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ABSTRACT

Each year 1.5 million students take the ACT Assessment to help themselves identify and develop realistic plans for their postsecondary education and career goals. The ACT Assessment includes the following tests: (1) English; (2) Mathematics; (3) Reading; and (4) Science Reasoning. Students receive four test scores, seven subscores, and a composite score. A student profile and an interest inventory provide student characteristics. Results are reported to the student, the high school, and colleges requested by the student. Tests, development of which is detailed, are based on the major areas of instruction in American high schools and colleges, so that a student's performance has a direct and obvious relationship to academic development. A description and sample questions are provided from each test. The 1994-95 and 1995-96 testing schedule is presented. (SLD)

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# THE ACT ASSESSMENT 1994

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## AN OVERVIEW



- Interpreting ACT Results
- The ACT Assessment Program
- Score Reports
- Development of the Tests
- Contents of the Tests
- Sample Test Questions
- Test Date Schedule, 1994-96

**ACT**

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## Important Points to Remember When Interpreting 1994 ACT Assessment Results

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- Results for 1994 are based on the performance of 891,714 students who graduated from high school in spring 1994 and who took the ACT Assessment on a national test date during their junior or senior year.
- The ACT tests measure educational development. Performance on the tests is influenced by the student's educational experiences, as the patterns of difference among average scores according to types of courses taken clearly indicate.
- ACT-tested students are a significant portion of the school population, but only a portion. Generalizations based on ACT-tested students should not be applied to broader student populations.
- The ACT tests measure individual high school students' educational development as related to their readiness to pursue further study at the college level. One should not draw inferences from this single source about the quality of schools or of education in any state or in the nation.
- The value of state average ACT scores lies in the interpretations applied to them within their states in the context of the many important factors that affect educational attainment. Rank-order comparisons among states invite inappropriate and inaccurate interpretation.

Corporate Communications  
ACT  
P.O. Box 168  
Iowa City, Iowa 52243-0168  
319-337-1028

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# The ACT Assessment Program

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**THE ACT ASSESSMENT PROGRAM** is an important part of the high school to college transition. Each year, a million and a half students take the ACT Assessment to help themselves identify and develop realistic plans for accomplishing their postsecondary educational and career goals. Students use ACT Assessment information in planning for college and in presenting themselves to colleges as persons with unique patterns of educational development, accomplishments, and needs.

High schools and colleges use ACT Assessment results in counseling, college admissions, educational and career planning, academic advising, placement, scholarship programs, recruitment, and retention, and in designing instructional programs and services that match the characteristics and needs of their students.

## The ACT Tests

The ACT Assessment includes four tests:

- English Test** 75 questions/45 min.
- Mathematics Test** 60 questions/60 min.
- Reading Test** 40 questions/35 min.
- Science Reasoning Test** 40 questions/35 min.

(Total testing time: 2 hours, 55 minutes)

## Scores

Students receive twelve scores on the ACT Assessment—seven subscores, four test scores, and a composite score:

### English Score

Subscores:

- Usage/Mechanics
- Rhetorical Skills

### Mathematics Score

Subscores:

- Pre-Algebra/Elementary Algebra
- Intermediate Algebra/Coordinate Geometry
- Plane Geometry/Trigonometry

### Reading Score

Subscores:

- Social Studies/Sciences
- Arts/Literature

### Science Reasoning Score

### Composite Score

The subscore scale is 1–18. The score scale for the ACT Assessment tests and the composite is 1–36. In 1994, the average score earned by the 891,714 graduating seniors who took the ACT was **20.8**.

