FOR TEACHERS ONLY

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

PS–ES PHYSICAL SETTING/EARTH SCIENCE

Friday, June 15, 2012 — 1:15 to 4:15 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 at: http://www.p12.nysed.gov/apda/ and select the link "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

1 . . . . . **2**	10 . . . . . **1**	19 . . . . . **2**	28 . . . . . **2** . . . . .
2 . . . . . **1**	11 . . . . . **4**	20 . . . . . **3**	29 . . . . . **3** . . . . .
3 . . . . . **3**	12 . . . . . **3**	21 . . . . . **1**	30 . . . . . **4** . . . . .
4 . . . . . **4**	13 . . . . . **2**	22 . . . . . **2**	31 . . . . . **2** . . . . .
5 . . . . . **3**	14 . . . . . **3**	23 . . . . . **3**	32 . . . . . **3** . . . . .
6 . . . . . **2**	15 . . . . . **2**	24 . . . . . **1**	33 . . . . . **4** . . . . .
7 . . . . . **4**	16 . . . . . **3**	25 . . . . . **3**	34 . . . . . **2** . . . . .
8 . . . . . **2**	17 . . . . . **1**	26 . . . . . **4**	35 . . . . . **2** . . . . .
9 . . . . . **2**	18 . . . . . **2**	27 . . . . . **4**	

Part B–1

36 . . . . . **1**	40 . . . . . **2**	44 . . . . . **4**	48 . . . . . **3** . . . . .
37 . . . . . **2**	41 . . . . . **4**	45 . . . . . **2**	49 . . . . . **1** . . . . .
38 . . . . . **1**	42 . . . . . **3**	46 . . . . . **3**	50 . . . . . **1** . . . . .
39 . . . . . **4**	43 . . . . . **1**	47 . . . . . **4**	

Directions to the Teacher

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

Do *not* attempt to correct the student's work by making insertions or changes of any kind.

Allow 1 credit for each correct response.

At least two science teachers must participate in the scoring of the Part B–2 and Part C open-ended questions on a student's paper. 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 more than approximately one-half of 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. On the student's separate answer sheet, for each question, record the number of credits earned and the teacher's assigned rater/scorer letter.

Fractional credit is *not* allowed. Only whole-number credit may be given for a response. Units need not be given when the wording of the questions allows such omissions.

For hand scoring, raters should enter the scores earned in the appropriate boxes printed on the separate answer sheet. Next, the rater should add these scores and enter the total in the space provided. The student's score for the Earth Science Performance Test should be recorded in the space provided. Then the student's raw scores on the written test and the performance test should be converted to a scale score by using the conversion chart that will be posted on the Department's web site at: http://www.p12.nysed.gov/apda/ on Friday, June 15, 2012. The student's scale score should be entered in the box labeled "Scale Score" on the student's answer sheet. The scale score is the student's final examination score.

Schools are not permitted to rescore any of the open-ended questions on this exam after each question has been rated once, regardless of the final exam score. Schools are required to ensure that the raw scores have been added correctly and that the resulting scale score has been determined accurately.

Because scale scores corresponding to raw scores in the conversion chart may change from one administration 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. Acceptable responses include, but are not limited to:

— intrusive

— plutonic

— underground

52 [1] Allow 1 credit if *both* the color and density are correct. Acceptable responses include, but are not limited to:

Color:

— lighter

— whiter

— pinker

Density:

— lower

— less dense

53 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

— foliated

— mineral alignment

— flattened crystals

54 [1] Allow 1 credit for Mesozoic Era.

55 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

— Similar fossil remains are found in Africa and South America.

— The fossil *Rugops primus*, found in Africa, is related to abelisaurids found in South America and India.

— fossil evidence

56 [1] Allow 1 credit for sedimentary rock *or* any specific sedimentary rock, such as shale.

