

# New York State Documents

## Regents Examinations

### EARTH SCIENCE

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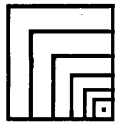


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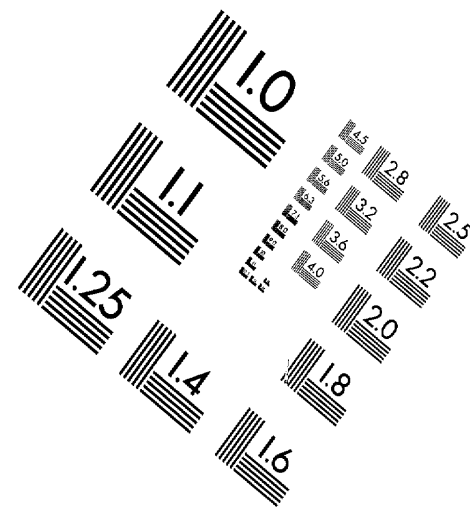
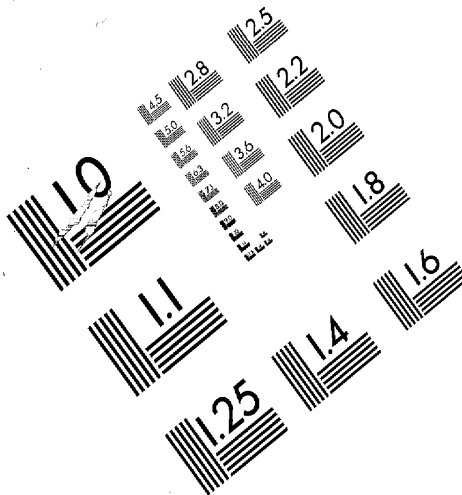
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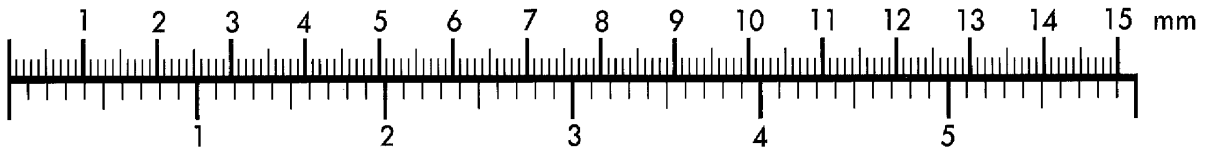


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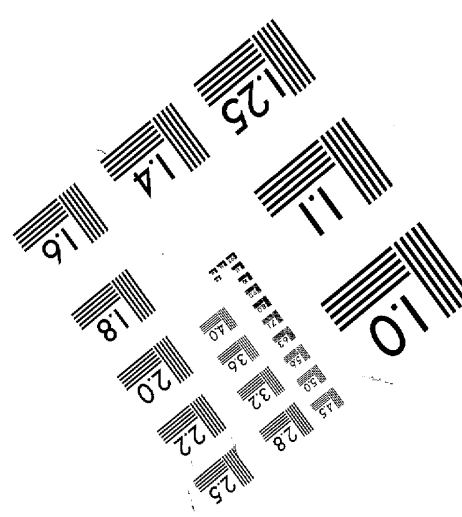
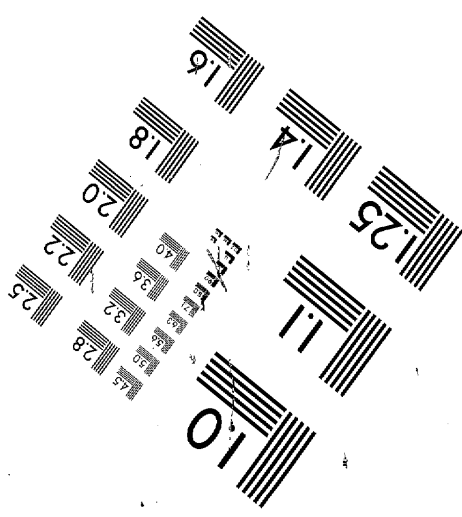
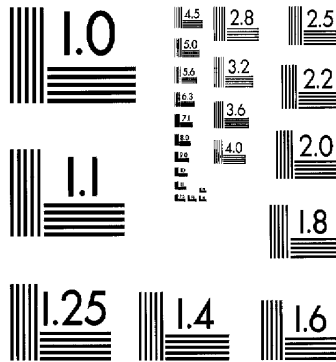
MS303-1980



Centimeter



Inches



The University of the State of New York

320TH HIGH SCHOOL EXAMINATION

EARTH SCIENCE

Monday, January 25, 1954 — 1.15 to 4.15 p. m., only

Write at top of first page of answer paper (a) name of school where you have studied, (b) number of weeks and recitations a week in earth science. Give either the total number of laboratory periods in earth science and the length of such periods or the number of laboratory exercises performed. A paper lacking the statement of laboratory work will not be accepted at a standing of less than 75 credits.