## Other Parts of the ACT Assessment

### Student Profile Section

This questionnaire collects a wide range of information, including:

- High School Courses and Grades
- Admissions/Enrollment Information
- Educational Plans, Interests, and Needs
- Special Educational Needs, Interests, and Goals
- College Extracurricular Plans
- Need for Financial Aid; Work Plans
- Background Information
- Factors Influencing College Choice
- High School Information
- High School Extracurricular Activities
- Out-of-Class Accomplishments
- Evaluation of High School Experience

### Interest Inventory

Because many students explore career options as they plan for college, a systematic assessment of career interests is part of the ACT Assessment. Items in the current inventory have been updated through field studies involving thousands of 9th graders, college-bound students, and adults. The Interest Inventory continues to use ACT's World-of-Work Map and Career Family List to link students' interest scores to educational and career options.



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## The Development and Contents of the Tests

The best way to gauge students' readiness for college is to measure as directly as possible their mastery of the knowledge and skills required for success in college courses. The knowledge and skills measured by the present version of the ACT Assessment are identified through four sources of information.

First, we study the dozens of critiques of American education that have been published since the early 1980s. We also review the formal instructional objectives for grades 7 through 12 for all states that publish their objectives. In addition, we survey textbooks on state-approved lists for courses in grades 7 through 12.

Finally, we confer with high school and college teachers, administrators, course-content experts, and curriculum specialists to determine the knowledge and skills taught in grades 7 through 12 that these practitioners find to be necessary for students in college courses.

On the basis of these sources, we define the scope and content of each area measured by the ACT Assessment. Detailed content specifications then are developed with the assistance of nationally recognized education consultants.

The ACT Assessment measures a broad range of educationally significant knowledge and skills. The tests emphasize such proficiencies as reasoning, analysis, problem-solving, and the integration of learning from various sources, as well as the application of these proficiencies to the kinds of tasks college students are expected to perform.

Because the tests are based on the major areas of instruction in American high schools and colleges, a student's performance has a direct and obvious relationship to his or her academic development. The meaning of that performance, as indicated by the scores and subscores, can be readily grasped by both educators and students.

### English Test

The 75-question, 45-minute English test measures the student's understanding of the conventions of standard written English punctuation, grammar, and sentence structure and the student's ability to make decisions related to strategy, organization, and style. *Spelling, vocabulary, and rote recall of rules of grammar are not tested.*

**Format.** The test consists of five passages, each accompanied by a sequence of questions. To provide a variety of rhetorical situations, a range of passages is employed, chosen not only for their appropriateness in assessing writing skills but also to reflect the interests and experiences of the examinees. All questions are multiple-choice.

Some questions refer to underlined portions of the passage and offer several alternatives to what is underlined. Others refer to a section of the passage or the passage as a whole. The student must decide which alternative is most appropriate in this context, or which alternative best answers the question. Many questions offer as one alternative the response "NO CHANGE" from the text.

**Scores.** Three are reported for the English Test: a total score based on all 75 questions, a subscore in Usage/Mechanics based on 40 questions, and a subscore in Rhetorical Skills based on 35 questions.

### Mathematics Test

The 60-question, 60-minute Mathematics Test assesses the skills students have typically acquired in courses taken up to the beginning of grade 12. Students must use their reasoning skills to solve practical problems. The knowledge of basic formulas and computation is assumed as background for the problems, but complex formulas and extensive computation are not required. The test

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covers the major content areas that are prerequisite to successful performance in entry-level college courses.

**Format.** The questions cover three skill areas: basic, application, and analysis. Basic skills questions can be solved by performing a familiar sequence of operations in a familiar setting. Application questions can be solved by performing a familiar sequence of operations, but the solution will not be routine. Analysis questions require a student to know why the familiar sequence of operations yields a solution, under what conditions it will not yield a solution, or how to examine all the cases that can arise within the restrictions stated in the question.

**Scores.** Four are reported for the Mathematics Test: a total score based on all 60 questions, a subscore in pre-algebra/elementary algebra based on 24 questions, a subscore in intermediate algebra/coordinate geometry based on 18 questions, and a subscore in plane geometry/trigonometry based on 18 questions.