57 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

— wide geographic distribution *or* widespread

— lived a short period of geologic time *or* short lived

— easily recognizable

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

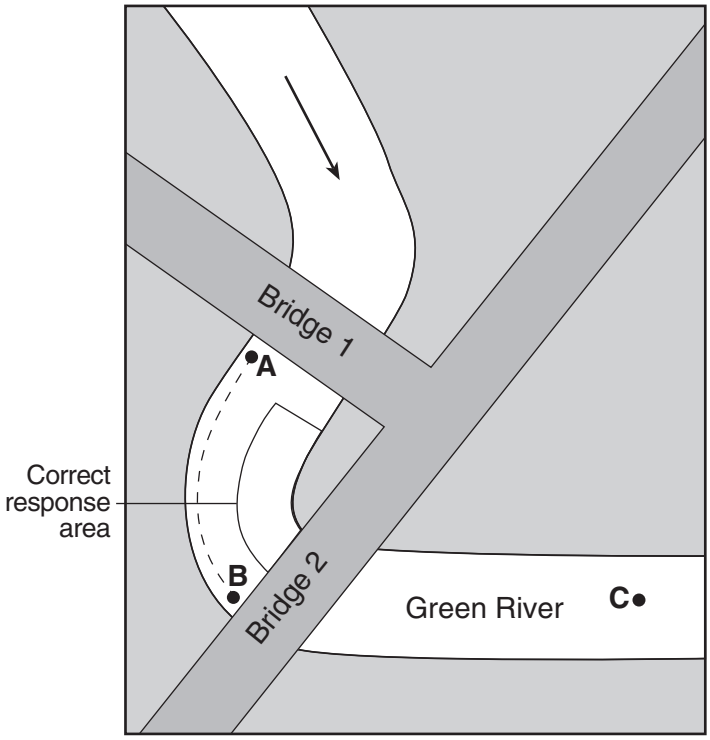
— divergence

— rifting

— seafloor spreading

59 [1] Allow 1 credit if the center of the **X** is located within the area indicated below.

Note: It is recommended that an overlay of the same scale as the student answer booklet be used to ensure reliability in rating.



60 [1] Allow 1 credit for 50 cm/s.

61 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

— pebbles

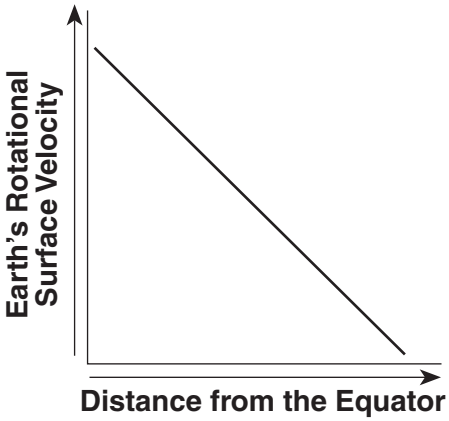
— 2-cm to 3-cm-diameter particles

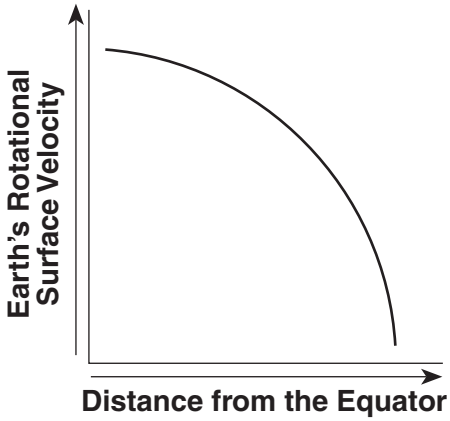
62 [1] Allow 1 credit for 955 mi/h.

63 [1] Allow 1 credit for 12 h.

64 [1] Allow 1 credit for a graph that shows an inverse relationship.

Examples of 1-credit graphs:





65 [1] Allow 1 credit for summer.

Part C

Allow a maximum of 20 credits for this part.

66 [1] Allow 1 credit for *C* and *E*.

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

— Hawaii Hot Spot

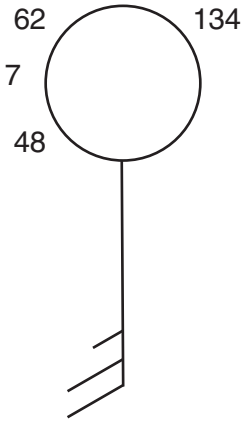
— mantle hot spot

— volcano

— a rising magma plume

68 [1] Allow 1 credit if *all four* weather variables from the data table are correctly recorded in the proper format. Allow credit if feathers are drawn on either side of the staff.

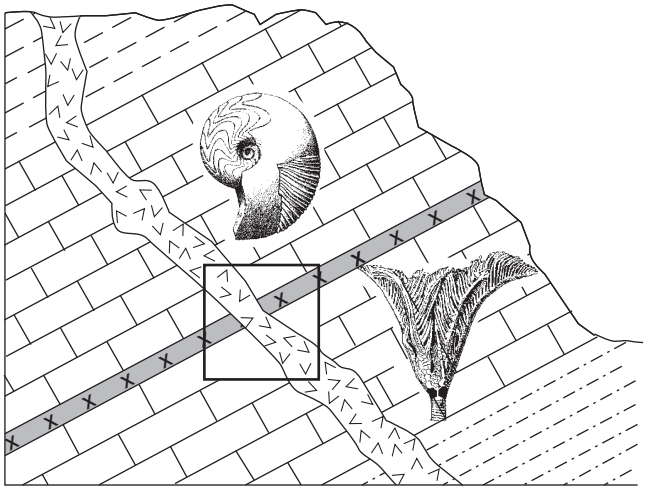
Example of a 1-credit response:



69 [1] Allow 1 credit for 1013.4 mb.