The minimum time requirement is five periods per week for a school year, including at least one prepared laboratory period or its equivalent. [Two unprepared laboratory periods are considered the equivalent of one prepared laboratory period. At least 30 laboratory exercises are required.]

Name of pupil.....Name of school.....

Answer all questions in part I and five questions from part II. Answers to the questions in part I should be written on the question paper as directed and handed in with the other answer paper. Answers should be numbered and lettered to correspond with the questions.

Part I

Answer all questions in part I.

Write on the line at the right of each statement the number preceding the word or expression that best completes the statement. [20]

- 1 A maritime tropical air mass is (1)cold and dry (2)cold and moist (3)warm and dry (4)warm and moist 1.....
2 Aluminum is extracted from the mineral (1)bauxite (2)hematite (3)pitchblende (4)pyrite 2.....
3 A national park noted chiefly for its caverns is (1)Carlsbad (2)Glacier (3)Yellowstone (4)Yosemite 3.....
4 Mesas are found in (1)old mountains (2)old plateaus (3)young mountains (4)young plateaus 4.....
5 Earthshine is sometimes seen at the phase of the moon known as (1)first quarter (2)full moon (3)last quarter (4)new crescent 5.....
6 A map scale of 1/125,000 means that 1 inch on the map corresponds to a distance of nearly (1)1 mile (2)2 miles (3)3 miles (4)125 miles 6.....
7 The low hills of northern Long Island are (1)buttes (2)mesas (3)monadnocks (4)terminal moraines 7.....
8 The seismograph records (1)atmospheric pressure (2)earthquake tremors (3)relative humidity (4)wind velocity 8.....
9 Stream capture can produce (1)cirques (2)meanders (3)sinkholes (4)wind gaps 9.....
10 A lake of glacial origin is (1)a crater lake (2)a kettle lake (3)an oxbow lake (4)a sink lake 10.....
11 The Palisades are an example of (1)a dike (2)an extrusion (3)a neck (4)a sill 11.....
12 The planet that is sometimes seen as a small dark spot against the sun is (1)Jupiter (2)Mars (3)Mercury (4)Neptune 12.....
13 India's winter monsoon blows chiefly from the (1)northeast (2)northwest (3)southeast (4)southwest 13.....

- 14 A city with a marine type of climate is (1) Boston (2) Chicago  
 (3) St. Louis (4) San Francisco 14.....
- 15 The most abundant element in the earth's crust is (1) carbon (2) iron  
 (3) nitrogen (4) oxygen 15.....
- 16 Two cities on the same meridian must have the same (1) altitude  
 (2) latitude (3) length of day (4) solar time 16.....
- 17 Normal air pressure at sea level in millibars is about (1) 1000 (2) 100  
 (3) 30 (4) 10 17.....
- 18 A glacial deposit that may wind across the country is (1) a delta  
 (2) a drumlin (3) an esker (4) a kame 18.....
- 19 One degree of latitude is equivalent to about (1) 15 miles (2) 30 miles  
 (3) 70 miles (4) 90 miles 19.....
- 20 The Columbia Plateau was formed by (1) faulting (2) folding  
 (3) glacial action (4) volcanic action 20.....

Write on the line at the right of *each* statement the word or expression that, when inserted in the blank, will make the statement true. [11]

- 21 Light travels at a speed of 186,000 miles per .... 21.....
- 22 The latitude of the South Pole is ... degrees South. 22.....
- 23 The radioactive metals obtained from the mineral pitchblende are radium and .... 23.....
- 24 The lowest temperature on a certain day was *minus* 12°F. The highest temperature on that day was 28°F. The daily range in temperature was ... degrees. 24.....
- 25 When it is Sunday on the east side of the International Date Line, it is ... on the west side of the line. 25.....
- 26 The Finger Lakes are river valleys that were changed by the action of a(an) .... 26.....
- 27 When limestone is metamorphosed, it is transformed into the rock called .... 27.....
- 28 Waterfalls and rapids characterize rivers in the ... stage of development. 28.....
- 29 Great cracks in the solid crust of the earth along which displacement occurs are called .... 29.....
- 30 Anticlines and synclines occur in the ... type of mountain structure. 30.....
- 31 When a barometer reads 30 inches at sea level, it will read 29 inches if carried up to an altitude of about ... feet. 31.....

