# IMPORTANT NOTICE TO TEACHERS 

Physical Setting/Earth Science Regents Examination
Tuesday, June 18, 2002

The following information concerns the rating of question 67 of the June 2002 Physical Setting/Earth Science Regents Examination.

There is an error in the last line of the scoring key. The scoring key should read as follows:

Allow 1 credit for any front symbols (correct or incorrect) drawn on the proper side of the three frontal boundaries.

Please communicate this information to all persons responsible for scoring the Physical Setting/Earth Science Regents Examination.

# FOR TEACHERS ONLY 

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

## PS-ES physical settingaearth science

Tuesday, June 18, 2002 - 9:15 a.m. to 12:15 p.m., only

## SCORING KEY AND RATING GUIDE

## Directions to the Teacher:

Refer to the directions on page 3 before rating student papers.

Part A and Part B-1
Allow 1 credit for each correct response.


## 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 Administering and 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.

On the detachable answer sheet for Part A and Part B-1, indicate by means of a checkmark 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 scaled score by using the conversion chart printed at the end of this Scoring Key and Rating Guide. The student's scaled score should be entered in the labeled box on the student's answer booklet. The scaled score is the student's final examination score.

All student answer papers that receive a scaled 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 scaled 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 in the scoring key for that administration be used to determine the student's final score. The chart in this scoring key is usable only for this administration of the examination.

## Part B-2

## Allow a total of 15 credits for this part. The student must answer all questions in this part.

51
[2]


Allow 1 credit for placing 74 in the proper location. Do not allow credit for $74^{\circ}$ or $74^{\circ} \mathrm{F}$. and
Allow 1 credit for shading in the station circle completely.
[1] Allow 1 credit for $\mathbf{2 0}$ or $\mathbf{2 1}$ or $\mathbf{2 2}$ years.
[1] Allow 1 credit for a response that indicates that the length of a planet's season increases with increasing distance from the Sun.
[2] Allow 2 credits, 1 credit for each of two correct responses. Acceptable responses include, but are not limited to, these examples:
tilt of Earth's axis
parallelism of Earth's axis
Earth's revolution around the Sun

55
[2]


Allow 1 credit if all three points are plotted correctly for the pyrite samples ( $\pm 2$ units).
and
Allow 1 credit for correctly connecting with a line all three points plotted by the student.

56 [1] Allow 1 credit for $\mathbf{5 0 . 0}$ grams or $\mathbf{5 0}$ g.
or
Allow 1 credit for a response that is consistent with the student's graph in question 55.

60 [1] Allow 1 credit for a correct response. Acceptable responses include, but are not limited to, these examples:

Graptolites floated freely in the ocean and could distribute themselves easily over a wide geographic area.
Certain species of graptolite existed for a limited geologic time.
Certain species of graptolite are unique and easily identified.

## Part C

## Allow a total of $\mathbf{2 0}$ credits for this part. The student must answer all questions in this part.

61 [1] Allow 1 credit for a response that states that luminosity increases, then decreases.

62 [1] Allow 1 credit for Procyon B.

63 [4]

$\boldsymbol{a}$ Allow 1 credit for correctly drawing an arrow in the direction of the relative movement in the Juan de Fuca Plate. Student answers should appear generally like the diagram.
b Allow 1 credit for divergent or mid-ocean ridge plate boundary.
c Allow 1 credit for the Pacific Plate.
d Allow 1 credit for a correct response. Acceptable responses include, but are not limited to, this example:
Earthquakes along the Oregon coastline are not as deep as earthquakes that occur beneath Mt. Hood.
[2] Allow 2 credits, 1 credit for each of two correct responses. Acceptable responses include, but are not limited to, these examples:
plan evacuation routes
identifying relative earthquake hazard zones or areas that are subject to damage during an earthquake plan emergency communication procedures (radio broadcast)
developing emergency information brochures
store food, supplies, and fresh water
build earthquake-proof structures
practice emergency rescue drills
identify shelter locations

65 [1] Allow 1 credit for a correct response. Acceptable responses include, but are not limited to, these examples:

The area of hurricane formation increases from May to September.
The area spreads eastward.

66 [1] Allow 1 credit for a correct response. Acceptable responses include, but are not limited to, these examples:

Hurricanes turn northeast due to the planetary wind belt they move into.
The jet stream causes the path of most hurricanes to curve toward the northeast.

67 [3]


Line $A B$ is an occluded front.
Line $B C$ is a cold front.
Line $B D$ is a warm front.
Allow 2 credits for the placement of the correct symbol on all three fronts, regardless of which side of the line the symbols are on.
Allow only 1 credit for the placement of the correct symbol on only one or two of the three fronts, regardless of which side of the line the symbols are on.
and
Allow 1 credit for placing all three correct front symbols on the correct side of the line.

68 [1] Allow 1 credit for Gulf of Mexico or Atlantic Ocean.

