initials		
Rater 1 Rater 2		

The format of the chart is illustrated below. The chart provided on the Department's web site for each administration of this examination will include scores ranging from 0 to 100 within the cells of the chart. It is *crucial* that, for each administration, you use *only* the conversion chart provided for that specific administration to determine the student's final examination score.

Regents Examination in Physical Setting/Chemistry
Chart for Converting Total Test Raw Scores to
Final Examination Scores (Scaled Score)

Raw Score	Scaled Score						
85	100	63		41		19	
84		62		40		18	
83		61		39		17	
82		60		38		16	
81		59		37		15	
80		58		36		14	
79		57		35		13	
78		56		34		12	
77		55		33		11	
76		54		32		10	
75		53		31		9	
74		52		30		8	
73		51		29		7	
72		50		28		6	
71		49		27		5	
70		48		26		4	
69		47		25		3	
68		46		24		2	
67		45		23		1	
66		44		22		0	0
65		43		21			
64		42		20			

Appendix III

Determining the Student’s Final Examination Score for the Physical Setting/Earth Science Examination

A box like the one shown to the right will appear on the student’s answer booklet for the Physical Setting/Earth Science Examination. The maximum score for Parts B-1 and Part B-2 may change from one examination to another. However, the maximum score for the entire Part B will be 30 on all examinations.

Record the student’s performance-test score in the designated box in the top left corner. The maximum raw score for the performance test is 23.

Record the student’s scores for Part A, Part B–1, Part B–2 and Part C on the designated lines. Add the four scores for these parts and enter the total in the box labeled “Total Written Test Score.” The maximum total raw score for the written test is 85.

To determine the student’s final examination score, use the chart provided for each administration on the Department’s web site: <http://www.emsc.nysed.gov/osa>.

Locate the student’s performance test score across the top of the chart and the student’s total written test score down the side of the chart. The point where those two scores intersect is the student’s final examination score. Record this score in the box labeled “Final Score.”

The format of the chart is illustrated on the next page. (Only the first half of the chart has been reproduced in this publication.) The chart provided on the Department’s web site for each administration of this examination will include scores ranging from 0 to 100 within the cells of the chart. It is *crucial* that, for each administration, you use *only* the conversion chart provided for that specific administration to determine the student’s final examination score.

<input style="width: 40px; height: 20px;" type="text"/>	Performance Test Score (Maximum Score: 23)	

Part	Maximum Score	Student’s Score
A	35	
B–1		
B–2		
C	20	
Total Written Test Score (Maximum Raw Score: 85)		<input style="width: 40px; height: 20px;" type="text"/>
Final Score (from conversion chart)		<input style="width: 40px; height: 20px;" type="text"/>
Raters’ Initials		
Rater 1	Rater 2

**Regents Examination in Physical Setting/Earth Science
 Chart for Converting Total Test Raw Scores to
 Final Examination Scores (Scaled Scores)**

		Total Performance Test Score																							
		23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Total Written Test Score	85	100																							
	84																								
	83																								
	82																								
	81																								
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	45																								
	44																								

This abbreviated chart is for illustration purposes only. The chart provided on the Department's web site for each administration of this examination will be two pages long and will provide score conversions for the entire range of total written test scores (0–85).

Appendix IV

Determining the Student's Final Examination Score for the Physical Setting/Physics Examination

A box like the one shown to the right will appear on the student's answer booklet for the Physical Setting/Physics Examination. The maximum score for Parts B-1 and B-2 may change from one examination to another. However, the maximum score for the entire Part B will be 30 on all examinations.

Record the student's scores for Part A, Part B-1, Part B-2 and Part C on the designated lines. Add the four scores for these parts and enter the total in the box labeled "Total Written Test Score." The maximum total raw score for the test is 85.

To determine the student's final examination score, use the chart provided for each administration on the Department's web site: <http://www.emsc.nysed.gov/osa>. Locate the student's total-test raw score in the column labeled "Raw Score" and then locate the scaled score that corresponds to that raw score. The scaled score is the student's final examination score. Record this score in the box labeled "Final Score."

Part	Maximum Score	Student's Score
A	35	
B-1		
B-2		
C	20	
Total Written Test Score (Maximum Raw Score: 85)		<input style="width: 40px; height: 20px;" type="text"/>
Final Score (From Conversion Chart)		<input style="width: 40px; height: 20px;" type="text"/>
Raters' Initials		
Rater 1 Rater 2		

The format of the chart is illustrated below. The chart provided on the Department's web site for each administration of this examination will include scores ranging from 0 to 100 within the cells of the chart. It is *crucial* that, for each administration, you use *only* the conversion chart provided for that specific administration to determine the student's final examination score.

**Regents Examination in Physical Setting/Physics
Chart for Converting Total Test Raw Scores to
Final Examination Scores (Scaled Scores)**

Raw Score	Scaled Score						
85	100	63		41		19	
84		62		40		18	
83		61		39		17	
82		60		38		16	
81		59		37		15	
80		58		36		14	
79		57		35		13	
78		56		34		12	
77		55		33		11	
76		54		32		10	
75		53		31		9	
74		52		30		8	
73		51		29		7	
72		50		28		6	
71		49		27		5	
70		48		26		4	
69		47		25		3	
68		46		24		2	
67		45		23		1	
66		44		22		0	0
65		43		21			
64		42		20			