In *some* of the following statements the italicized term makes the statement incorrect. For each *incorrect* statement, write on the line at the right the term that must be substituted for the italicized term to make the statement correct. For each *correct* statement, write the word *true* on the line at the right. [11]

- 32 The largest known planet is *Pluto*. 32.....
- 33 One of the two principal earthquake belts of the world encircles the *Arctic* Ocean. 33.....
- 34 A mineral deposit, shaped like an icicle, that hangs from a cavern roof is called a(an) *stalactite*. 34.....
- 35 When rain freezes as it falls, it is known as *sleet*. 35.....
- 36 Warm air is forced up between masses of colder air at a(an) *occluded* front. 36.....
- 37 Heaviest rainfall occurs in India during the *summer* monsoon. 37.....

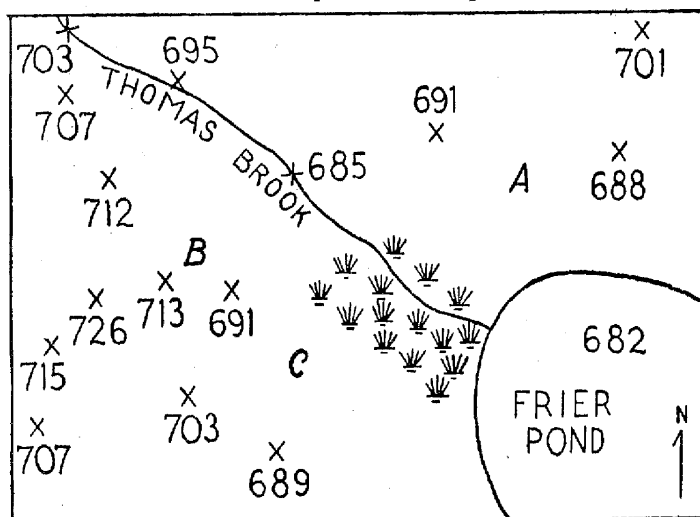
- |   |         |
|---|---------|
| 38 Contour plowing <i>increases</i> the rate of soil erosion.                                 | 38..... |
| 39 A(an) <i>meridian</i> is always part of a great circle.                                    | 39..... |
| 40 A region of horizontal rock structure and high relief is defined as a(an) <i>plateau</i> . | 40..... |
| 41 The peeling of weathered rock surfaces is called <i>exfoliation</i> .                      | 41..... |
| 42 The Atlantic Coastal Plain originated through the uplift of a(an) <i>lake bed</i> .        | 42..... |

Write on the line at the right of each statement the term (*increases, decreases, remains the same*) that, when inserted in the blank, will make the statement true. [8]

- |   |         |
|---|---------|
| 43 As air expands, its temperature ....   | 43..... |
| 44 As latitude increases, the distance from the Equator ....                              | 44..... |
| 45 As the sun's altitude increases, its heating effect on the surface of the earth ....   | 45..... |
| 46 As the speed of rotation of a body increases, its centrifugal force ....               | 46..... |
| 47 As the pressure gradient increases, the speed of the wind ....                         | 47..... |
| 48 As one goes from the Equator to the North Pole, the altitude of the North Star ....    | 48..... |
| 49 As the speed of cooling of molten lava increases, the size of the crystals formed .... | 49..... |
| 50 As daily temperature increases in a desert region, the absolute humidity usually ....  | 50..... |

**Part II**

Answer five questions from part II.