### Reading Test

The 40-question, 35-minute Reading Test measures the student's reading comprehension as a product of skill in referring and reasoning. The questions require students to derive meaning from several passages by referring to what is explicitly stated and by reasoning to determine the implicit meanings, draw conclusions, and make comparisons and generalizations.

**Format.** Four prose passages represent the levels and kinds of texts commonly encountered by college freshmen. Prose fiction, humanities, social studies, and natural sciences passages are selected from published sources. Each is accompanied by a set of multiple-choice questions. These questions do not test the rote recall of facts from outside the passage, isolated vocabulary, or rules of formal logic. Rather, the test focuses upon the complementary skills that readers must bring to bear in studying written material from a range of subject areas.

**Scores.** Three are reported for the Reading Test: a total score based on all 40 questions, a subscore based on the 20 questions in the social studies and natural sciences sections and a subscore based on the 20 questions in the prose fiction and humanities sections.

### Science Reasoning Test

The 40-question, 35-minute Science Reasoning Test measures the student's interpretation, analysis, evaluation, reasoning, and problem-solving skills in the natural sciences. Units of scientific information are addressed through multiple-choice questions.

**Format.** The information is conveyed in three different formats.

#### Data Representation

This format presents students with graphs and tables similar to those found in science journals and texts. The questions measure skills such as graph reading, interpretation of scatter plots, and interpretation of tables.

#### Research Summaries

This format provides students with descriptions of experiments. The questions focus on the design of the experiments and the interpretation of the results. The questions are written expressly for this test.

#### Conflicting Viewpoints

This format presents students with expressions of hypotheses or views that, being based on differing premises or on incomplete data, are inconsistent with one another. The questions focus upon understanding and analyzing alternative viewpoints or hypotheses. They require students to recognize and understand the basic features of and any concepts related to the information provided; to examine critically the relationships between the information and the conclusions drawn or hypotheses developed; and to generalize from the information to gain new information, draw a new conclusion, or make a prediction.

**Scores.** Only a total score is reported for the Science Reasoning Test.

## Sample Questions

Here are questions taken from a retired form of the ACT Assessment that was actually administered on a recent national test date. Answer keys follow each set of questions.

### ENGLISH TEST

(Actual test: 45 Minutes—75 Questions)

**DIRECTIONS:** In the five passages that follow, certain words and phrases are underlined and numbered. In the right-hand column, you will find alternatives for each underlined part. You are to choose the one that best expresses the idea, makes the statement appropriate for standard written English, or is worded most consistently with the style and tone of the passage as a whole. If you think the original version is best, choose "NO CHANGE."

You will also find questions about a section of the passage, or about the passage as a whole. These questions

do not refer to an underlined portion of the passage, but rather are identified by a number or numbers in a box.

For each question, choose the alternative you consider best and blacken the corresponding oval on your answer sheet. Read each passage through once before you begin to answer the questions that accompany it. You cannot determine most answers without reading several sentences beyond the question. Be sure that you have read far enough ahead each time you choose an alternative.

#### Passage IV

[1]

[1] Most athletes, who break a record, are honored and praised, even idolized, by fans.

[2] Usually, the longer the record has stood, the most acclaims the record-breaker receives. [3] That's usually the case, but not always. [4] Certainly it wasn't with Roger Maris, the Yankee outfielder who, in 1961, broke the record for the most home runs hit in one season.

[2]

Maris's sixty-one home runs broke the record set by the legendary Babe Ruth, in 1927, Ruth slammed sixty home runs. He was remarkable not

47. A. NO CHANGE  
B. athletes, who break a record  
C. athletes who break a record  
D. athletes who break a record,

48. F. NO CHANGE  
G. most acclaim  
H. more additional acclaims  
J. more acclaim

49. For the sake of unity and coherence, Sentence 3 should be placed:  
A. where it is now.  
B. after Sentence 1.  
C. after Sentence 4.  
D. at the end of Paragraph 2.