70 [1] Allow 1 credit for a response showing the basaltic intrusion cutting through the ash layer.

Example of a 1-credit response:



71 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

— The horizontal rocks are on top of the tilted layers.

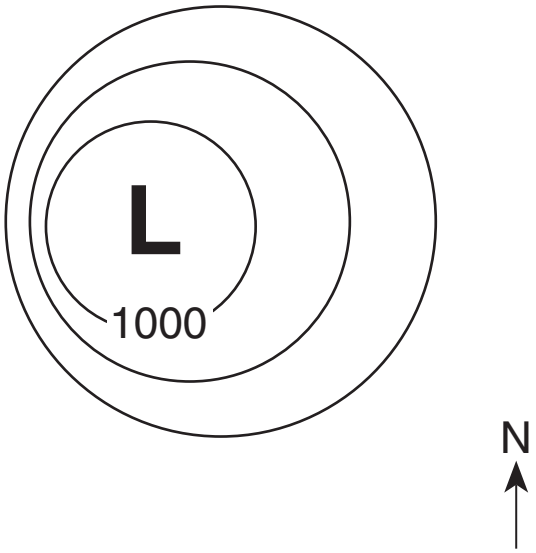
— Fossils of the earliest grasses and large carnivorous mammals are more recent than *Manticoceras* and *Ctenocrinus*.

— The fossils in the tilted layers are older.

72 [1] Allow 1 credit for 251 million years.

73 [1] Allow 1 credit for correctly drawing the *two* isobars. The isobars should be closer together on the western side. If additional isobars are drawn, all must be correct to receive credit.

Example of a 1-credit response:



74 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

— the prevailing southwest winds

— the jet stream

— planetary winds

75 [1] Allow 1 credit for a correct response for *both* air-mass symbols. Allow credit even if all uppercase letters are used.

— Air-mass *X*: cP *or* cA

— Air-mass *Y*: mT

Note: Do *not* allow credit if the letters are reversed, such as Pc.