- 1 The above diagram represents a contour map in the making. Each number represents the elevation of that place above sea level.
  - a Starting with the 690-foot contour and using a contour interval of 10 feet, draw *four* complete contour lines. [4]
  - b Shade the additional area that would be under water if the level of Frier Pond rose 8 feet. [1]
  - c Which slope is steeper, *A* or *B*? [1]
  - d In what direction does Thomas Brook flow? [1]
  - e What do the symbols just east of *C* represent? [1]
  - f Mention *one* way in which a contour map might be useful to each of *two* of the following: an aviator, a farmer, a hiker. [2]

- 2 Five common minerals are quartz, calcite, feldspar, magnetite and mica.
- Describe briefly a property used to identify each of *three* of these minerals. [3]
  - Which *two* of these minerals *other than quartz* are often found in granite? [2]
  - Which *one* of these minerals is the chief constituent of limestone? [1]
  - Which *one* of these minerals is an ore of iron? [1]
  - Quartz is found in granite, in quartzite and in sandstone. Explain how it originates in *each* of these three rocks. [3]
- 3
- Name *two* wind belts and *two* calm belts that would be crossed in a trip from New York to Brazil. [4]
  - Name *one* of these belts that has a dry climate. Give a reason for this dry climate. [1, 1]
  - Name *one* of these belts that has a rainy climate. Give a reason for this rainy climate. [1, 1]
  - Explain why some places have alternate rainy seasons and dry seasons. [2]
- 4
- (1) Name *one* different feature of erosion formed by *each* of the following: the Niagara River, the Colorado River, the Delaware River. [3]  
(2) Give a brief explanation of the origin of *each* feature named. [3]
  - (1) Name *two* different features formed by deposition in the lower Mississippi valley. [2]  
(2) Explain the origin of *each* feature named. [2]
- 5 The rotation and revolution of the earth and the moon are responsible for many phenomena. In terms of these motions explain the reason for each of *five* of the following: [10]
- The sun, moon and stars rise in the east and set in the west.
  - The same side of the moon always faces the earth.
  - The moon has phases.
  - Different constellations are visible in winter than in summer.
  - A coastal storm is likely to do more damage at full moon phase than at first quarter phase.
  - High tides occur about 50 minutes later each day.
- 6 Distinguish between the terms in each of *five* of the following pairs: [10]
- |                                  |                                     |
|----------------------------------|-------------------------------------|
| <i>a</i> weather — climate       | <i>d</i> solar system — galaxy      |
| <i>b</i> cold front — warm front | <i>e</i> sextant — chronometer      |
| <i>c</i> anemometer — wind vane  | <i>f</i> troposphere — stratosphere |
- 7
- Distinguish between the absolute humidity of the air and the capacity of the air. [2]
  - Explain what is meant by the dew point of a mass of air. [2]
  - Explain how relative humidity is determined with the aid of wet-bulb and dry-bulb thermometers. [2]
  - Why is ground fog more likely to form on a clear night than on a cloudy night? [2]
  - State *two* ways in which a cirrus cloud differs from a cumulus cloud. [2]
- 8 Explain each of *five* of the following true statements: [10]
- Lakes change slowly into swamps.
  - Offshore bars are found along sandy coasts in shallow water.
  - Fjords often have great depth.
  - The volcanoes of Japan are much steeper than those of Hawaii.
  - Talus forms rapidly in a humid climate when the temperature varies above and below 32° F.
  - Monadnocks are found on peneplanes.

# FOR TEACHERS ONLY

## ESc

### INSTRUCTIONS FOR RATING EARTH SCIENCE

Monday, January 25, 1954—1.15 to 4.15 p. m., only

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

#### Part I

Allow a total of 50 credits on part I, one credit for each correct answer. For questions 21–42, a variation will be accepted if the answer is scientifically correct. However, in questions 34–37 and questions 39–41 for which *true* is the correct answer, no variations will be allowed.

- |              |                        |
|--------------|------------------------|
| (1) 4        | (26) glacier           |
| (2) 1        | (27) marble            |
| (3) 1        | (28) young             |
| (4) 2        | (29) faults            |
| (5) 4        | (30) folded            |
| (6) 2        | (31) 900–1000          |
| (7) 4        | (32) Jupiter           |
| (8) 2        | (33) Pacific           |
| (9) 4        | (34) true              |
| (10) 2       | (35) true              |
| (11) 4       | (36) true              |
| (12) 3       | (37) true              |
| (13) 1       | (38) decreases         |
| (14) 4       | (39) true              |
| (15) 4       | (40) true              |
| (16) 4       | (41) true              |
| (17) 1       | (42) continental shelf |
| (18) 3       | (43) decreases         |
| (19) 3       | (44) increases         |
| (20) 4       | (45) increases         |
| (21) second  | (46) increases         |
| (22) 90      | (47) increases         |
| (23) uranium | (48) increases         |
| (24) 40      | (49) decreases         |
| (25) Monday  | (50) remains the same  |

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