50. F. NO CHANGE  
G. Ruth in 1927,  
H. Ruth. In 1927,  
J. Ruth.

■ ■ ■

only for his ability to hit homers, but also for the loyalty and affection he inspired. Maris, on the other hand, was not a very popular player.

[3]

When Maris broke Ruth's record, in response to<sup>51</sup> protests rather than praise. They argued that Maris had an unfair advantage over Ruth, since the 1961 season included eight extra<sup>52</sup> games than the 1927 season. In reply, Maris's relatively few supporters indignantly point that; despite the long season,<sup>53</sup> Maris had been at the plate fewer times than Ruth. To Maris's fans it was thrilling that Maris had broken Ruth's record after a considerable period of thirty-four years.<sup>54</sup>

[4]

After baseball officials listened carefully to both sides, they determined that, although Maris had broken the record, he should not receive full recognition for his achievement. Nonetheless, when the officials listed the new record, they qualified it by putting an asterisk next to the entry. This indicated that, while Maris had broken the record, he had done so after appearing in more games than had Ruth.

[5]

Up to that time, no other broken record had been similarly treated. yet baseball devotees<sup>56</sup>

51. A. NO CHANGE  
B. we responded with  
C. there was a response of  
D. many fans responded with
52. F. NO CHANGE  
G. additional  
H. excess  
J. more
53. A. NO CHANGE  
B. pointed out that, despite  
C. pointed that out. Despite  
D. point that out, despite
54. F. NO CHANGE  
G. a considerable and lengthy period.  
H. an endless repetition of thirty-four years.  
J. thirty-four years.
55. A. NO CHANGE  
B. achievement. Therefore.  
C. achievement: however.  
D. achievement. Nevertheless.
56. F. NO CHANGE  
G. treated because  
H. treated, so  
J. treated, although it is true that

whose admiration for the ability of both men  
<sup>57</sup> thought the resolution unfair. They reasoned that  
 all players should receive full credit for their  
 accomplishments, regardless of technicalities.

Maris, understandably, was bitter about the lack  
<sup>58</sup>

of recognition.  
<sup>59</sup>

[6]

The Yankees traded Maris after a few seasons.

The remainder of his baseball career was unexceptional.

He died in 1985. he still felt he had been unjustly  
<sup>60</sup> denied his rightful place in baseball history.

57. A. NO CHANGE  
 B. whom admire  
 C. who admired  
 D. whom admired

58. F. NO CHANGE  
 G. Maris understandably.  
 H. Maris, understandably—  
 J. Maris, understandably

59. A. NO CHANGE  
 B. recognition, feeling it was his last straw.  
 C. recognition of his last last straw.  
 D. recognition which was the last straw.

60. F. NO CHANGE  
 G. still feeling  
 H. and continued to be feeling that  
 J. until he felt

Item 61 poses a question about Passage IV as a whole.

61. The writer wants to support the assertion in Paragraph 2 that Maris was not a popular player by explaining why he was unpopular. Which of the following strategies would best accomplish that goal?
- A. Citing some specific examples to illustrate why Maris was not liked  
 B. Comparing the number of Maris's fans with the number of Ruth's fans  
 C. Explaining why an athlete should not worry about being popular  
 D. Citing some specific examples to illustrate why Ruth was popular

Key			
47. C	52. J	57. C	
48. J	53. B	58. F	
49. A	54. J	59. A	
50. H	55. B	60. G	
51. D	56. H	61. A	

■ ■ ■

## MATHEMATICS TEST

(Actual test: 60 Minutes—60 Questions)

**DIRECTIONS:** Solve each problem, choose the correct answer, and then blacken the corresponding oval on your answer sheet.

Do not linger over problems that take too much time. Solve as many as you can; then return to the others in the time you have left for this test.

