

FOR TEACHERS ONLY

The University of the State of New York
REGENTS HIGH SCHOOL EXAMINATION

PS-ES PHYSICAL SETTING/EARTH SCIENCE

Wednesday, August 18, 2010 — 12:30 to 3:30 p.m., only

SCORING KEY AND RATING GUIDE

Directions to the Teacher:

Refer to the directions on page 2 before rating student papers.

Updated information regarding the rating of this examination may be posted on the New York State Education Department's web site during the rating period. Check this web site <http://www.emsc.nysed.gov/osa/> and select the link "Examination Scoring Information" for any recently posted information regarding this examination. This site should be checked before the rating process for this examination begins and several times throughout the Regents examination period.

Part A and Part B-1

Allow 1 credit for each correct response.

Part A			Part B-1	
1 2	13 1	25 4	36 3	44 2
2 1	14 1	26 2	37 1	45 1
3 3	15 2	27 3	38 3	46 4
4 2	16 2	28 2	39 2	47 2
5 2	17 4	29 3	40 3	48 2
6 1	18 4	30 4	41 4	49 1
7 2	19 2	31 1	42 3	50 4
8 4	20 3	32 1	43 3	
9 3	21 1	33 3		
10 4	22 4	34 4		
11 3	23 4	35 3		
12 3	24 3			

Directions to the Teacher

Follow the procedures below for scoring student answer papers for the Physical Setting/Earth Science examination. Additional information about scoring is provided in the publication *Information Booklet for Scoring Regents Examinations in the Sciences*.

Use only *red* ink or *red* pencil in rating Regents papers. Do *not* correct the student's work by making insertions or changes of any kind.

For Part A and Part B–1, indicate by means of a check mark each incorrect or omitted answer. In the box provided at the end of each part, record the number of questions the student answered correctly for that part.

At least two science teachers must participate in the scoring of each student's responses to the Part B–2 and Part C open-ended questions. Each of these teachers should be responsible for scoring a selected number of the open-ended questions on each answer paper. No one teacher is to score all the open-ended questions on a student's answer paper.

Students' responses must be scored strictly according to the Scoring Key and Rating Guide. For open-ended questions, credit may be allowed for responses other than those given in the 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. In the student's answer booklet, record the number of credits earned for each answer in the box printed to the right of the answer lines or spaces for that question.

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 questions allows such omissions.

Raters should enter the scores earned for Part A, Part B–1, Part B–2, and Part C on the appropriate lines in the box printed on the answer booklet, and then should add these four scores and enter the total in the box labeled "Total Written Test Score." The student's score for the Earth Science Performance Test should be entered in the space provided. Then, the student's raw scores on the performance test and written test should be converted to a scale score by using the conversion chart that will be posted on the Department's web site <http://www.emsc.nysed.gov/osa/> on Wednesday, August 18, 2010. The student's scale score should be entered in the labeled box on the student's answer booklet. The scale score is the student's final examination score. On the front of the student's answer booklet, raters must enter their initials on the lines next to "Rater 1" or "Rater 2."

All student answer papers that receive a scale score of 60 through 64 **must** be scored a second time. For the second scoring, a different committee of teachers may score the student's paper or the original committee may score the paper, except that no teacher may score the same open-ended questions that he/she scored in the first rating of the paper. The school principal is responsible for assuring that the student's final examination score is based on a fair, accurate, and reliable scoring of the student's answer paper.

Because scale scores corresponding to raw scores in the conversion chart may change from one examination to another, it is crucial that for each administration, the conversion chart provided for that administration be used to determine the student's final score.

Part B–2

Allow a maximum of 15 credits for this part.

