



The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Albany, New York 12234

INFORMATION BOOKLET FOR 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 *Directions for Administering Regents Examinations* (DET 541), and *Regents Examinations, Regents Competency Tests, and Proficiency Examinations: School Administrator's Manual, 2001 Edition*. Copies of the *Directions* are shipped to schools prior to each Regents Examination period and may also be accessed on the Department's web site at: <http://www.emsc.nysed.gov/osa/hsgen.html>. The *School Administrator's Manual* may be accessed on the Department's web site at: <http://www.emsc.nysed.gov/osa/hsinfo/gen/hsinfo/genarch/sam2001.pdf>.

If you have questions about **general test administration procedures** for Regents Examinations in the sciences for which you are unable to find answers in either of these documents, 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 518-474-5902.

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 emscurric@mail.nysed.gov or you may call the Office of Curriculum, Instruction and Instructional Technology at 518-474-5922.

School administrators should print or photocopy this information booklet and distribute copies to all school personnel who will be scoring these examinations.

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	4-15	25
B-2	multiple choice and open ended	4-20	
C	open ended	5-15	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 at: <http://www.emsc.nysed.gov/osa>.

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

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 at: <http://www.emsc.nysed.gov/osa>.

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*, printed on blue paper, and in the rating guide, printed on yellow paper. Teachers are strongly encouraged to review these directions before administering or rating the performance 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.

The school must give students who have already taken the Earth Science Performance Test as part of a prior administration of the Regents Examination in Physical Setting/Earth Science and who are retaking this examination the choice whether or not to retake the performance test. The student may choose not to take the performance test again, instead applying the score earned on the most recent performance test taken to the score earned on the new written test to determine his or her final examination score. If the student elects to take the performance test again, the new performance test score must be used in conjunction with the score earned on the written test to determine the final score. A performance test score, however, may never be applied retroactively to a written test score earned in an earlier administration.

Written Test: The table on the next page 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

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 at: <http://www.emsc.nysed.gov/osa>.

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

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 consistent and reliable scores and allows scoring to proceed 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.

Scoring of Multiple-Choice Questions

Multiple-choice questions may be either hand scored or machine scored. When hand scoring, indicate by means of a check mark each incorrect or omitted answer to multiple-choice questions on the designated answer sheet. Do not place a check mark beside a correct answer. Use only red ink or red pencil. In the appropriate space on the student's answer sheet, record the number of multiple-choice questions the student answered correctly.

Machine-scorable answer sheets must be provided and scored by the school. Answer sheets supplied by the school must provide the same number of response options as are given in the examination questions, and the choices must be labeled 1, 2, 3, 4, not A, B, C, D. Instructions for using the answer sheets must be developed locally and provided to the proctors administering the examinations.

Before answer sheets can be machine scored, several samples must be both machine and manually scored to ensure the accuracy of the machine-scoring process. All discrepancies must be rectified before student answer sheets are machine scored. When machine scoring is completed, a sample of the scored answer sheets must be scored manually to verify the accuracy of the machine-scoring process.

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 at: <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.

For the Regents Examinations in the sciences, all student answer papers that receive a scaled score of 60 through 64 must be scored a second time. The principal may elect to have the scoring committee also score a second time those student answer papers that received a scaled score of 50 through 55, or all student answer papers. For the second scoring, a different committee of teachers may score the student's paper or the original committee may score the paper. However, *no* teacher may score the same open-ended questions that he or she scored in the first rating of the paper. It is the responsibility of the school principal to ensure that the student's final examination score is based on a fair, accurate, and reliable scoring of the student's answer paper.

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

When the teacher scoring committee completes the scoring process, test scores must be considered final and must be entered onto students' permanent records.

Principals and other administrative staff in a school or district do not have the authority to set aside the scores arrived at by the teacher scoring committee and rescore student examination papers or to change

any scores assigned through the procedures described in this manual and in the scoring materials provided by the Department. Any principal or administrator found to have done so, except in the circumstances described below, will be in violation of Department policy regarding the scoring of State examinations. Teachers and administrators who violate Department policy with respect to scoring State examinations may be subject to disciplinary action in accordance with Sections 3020 and 3020-a of Education Law or to action against their certification pursuant to Part 83 of the Regulations of the Commissioner of Education.

On rare occasions, an administrator may learn that an isolated error occurred in the calculation of a final score for a student or in recording students' scores in their permanent records. For example, the final score may have been based on an incorrect summing of the student's raw scores for parts of the test or from a misreading of the conversion chart. When such errors involve no more than five students' final scores on any Regents Examination and when such errors are detected within four months of the test date, the principal may arrange for the corrected score to be recorded in the student's permanent record. However, in all such instances, the principal must advise the Office of State Assessment in writing that the student's score has been corrected. The written notification to the Department must be signed by the principal or superintendent and must include the names of the students whose scores have been corrected, the name of the examination, the students' original and corrected scores, and a brief explanation of the nature of the scoring error which was corrected.

If an administrator has substantial reason to believe that the teacher scoring committee has failed to accurately score more than five student answer papers on any examination, the administrator must first obtain permission in writing from the Office of State Assessment before arranging for or permitting a rescoring of student papers. The written request to the Office of State Assessment must come from the superintendent of a public school district or the chief administrative officer of a nonpublic or charter school and must include the examination title, date of administration, and number of students whose papers would be subject to such rescoring. This request must also include a statement explaining why the administrator believes that the teacher scoring committee failed to score appropriately and, thus, why he or she believes rescoring the examination papers is necessary. As part of this submission, the school administrator must make clear his or her understanding that such extraordinary re-rating may be carried out only by a full committee of teachers constituted in accordance with the scoring guidelines presented above and fully utilizing the scoring materials for this test provided by the Department.

On occasion, the Department finds it necessary to notify schools of a revision to the scoring key and rating guide for an examination. Should this occur after the scoring committee has completed its work, the principal is authorized to have appropriate members of the scoring committee review students' responses only to the specific question(s) referenced in the notification and to adjust students' final examination scores when appropriate. Only in such circumstances, the school is not required to notify or obtain approval from the Department to correct students' final examination scores.

Appendixes

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 at: <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."

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.

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		

**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	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 at: <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 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			

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 at: <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: 80%; height: 30px;" 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: 80%; height: 30px;" type="text"/>
Final Score (from conversion chart)		<input style="width: 80%; height: 30px;" 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																								
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	46																								
	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 administration 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 at: <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: 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/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			