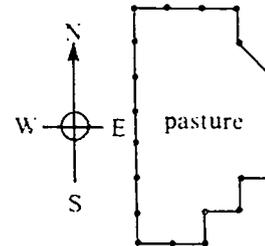
Note: Unless otherwise stated, all of the following should be assumed.

1. Illustrative figures are NOT necessarily drawn to scale.
2. Geometric figures lie in a plane.
3. The word *line* indicates a straight line.
4. The word *average* indicates arithmetic mean.

- 
8. Mrs. Dorgan's gross monthly income is \$1,800. If 15% is withheld for income taxes, 7% for social security, and 2% for insurance, what is her net monthly income (after deducting these expenses)?
- F. \$ 432  
G. \$ 630  
H. \$1,200  
J. \$1,368  
K. \$1,530
9. Simplify  $3\frac{1}{8} - 2\frac{7}{12}$  to a single fraction in lowest terms with a positive denominator. What is the numerator?
- A. -11  
B. -7  
C. 3  
D. 13  
E. 52
10. For all  $y$  and all  $N$ ,  $(y^2 - Ny + 4) + (y^2 - 2) = ?$
- F.  $-Ny + 6$   
G.  $2y^2 + 2$   
H.  $2y^2 - Ny - 2$   
J.  $y^2 - Ny + 2$   
K.  $2y^2 - Ny + 2$
11. Joe has taken 4 tests in his algebra class during the current grading period, earning test scores of 86, 66, 78, and 81. A student needs an average score of 80 on 5 tests to earn a "B" for the class. What is the minimum (integer) score Joe can earn on his next test in order to have an average of at least 80 for the 5 tests?
- A. 83  
B. 85  
C. 87  
D. 89  
E. 91
12. What is the slope of the line with the equation  $2x + 3y + 6 = 0$ ?
- F. -6  
G. -3  
H. -2  
J.  $-\frac{2}{3}$   
K.  $\frac{2}{3}$

13. Which of the following pairs CANNOT intersect to form a circle? (Note: A single point is not considered a circle for the purposes of this question.)
- A. Surface of a sphere and surface of some cylinder
  - B. Surface of a sphere and some plane
  - C. Surface of a cone and some plane
  - D. Surface of a cylinder and some line
  - E. Surface of a cylinder and some plane

15. The diagram below shows a pasture which is fenced in. All but 1 section of fence run straight north-south or east-west. Consecutive fence posts are 10 feet apart except for the 1 diagonal section. Which of the following statements best describes  $P$ , the perimeter of the pasture, in feet?



- A.  $P > 210$
- B.  $P = 210$
- C.  $P < 210$
- D.  $P > 230$
- E.  $P = 240$

14. For all  $x$ ,  $(x - 1)^2 + (x - 2)^2 = ?$
- F.  $2x - 3$
  - G.  $2x^2 - 5$
  - H.  $2x^2 + 5$
  - J.  $2x^2 - 6x - 5$
  - K.  $2x^2 - 6x + 5$

16.  $2\sqrt{28} + 3\sqrt{175} = ?$
- F.  $12\sqrt{7}$
  - G.  $19\sqrt{7}$
  - H. 63
  - J.  $5\sqrt{203}$
  - K.  $83\sqrt{7}$

Key		
8. J	11. D	14. K
9. D	12. J	15. A
10. K	13. D	16. G

## READING TEST

(Actual test: 35 Minutes—40 Questions)

**DIRECTIONS:** There are four passages in this test. Each passage is followed by several questions. After reading a passage, choose the best answer to each question and blacken the corresponding oval on your answer sheet. You may refer to the passages as often as necessary.