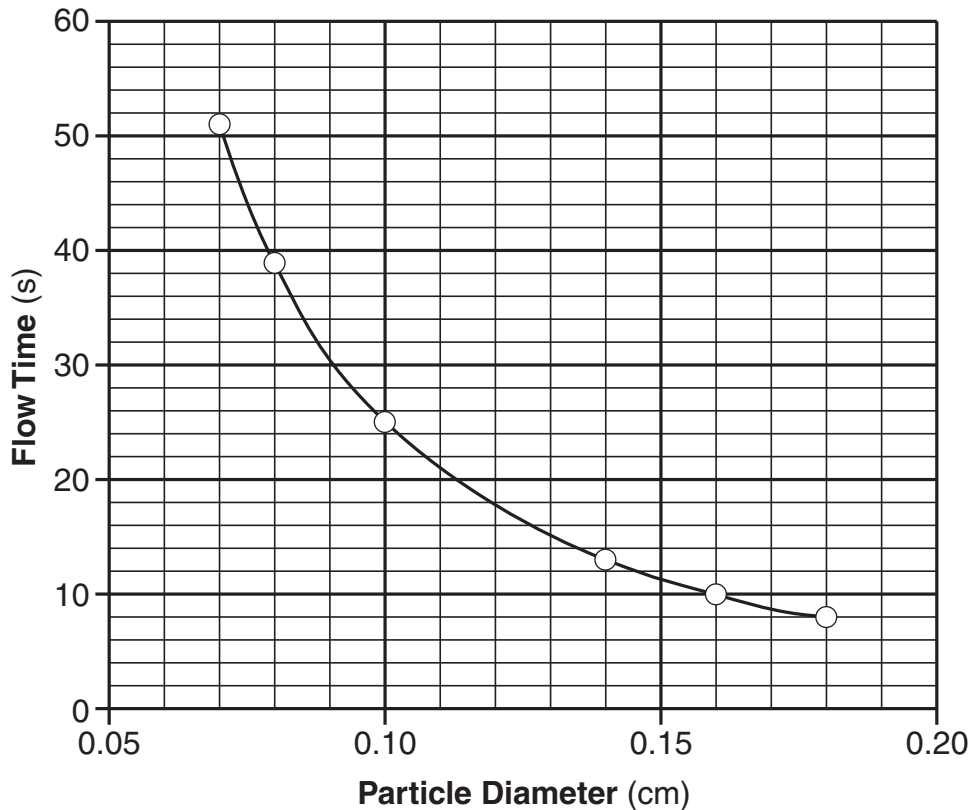
51 [1] Allow 1 credit for 15°.

52 [1] Allow 1 credit for 90°.

53 [1] Allow 1 credit for 12 h.

54 [1] Allow 1 credit for a correctly drawn line that passes within all of the circles shown below.

Note: It is recommended that an overlay be used to ensure reliability in rating.



55 [1] Allow 1 credit for any value from 14 to 16 s or a response based on the student-drawn graph ± 1 s.

56 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

- Larger particles have larger pore spaces between them.
- Larger particles have less total surface area than smaller particles, and, therefore, less friction with the moving water.

57 [1] Allow 1 credit for cold front.