69 [2] Allow 2 credits, 1 credit for each of two correct responses. Acceptable responses include, but are not limited to, these examples:
high relative humidity
greater cloud cover
increased precipitation

70 [1] Allow 1 credit for Jurassic Period.

71 [2] Allow 2 credits, 1 credit for each of two correct responses. Acceptable responses include, but are not limited to, these examples:
fine grained (crystals less than 1 mm )
glassy texture
vesicular texture
dark colored
mafic (high Fe and Mg content)
high density ( $3.0 \mathrm{~g} / \mathrm{cm}^{3}$ )
mineral composition:
plagioclase feldspar
pyroxene
olivine
amphibole

72 [1] Allow 1 credit for a correct response. Acceptable responses include, but are not limited to, these examples:

Continents fit together like puzzle pieces.
Continents have matching bedrock types along coastlines.
Continents have correlating fossils.
strips of magnetic reversals found in ocean bedrock

## Regents Examination in Physical Setting/Earth Science —June 2002 Chart for Determining the Final Examination Score (Use for June 2002 examination only.)

To determine the student's final examination score, locate the student's total 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. For example, a student receiving a total performance test score of 14 and a total written test score of 68 would receive a final examination score of 85 .

Total Performance Test Score


## Regents Examination in Physical Setting/Earth Science —June 2002 Chart for Determining the Final Examination Score (Use for June 2002 examination only.)

Total Performance Test Score


## Map to Core Curriculum

| June 2002 Physical Setting/ Earth Science |  |  |  |
| :---: | :---: | :---: | :---: |
| Question Numbers |  |  |  |
| Key Ideas/Performance Indicators | Part A | Part B | Part C |
| Standard 1 |  |  |  |
| Math Key Idea 1 |  | 36,55,57 |  |
| Math Key Idea 2 | 14,17,27,32 | $\begin{array}{\|l\|} \hline 37,38,40,49,50,53, \\ 56,58 \\ \hline \end{array}$ | 61,62 |
| Math Key Idea 3 |  |  |  |
| Sci. Inq Key Idea 1 | 5,8 | 54,60 | 63,65,70,71,72 |
| Sci. Inq Key Idea 2 |  |  |  |
| Sci. Inq Key Idea 3 |  | $\begin{gathered} \hline 41,42,43,44,45,46, \\ 47,48,53 \\ \hline \end{gathered}$ | 63 |
| Eng. Des. Key Idea 1 |  |  |  |
| Standard 2 |  |  |  |
| Key Idea 1 |  | 50 | 66,68 |
| Key Idea 2 |  |  |  |
| Key Idea 3 |  |  | 64 |
| Standard 6 |  |  |  |
| Key Idea 1 | 7 | 44,55,60 | 71,72 |
| Key Idea 2 | 20,29,33 | $\begin{gathered} \hline 39,41,42,43,44,45, \\ 46,47,48,51 \end{gathered}$ | 63,67 |
| Key Idea 3 |  | 47,57,59 | 70 |
| Key Idea 4 | 21 |  |  |
| Key Idea 5 | 7,16,30 | 39,52 | 67,69 |
| Key Idea 6 |  |  |  |
| Standard 7 |  |  |  |
| Key Idea 1 |  |  |  |
| Key Idea 2 |  |  | 64 |
| Standard 4 |  |  |  |
| Performance Indicator 1 | $\begin{array}{\|c} \hline 1,5,6,7,9,11,14,19 \\ 23,25 \end{array}$ | $\begin{aligned} & \hline 36,37,38,45,46,47, \\ & 48,52,53,54,59,60 \end{aligned}$ | 61,62 |
| Performance Indicator 2 | $\begin{aligned} & 2,3,5,10,12,13,15, \\ & 16,17,18,20,1,1,22, \\ & 24,25,26,27,28,29, \\ & 30,31,32,33,34 \end{aligned}$ | $\begin{gathered} 39,40,49,50 \\ 51,57,58 \end{gathered}$ | $\begin{array}{\|c\|} \hline 63,64,65,66,67,68,70, \\ 72 \end{array}$ |
| Performance Indicator 3 | 4 | 41,42,43,44,55,56 | 71 |
| Reference Tables |  |  |  |
| ESRT 2001 edition | $\begin{aligned} & \hline 2,3,4,11,14,16,17 \\ & 18,20,25,31,32,35 \end{aligned}$ | $\begin{gathered} 36,40,41,42,43,44, \\ 46,47,48,49,50,51, \\ 53,56,57,59 \end{gathered}$ | $\begin{aligned} & 61,62,63,66, \\ & 67,68,70,71 \end{aligned}$ |

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Tuesday, June 18, 2002

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Allow 1 credit for any front symbols (correct or incorrect) drawn on the proper side of the three frontal boundaries.

Please communicate this information to all persons responsible for scoring the Physical Setting/Earth Science Regents Examination.