### Passage IV

I first had to change my ideas about creativity as soon as I began studying people who were positively healthy, highly evolved and matured, self-actualizing. I had first to give up my stereotyped notion that health, genius, talent and productivity were synonymous. A fair proportion of my subjects, though healthy and creative in a special sense that I am going to describe, were *not* productive in the ordinary sense, nor did they have great talent or genius, nor were they poets, composers, inventors, artists or creative intellectuals. It was also obvious that some of the greatest talents of mankind were certainly not psychologically healthy people, Wagner, for example, or Van Gogh or Byron. Some were and some weren't, it was clear. I very soon had to come to the conclusion that great talent was not only more or less independent of goodness or health of character but also that we know little about it. For instance, there is some evidence that great musical talent and mathematical talent are more inherited than acquired. It seemed clear then that health and special talent were separate variables, maybe only slightly correlated, maybe not. We may as well admit at the beginning that psychology knows very little about special talent of the genius type. I shall say nothing more about it, confining myself instead to that more widespread kind of creativeness which is the universal heritage of every human being that is born, and which seems to co-vary with psychological health.

Furthermore, I soon discovered that I had, like most other people, been thinking of creativeness in terms of products, and secondly, I had unconsciously confined creativeness to certain conventional areas only of human endeavor, unconsciously assuming that *any* painter, *any* poet, *any* composer was leading a creative life. Theorists, artists, scientists, inventors, writers could be creative. Nobody else could be. Unconsciously I had assumed that creativeness was the prerogative solely of certain professionals.

But these expectations were broken up by various of my subjects. For instance, one woman, uneducated, poor, a full-time housewife and mother, did none of these conventionally creative things and yet was a marvellous cook, mother, wife and homemaker. With little money, her home was somehow always beautiful.

45 She was a perfect hostess. Her meals were banquets. Her taste in linens, silver, glass, crockery and furniture was impeccable. She was in all these areas original, novel, ingenious, unexpected, inventive. I just *had* to call her creative. I learned from her and others like her that a first-rate soup is more creative than a second-rate painting, and that, generally, cooking or parenthood or making a home could be creative while poetry need not be: it could be uncreative. . . .

Another was a psychiatrist, a "pure" clinician who never wrote anything or created any theories or researches but who delighted in his everyday job of helping people to create themselves. This man approached each patient as if he were the only one in the world, without jargon, expectations or presuppositions, with innocence and naivete and yet with great wisdom, in a Taoistic fashion. Each patient was a unique human being and therefore a completely new problem to be understood and solved in a completely novel way. His great success even with very difficult cases validated his "creative" (rather than stereotyped or orthodox) way of doing things. From another man I learned that constructing a business organization could be a creative activity. From a young athlete, I learned that a perfect tackle could be as esthetic a product as a sonnet and could be approached in the same creative spirit.

It dawned on me once that a competent cellist I had reflexly thought of as "creative" (because I associated her with creative music? with creative composers?) was actually playing well what someone else had written. She was a mouthpiece. A good cabinet-maker or gardener or dressmaker *could* be more truly creative. I had to make an individual judgment in each instance, since almost any role or job could be either creative or uncreative.

In other words, I learned to apply the word "creative" (and also the word "esthetic") not only to products but also to people in a characterological way, and to activities, processes, and attitudes. And furthermore, I had come to apply the word "creative" to many products other than the standard and conventionally accepted poems, theories, novels, experiments or paintings.

From Abraham H. Maslow, *Toward a Psychology of Being*. © 1968 by Litton Educational Publishing, Inc.