58 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

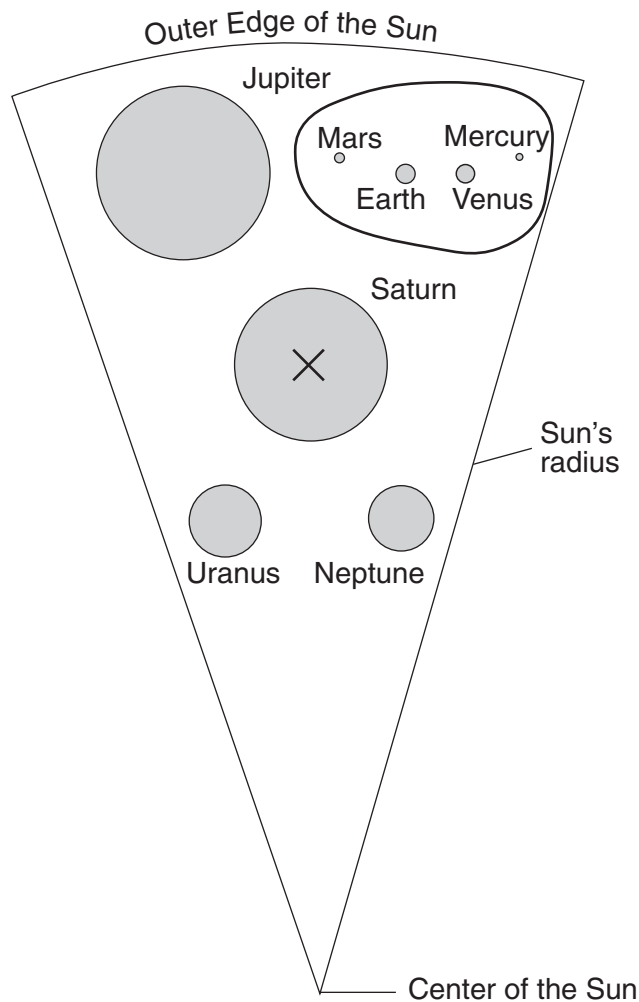
- The warm, moist air is less dense.
- The warm, moist air is lighter.
- Warm air is overriding the more dense cold air.

59 [1] Allow 1 credit for occluded front.

60 [1] Allow 1 credit for circling Mercury, Venus, Earth, and Mars.

61 [1] Allow 1 credit for placing an **X** on Saturn.

Example of a 2-credit response for questions 60 and 61:



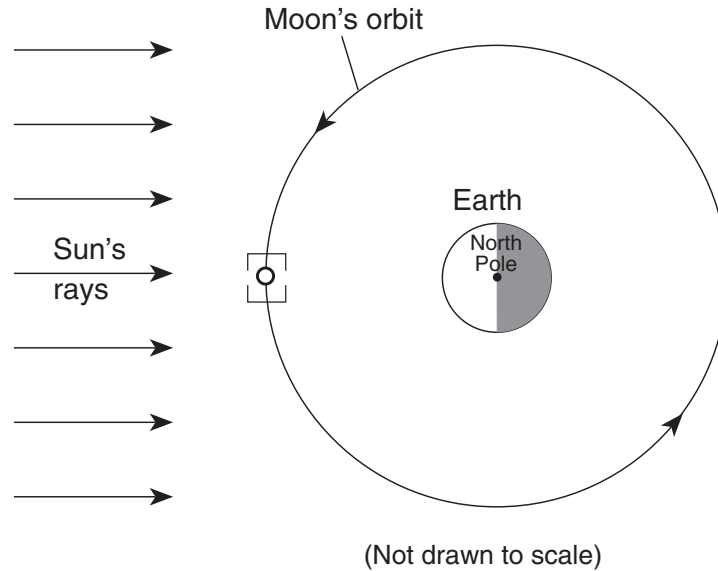
62 [1] Allow 1 credit for any value from 9.5 to 11.5.

- 63** [1] Allow 1 credit. Acceptable responses include, but are not limited to:
- luster
- 64** [1] Allow 1 credit. Acceptable responses include, but are not limited to:
- the color of the dust or powdered form of the mineral
 - the color of the mark left when a mineral is rubbed on an unglazed porcelain tile
- 65** [1] Allow 1 credit. Acceptable responses include, but are not limited to:
- quartz
 - garnet
 - diamond
 - pyrite

Part C

Allow a maximum of 20 credits for this part.

66 [1] Allow 1 credit if the center of the student-drawn circle is within the brackets shown.



67 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

- The change from high tide to low tide repeats in a pattern.
- Tides occur in a regularly repeating pattern.