76 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

— go to the basement

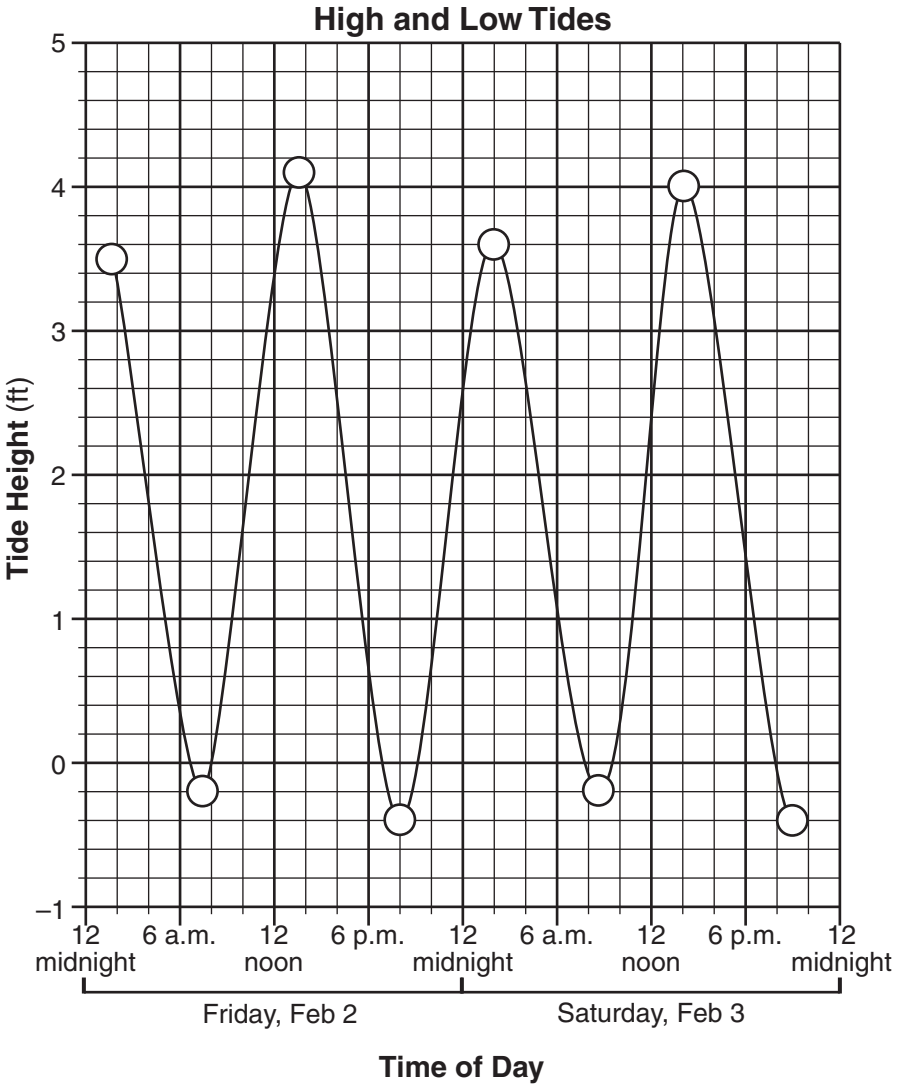
— stay away from windows

— listen to emergency warnings broadcast on radio or TV

— go to a community emergency shelter

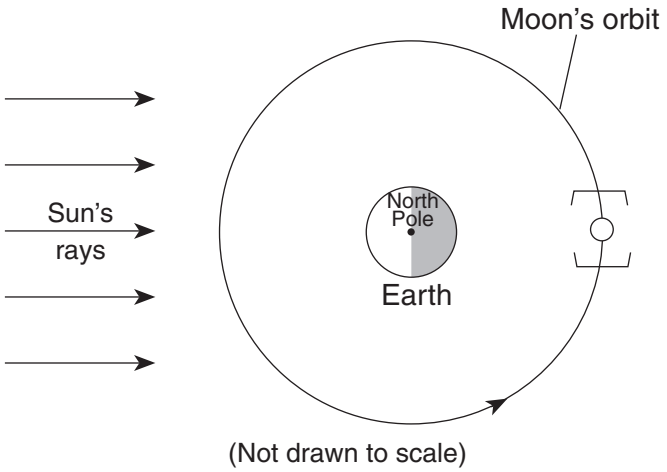
77 [1] Allow 1 credit if the centers of *all eight* plots are located within the circles shown below and are connected with a line that passes within each circle.

Note: It is recommended that an overlay of the same scale as the student answer booklet be used to ensure reliability in rating.



78 [1] Allow 1 credit for any time from 2 a.m. to 4 a.m.

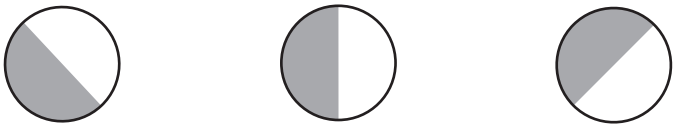
79 [1] Allow 1 credit if the center of the student-drawn circle is within the brackets shown below.



80 [1] Allow 1 credit for March 3 *or* March 4.

81 [1] Allow 1 credit for shading half of the circle on the left side.

Examples of 1-credit responses:



82 [1] Allow 1 credit for 42°.

83 [1] Allow 1 credit for troposphere.

84 [1] Allow 1 credit. Acceptable responses include, but are not limited to:

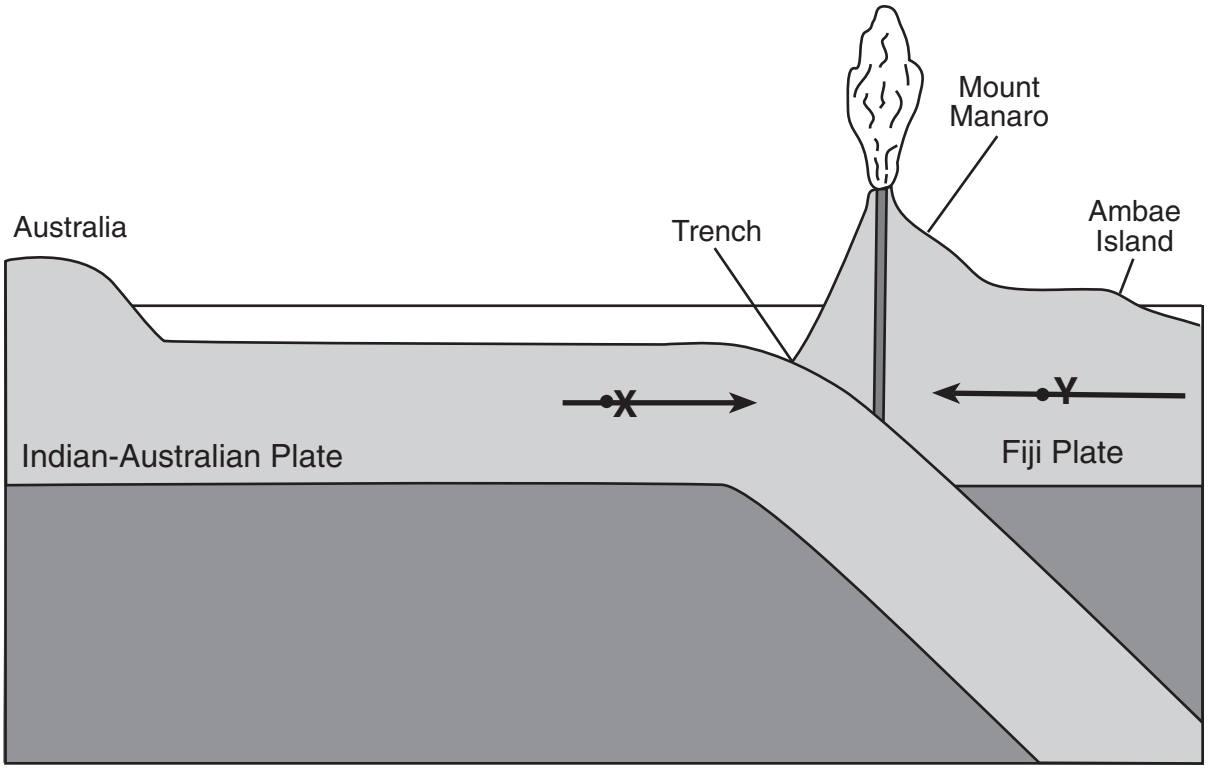
— East Australia Current

— South Equatorial Current

— E. Australia C.

85 [1] Allow 1 credit if *both* arrows show the correct directions, even if the arrows do *not* pass through the dots.

Example of a 1-credit response:



(Not drawn to scale)

Regents Examination in Physical Setting/Earth Science

June 2012

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

The *Chart for Determining the Final Examination Score for the June 2012 Regents Examination in Physical Setting/Earth Science* will be posted on the Department's web site at: http://www.p12.nysed.gov/apda/ on Friday, June 15, 2012. 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.

Online Submission of 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.forms2.nysed.gov/emsc/osa/exameval/reexameval.cfm.
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

June 2012 Physical Setting/Earth Science			
Question Numbers			
Key Ideas/Performance Indicators	Part A	Part B	Part C
Standard 1			
Math Key Idea 1		44, 48, 60	77
Math Key Idea 2	26, 31, 35	39, 64	78
Math Key Idea 3		46	
Science Inquiry Key Idea 1	2, 12, 15, 18, 30	36, 45, 56, 57	
Science Inquiry Key Idea 2			
Science Inquiry Key Idea 3	14, 20	55, 56	82
Engineering Design Key Idea 1			
Standard 2			
Key Idea 1			
Key Idea 2	28		
Key Idea 3			76
Standard 6			
Key Idea 1	8, 10	37	74
Key Idea 2	3, 4, 5, 16, 17, 19, 22, 23, 24, 26, 27, 28, 29, 32, 33, 34	36, 41, 42, 46, 47, 48, 49, 50, 51, 52, 53, 59, 61, 62, 63, 64, 65	66, 67, 68, 69, 70, 71, 72, 73, 75, 79, 81, 83, 84, 85
Key Idea 3	25	54	
Key Idea 4			
Key Idea 5		38, 40, 43, 58	80, 81
Key Idea 6			
Standard 7			
Key Idea 1			
Key Idea 2			76
Standard 4			
Key Idea 1	1, 2, 3, 8, 9, 10, 18, 21, 22, 25, 26, 27, 29, 30, 33	36, 37, 38, 41, 49, 50, 54, 55, 57, 62, 64, 65	70, 71, 72, 77, 78, 79, 80, 81, 82
Key Idea 2	4, 5, 6, 7, 11, 14, 15, 16, 17, 19, 23, 24, 28, 31, 34, 35	39, 40, 42, 43, 44, 46, 47, 48, 58, 59, 60, 61, 63	66, 67, 68, 69, 73, 74, 75, 76, 83, 84, 85
Key Idea 3	12, 13, 20, 32	45, 51, 52, 53, 56	
Reference Tables			
ESRT 2011 Edition (Revised)	3, 12, 13, 14, 16, 19, 20, 21, 22, 24, 25, 27, 31, 32	37, 48, 50, 51, 52, 54, 59, 60, 61	66, 67, 68, 69, 72, 74, 75, 82, 83, 84, 85