31. Which of the following would the author think the most creative?
- A. A new rock group whose style is very similar to that of a famous rock group
  - B. A physician who deals with each patient in a personal and intuitive manner
  - C. A composer whose music sounds almost identical to J. S. Bach's
  - D. A teacher with an extremely well organized syllabus that is carefully followed each year
32. According to the passage, Wagner, Van Gogh, and Byron have in common that they were:
- F. psychologically unhealthy.
  - G. musicians.
  - H. poets.
  - J. painters.
33. As a result of his study of various types of people, the author's previous understanding of creativity has been:
- A. confirmed.
  - B. changed.
  - C. limited.
  - D. stereotyped.
34. Which of the following assertions does NOT reflect a stereotyped attitude about creativity?
- F. An athletic activity can be creative.
  - G. Poor, uneducated housewives cannot be creative.
  - H. A person must be a professional to be creative.
  - J. Poetry, music, and painting are the most creative activities.
35. In the fifth paragraph (lines 72-80), the author's insight about the cellist is that:
- A. performers are never truly creative.
  - B. performing is a creative activity.
  - C. creativity is more likely to exist in the area of the fine arts.
  - D. an individual judgment of creativity has to be made about each person.
36. The main idea of the second paragraph (lines 29-38) is that:
- F. creativity depends upon a large reservoir of unconscious attitudes.
  - G. all human beings are creative.
  - H. only certain professionals can be creative.
  - J. the author had held mistaken and preconceived ideas about creativity.
37. In the third and fourth paragraphs (lines 39-71), the author implies that he believes a creative activity or product must be one that is:
- A. ignored by the public.
  - B. valued by the public.
  - C. understood only by the creator.
  - D. done well by the creator.
38. Which of the following opinions about genius would the author most likely reject?
- F. Genius is difficult to study.
  - G. Genius is an interesting phenomenon.
  - H. Genius is directly related to state of mental health.
  - J. Genius is much less common than creativity.
39. After the first paragraph, how does the author treat the subject of "special talent of the genius type" (line 24)?
- A. He considers it the highest type of creativity.
  - B. He excludes it from his consideration of creativity.
  - C. He calls all types of creativity indicators of genius.
  - D. He includes it in his consideration of creativity.
40. The author clearly indicates that he believes genius is:
- F. the heritage of each person.
  - G. a prerequisite for creativity.
  - H. the product of mental health.
  - J. not yet explained by psychology.

Key			
31. B	35. D	39. B	
32. F	36. J	40. J	
33. B	37. D		
34. F	38. H		

## SCIENCE REASONING TEST

(Actual test: 35 Minutes—40 Questions)

**DIRECTIONS:** There are seven passages in this test. Each passage is followed by several questions. After reading a passage, choose the best answer to each question and blacken the corresponding oval on your answer sheet. You may refer to the passages as often as necessary.

### Passage IV

The used, heated water from a power plant passes through a cooling basin and is returned to the river as effluent. To determine the environmental impact of the effluent, biologists compared the water temperatures and

studied samples taken from 5 sites along the river in January and July. The organisms studied were: blue-green algae (anchored near the surface), water striders (surface dwellers), smallmouth bass (near-surface to near-bottom dwellers), and crayfish (bottom burrowers).