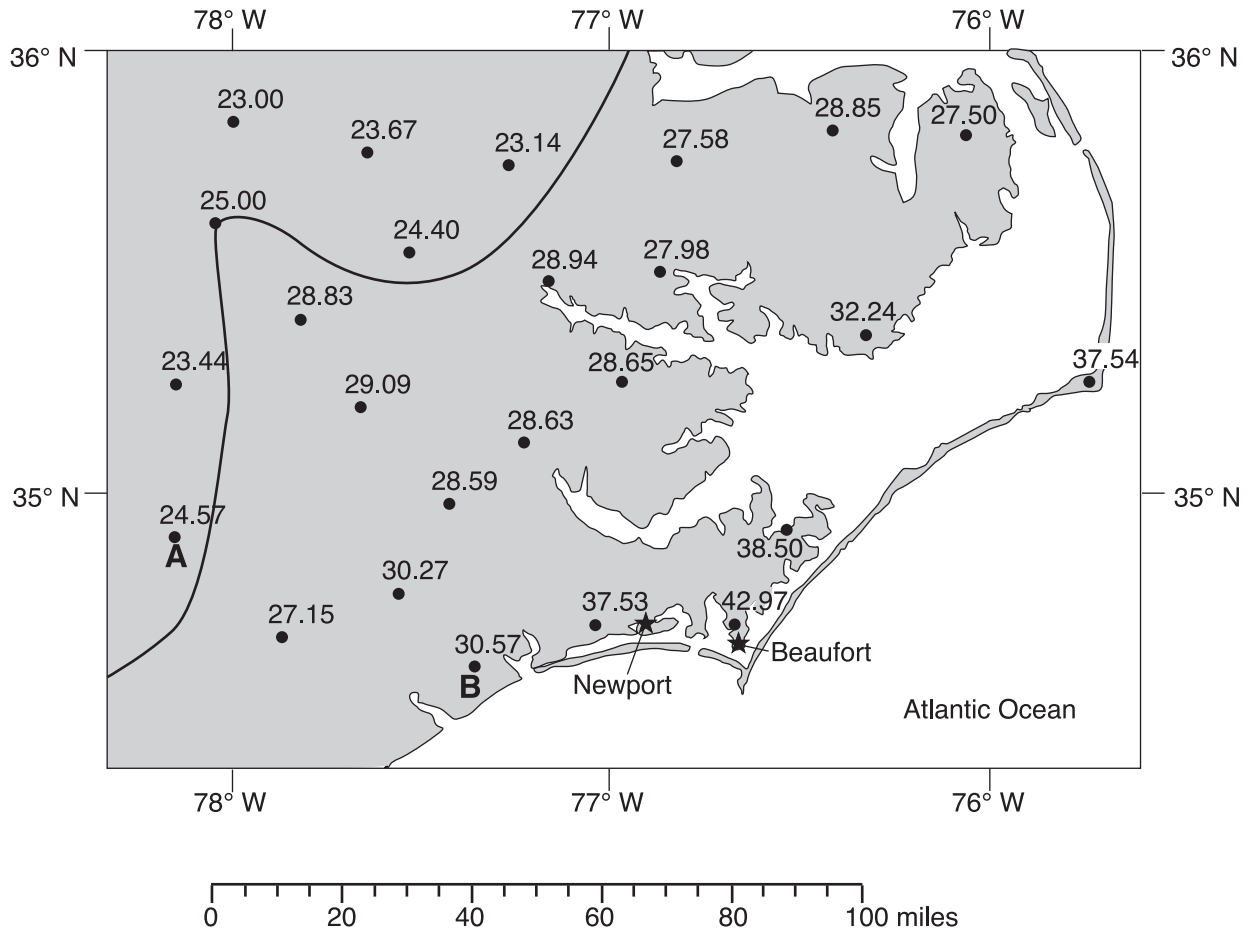
68 [1] Allow 1 credit for 27.3 d.

69 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

- During a lunar eclipse, Earth blocks the sunlight from reaching the Moon.
- Earth's shadow must fall on the Moon.
- The Moon must move into Earth's shadow.

- 70** [1] Allow 1 credit for a correctly drawn 25.00-inch isoline that extends to the edges of the map. If more than one isoline is drawn, all isolines must be correct to receive credit.

Example of a 1-credit response:



- 71** [1] Allow 1 credit for any value from 0.11 to 0.13 that is labeled with correct units. Acceptable units include, but are not limited to:

- in/mi
- inches/mile
- inches of precipitation/mile

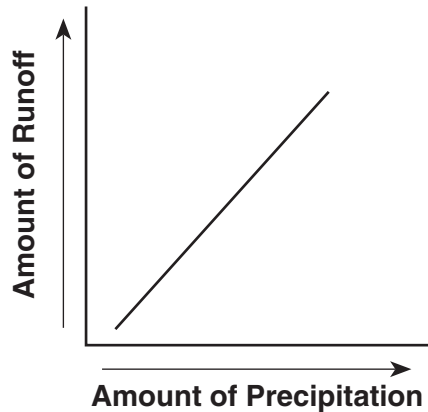
- 72** [1] Allow 1 credit for Elmira.

- 73** [1] Allow 1 credit. Acceptable responses include, but are not limited to:

- The angle of insolation is greater for Beaufort, North Carolina.
- Beaufort is at a lower latitude.
- The Sun is higher in the sky at Beaufort.
- Beaufort is closer to the equator.

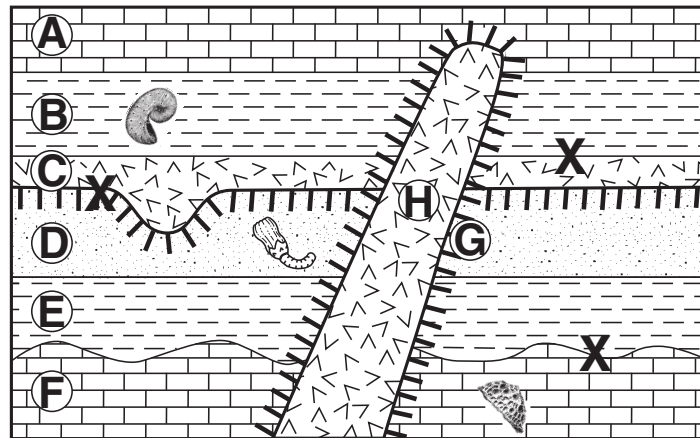
- 74 [1] Allow 1 credit for a graph showing a direct relationship. A straight or curved line may be used.

Example of a 1-credit response:



- 75 [1] Allow 1 credit for *two* correct responses. Acceptable responses include, but are not limited to:
- Gulf of Mexico
 - Atlantic Ocean
 - Lake Erie
 - Lake Ontario
- 76 [1] Allow 1 credit for Catskills.
- 77 [1] Allow 1 credit. Acceptable responses include, but are not limited to:
- cooling
 - condensation
 - Air expands.
- 78 [1] Allow 1 credit for *one* arrow that crosses Lake Ontario and generally points toward Oswego.
- 79 [1] Allow 1 credit for *two* correct responses. Acceptable responses include, but are not limited to:
- have an ample supply of food
 - purchase an electric generator in case of a power failure
 - keep snow removal equipment in good condition and in a convenient location
 - have an updated medicine kit (buy needed medicines)
 - stockpile water supplies
 - purchase flashlights and/or candles

- 80 [1] Allow 1 credit if *two* **Xs** are located on *two* of the three boundaries shown below. Do *not* allow credit if both **Xs** are along the same unconformity.



Key	
	Igneous rock
	Contact metamorphism
	Ammonoid (Cretaceous Period)
	Crinoid (Mississippian Period)
	Coral (Devonian Period)

- 81 [1] Allow 1 credit if *both* periods are correct. Acceptable responses include, but are not limited to:
- Devonian Period *or* Mississippian Period
 - Carboniferous Period *or* Devonian Period

- 82 [1] Allow 1 credit. Acceptable responses include, but are not limited to:
- C is on top of D.
 - C metamorphosed D.