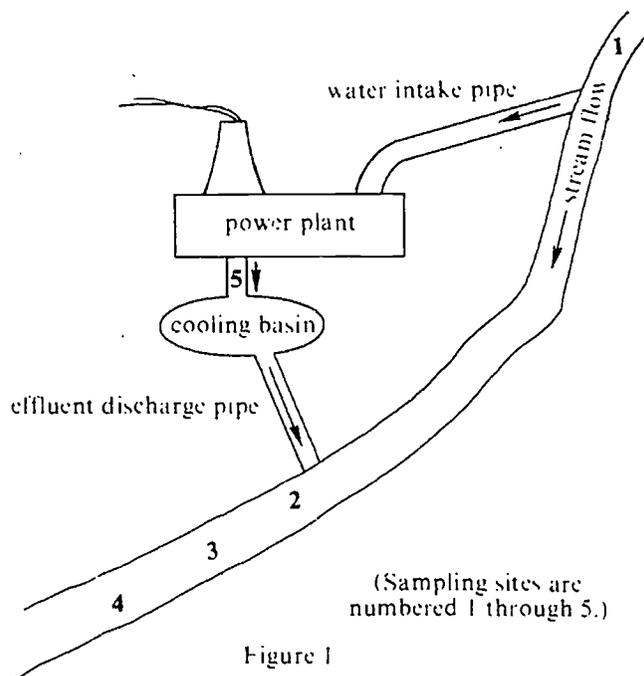


Table I

Site	Water temperature (°C)	Biomass of algae (grams/meter <sup>2</sup> )	Biomass of bass (grams/1,000 liters)	Population density of water striders (# per meter <sup>2</sup> )	Population density of crayfish (# per trap per night)
January samples:					
1	2	5	4	1.0	10
2	12	12	10	0.8	1
3	6	7	7	1.1	5
4	3	6	5	1.2	8
5	30	no data	no data	no data	no data
July samples:					
1	20	15	3.0	0.9	11
2	30	24	0.1	1.1	30
3	25	21	0.5	1.0	20
4	23	18	1.0	1.1	15
5	48	no data	no data	no data	no data

18. Which of the following statements best represents the changes observed in the same sampling sites from January to July?
- F. The biomass of bass remained constant.
  - G. The biomass of bass decreased.
  - H. The population density of crayfish remained constant.
  - J. The population density of crayfish decreased.
19. Which of the following conclusions about the power plant's effect on the river is(are) supported by the data?
- I. In winter, the power plant heats the river's water.
  - II. In winter, the power plant cools the river's water.
  - III. In summer, the power plant heats the river's water.
  - IV. In summer, the power plant cools the river's water.
- A. II only
  - B. III only
  - C. I and III only
  - D. II and IV only
20. Based on the passage, what might one conclude about the effects of the effluent discharge on the population densities of river organisms?
- F. Some may be unaffected, others may be decreased, and others will thrive.
  - G. Some may be unaffected, others will thrive, but none will be decreased.
  - H. All organisms will be increased.
  - J. All organisms will be decreased.
21. Which of the following statements best describe(s) the relationship between water temperature and crayfish population density?
- I. In January, the lower the temperature, the higher their population density.
  - II. In January, the higher the temperature, the higher their population density.
  - III. In July, the lower the temperature, the higher their population density.
  - IV. In July, the higher the temperature, the higher their population density.
- A. III only
  - B. I and IV only
  - C. II and III only
  - D. II and IV only
22. Which sampling site (as shown in Figure 1) represents the experimental control?
- F. Site 1
  - G. Site 2
  - H. Site 3
  - J. Site 5

Key	
18. G	21. B
19. C	22. F
20. F	

## ACT Assessment Test Date Schedules

### 1994-1995

Test Date*	Regular Registration Postmark Deadline (regular fee)**	Late Registration Postmark Deadline (additional fee required)
October 22, 1994	September 23, 1994	October 7, 1994
December 10, 1994	November 10, 1994	November 28, 1994
February 4, 1995	January 6, 1995	January 23, 1995
April 8, 1995	March 10, 1995	March 27, 1995
June 10, 1995	May 12, 1995	May 26, 1995

### 1995-1996

Test Date*	Regular Registration Postmark Deadline (regular fee)**	Late Registration Postmark Deadline (additional fee required)
October 28, 1995	September 29, 1995	October 16, 1995
December 9, 1995	November 10, 1995	November 27, 1995
February 3, 1996	January 5, 1996	January 22, 1996
April 13, 1996	March 15, 1996	April 1, 1996
June 8, 1996	May 10, 1996	May 24, 1996

\*Due to the special requirements of legislation in effect in New York, a February 1995 test is not scheduled in that state, and the basic fee is \$2.00 higher on all 1994-95 test dates. This test date restriction and higher fee may continue for the 1995-96 testing year.

\*\*Due to special services provided in Florida, the basic fee is \$2.00 higher in Florida on all 1994-95 and 1995-96 test dates.

#### Some Facts About the ACT Assessment

Basic test fee (Includes reports for the student, the high school, and up to three colleges)	\$ 17.00
Students tested in 1993-94	1,500,000
Colleges that accept ACT scores	3,500
ACT test centers (U.S. and international)	5,000