- 83 [1] Allow 1 credit for G.

- 84 [1] Allow 1 credit. Acceptable responses include, but are not limited to:
- Cretaceous Period
 - Paleogene Period
 - Neogene Period
 - Quaternary Period

- 85 [1] Allow 1 credit. Acceptable responses include, but are not limited to:
- The fossils are too old for ^{14}C dating.
 - Carbon-14 has a very short half-life.

Regents Examination in Physical Setting/Earth Science

August 2010

Chart for Converting Total Test Raw Scores to Final Examination Scores (Scale Scores)

The Chart for Determining the Final Examination Score for the August 2010 Regents Examination in Physical Setting/Earth Science will be posted on the Department's web site <http://www.emsc.nysed.gov/osa/> on Wednesday, August 18, 2010. Conversion charts provided for previous administrations of the Regents Examination in Physical Setting/Earth Science must NOT be used to determine students' final scores for this administration.

Submitting Online Teacher Evaluations of the Test to the Department

Suggestions and feedback from teachers provide an important contribution to the test development process. The Department provides an online evaluation form for State assessments. It contains spaces for teachers to respond to several specific questions and to make suggestions. Instructions for completing the evaluation form are as follows:

1. Go to <http://www.emsc.nysed.gov/osa/exameval>.
2. Select the test title.
3. Complete the required demographic fields.
4. Complete each evaluation question and provide comments in the space provided.
5. Click the SUBMIT button at the bottom of the page to submit the completed form.

Map to Core Curriculum

August 2010 Physical Setting/Earth Science			
Question Numbers			
Key Ideas/Performance Indicators	Part A	Part B	Part C
Standard 1			
Math Key Idea 1		54, 62	71, 74
Math Key Idea 2	12, 19, 25, 27, 28	44, 47, 55	
Math Key Idea 3			70
Science Inquiry Key Idea 1	9, 11, 14, 32		69
Science Inquiry Key Idea 2			
Science Inquiry Key Idea 3	25		
Engineering Design Key Idea 1			
Standard 2			
Key Idea 1			
Key Idea 2			
Key Idea 3			79
Standard 6			
Key Idea 1	31, 33, 34	37, 40, 49, 56, 58	77, 78
Key Idea 2	3, 4, 5, 8, 12, 17, 20, 21, 22, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35	36, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 50, 51, 52, 53, 57, 59, 60, 61, 63, 64, 65	66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 78, 80, 81, 82, 83, 84, 85
Key Idea 3		62	
Key Idea 4			
Key Idea 5	4	48, 49, 50, 55, 59	66, 67, 68, 69, 71, 77, 82, 83, 84
Key Idea 6			
Standard 7			
Key Idea 1			79
Key Idea 2			79
Standard 4			
Key Idea 1	1, 2, 3, 4, 5, 6, 10, 12, 13, 14, 15, 25, 26, 27, 30	48, 49, 50, 51, 52, 53, 54, 55, 56, 60, 61, 62	66, 67, 68, 69, 72, 74, 80, 81, 82, 83, 84, 85
Key Idea 2	7, 8, 9, 11, 16, 17, 18, 19, 20, 21, 25, 28, 29, 31, 32, 33, 35	36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 57, 58, 59	70, 71, 73, 75, 76, 77, 78, 79
Key Idea 3	22, 23, 24, 34	63, 64, 65	83
Reference Tables			
ESRT 2010 Edition	6, 8, 12, 13, 14, 15, 16, 18, 19, 22, 23, 24, 26, 28, 29, 30, 34, 35	36, 39, 41, 42, 43, 44, 45, 47, 57, 59, 60, 61, 62, 63, 65	68, 71, 72, 73, 75, 76, 77, 78, 81, 83, 84, 85

