APPENDIX 1

CRITICAL THINKING TEST

Answering the questions:

In answering each question, use only what you are told in that question. In order to do this, you should

imagine that your mind is blank, because some of the things you are told are obviously false. Even so,

you should suppose that they are true--for that question only.

You will be given one or more sentences with which to think. You will then be given another sentence,

about which you must decide, using only what you were told.

There are three possible answers. This is what they mean:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE It may be true or it may not be true. You

weren't told enough to be certain whether it

is "YES" or "NO".

The meaning of the possible answers is given at the top of each page to help you remember. Each

question has only one correct answer.

Mark your answers on this booklet by drawing a circle around the right answer. Remember: If you

have no idea what the answer is, skip the question and go on to the next. Do not guess wildly, but if

you think you know, then answer the question.

Sample questions:

Read the first question and see how it is marked.

1. Suppose you know that

Bill is next to Sam.

Then would this be true?

Sam is next to Bill.

1. A.

B. NO

C. MAYBE

The correct answer is A, "YES". If Bill is next to Sam, then Sam must be next to Bill. It must be true, so a

circle is drawn around "YES".

Here is another sample. This time you circle the answer.

2. Suppose you know that

The sparrow is over the

hawk.

Then would this be true?

The hawk is over the

sparrow.

2. A. YES

B. NO

C. MAYBE

You should have circled B. "NO". If the sparrow is over the hawk, then the hawk can't be over the

sparrow. It can't be true.

YES

Cornell Conditional-Reasoning Test, Form X Page 3

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE It may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

Circle the answer to this next sample. Be careful:

3. Suppose you know that

Jane is standing near Betsy.

Then would this be true?

Betsy is standing near Jane.

3. A. YES

B. NO

C. MAYBE

The correct answer is C, "MAYBE". Even is Jane is standing near Betsy, Betsy may be sitting. Betsy

might be standing near Jane, but she might be sitting near Jane, or something else. You were not told

enough to be certain about it, so "MAYBE" is the anwer.

Circle the answer to this next sample question. Remember that your mind is supposed to be blank at

the beginning of each question.

4. Suppose you know that

California is near

New York.

Then would this be true?

New York is near

California.

4. A. YES

B. NO

C. MAYBE

The correct answer is A, "YES", even though New York and California are not really near to each other.

If California were near to New York, then New York would be near to California. It would have to be

true.

Remember: You should suppose that what you are told is true--for the question you are answering.

Cornell Conditional-Reasoning Test, Form X Page 4

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

So far in the sample questions you were told only one thing. In this one you are told two things. Circle

your answer.

5. Suppose you know that

The pit is inside of the mouth of the

fox.

The cherry is inside the mouth of the

fox.

Then would this be true?

The pit is inside the cherry.

5. A. YES

B. NO

C. MAYBE

The correct answer is C, "MAYBE". All you are told is that the pit and the cherry are both in the mouth

of the fox. There is no way to be certain whether the pit is in the cherry or not.

Here is the last sample question. This time the letters "X" and "Y" are used. They can stand for anything

you like. Circle your answer.

6. Suppose you know that

X is next to Y.

Then would this be true?

Y is next to X.

6. A. YES

B. NO

C. MAYBE

The correct answer is A, "YES", no matter what X and Y stand for. If X is next to Y. then Y must be next

to X.

Now that you have done the practice questions you probably understand what is expected. If you have

any questions, ask them now.

DO NOT TURN THE PAGE UNTIL YOU ARE TOLD TO DO SO.

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

7. Suppose you know that

If the hat on the table is blue, then it

belongs to Joan.

The hat on the table is blue.

Then would this be true?

The hat on the table belongs to Joan

7. A. YES

B. NO

C. MAYBE

8. Suppose you know that

If the car in the parking lot is Mr.

Smith's, then it is blue.

The car in the parking lot is not blue.

Then would this be true?

The car in the parking lot is Mr. Smith's.

8. A. YES

B. NO

C. MAYBE

9.

Suppose you know that

If Tom lives in the white house, then his

last name is Smith.

Tom does not live in the white house.

Then would this be true?

Tom's last name is not Smith.

9. A. YES

B. NO

C. MAYBE

10. Suppose you know that

Harry is on the football team only if he

has his mother's permission.

Harry is on the football team.

Then would this be true?

Harry has his mother's permission.

10. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 6

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

11. Suppose you know that

If Mary lives in the white house, then

her last name is Brown.

Mary's last name is Brown.

Then would this be true?

Mary lives in the white house.

11. A. YES

B. NO

C. MAYBE

12. Suppose you know that

John is in the kitchen only if there is

food in the kitchen.

There is no food in the kitchen.

Then would this be true?

John is in the kitchen.

12. A. YES

B. NO

C. MAYBE

13. Suppose you know that

If the automobile in the parking lot

belongs to Mr. Brown, then it is

black.

The automobile in the parking lot

doesn't belong to Mr. Brown.

Then would this be true?

The automobile isn't black.

13. A. YES

B. NO

C. MAYBE

14. Suppose you know that

Joe's bicycle is not working today.

If Joe's bicycle is not working, then he

has to walk to school.

Then would this be true?

Joe has to walk to school today?

14. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 7

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

15. Suppose you know that

There is an X only if there is a Y.

There is not a Y.

Then would this be true?

There is an X.

15. A. YES

B. NO

C. MAYBE

16. Suppose you know that

Dick was not at home yesterday

afternoon.

If Dick was not at the football game

yesterday afternoon he was at home.

Then would this be true?

Dick was not at the football game

yesterday afternoon.

16. A. YES

B. NO

C. MAYBE

17. Suppose you know that

Tom may use paints only if he has

cleaned up his clay work.

Tom may use paints.

Then would this be true?

Tom has cleaned up his clay work.

17. A. YES

B. NO

C. MAYBE

18. Suppose you know that

Fred went to a movie last night.

If Fred does not go to a movie, he feels

bad the next day.

Then would this be true?

Fred does not feel bad today.

18. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 8

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

19. Suppose you know that

If there is an X, then there is a Y.

There is an X.

Then would this be true?

There is a Y.

19. A. YES

B. NO

C. MAYBE

20. Suppose you know that

Mary will be in the school play only if

she likes plays.

Mary will be in the school play.

Then would this be true?

Mary does not like plays.

20. A. YES

B. NO

C. MAYBE

21. Suppose you know that

Tom is playing ball only if he has a ball

glove.

Tom does not have a ball glove.

Then would this be true?

Tom is playing ball.

21. A. YES

B. NO

C. MAYBE

22. Suppose you know that

If there is an X, then there is a Y.

There is not a Y .

Then would this be true?

There is an X.

22. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 9

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

23. Suppose you know that

If whales are birds, then they can fly.

Whales aren't birds.

Then would this be true?

Whales can't fly.

23. A. YES

B. NO

C. MAYBE

24. Suppose you know that

If Bill lives on a farm, then he has a pet

dog.

Bill has a pet dog.

Then would this be true?

Bill lives on a farm.

24. A. YES

B. NO

C. MAYBE

25. Suppose you know that

Jerry was not asked to play ball.

Jerry is not home only if he was asked to

play bail.

Then would this be true?

Jerry is not home.

25. A. YES

B. NO

C. MAYBE

26. Suppose you know that

If Mary lives in the green house, then

her last name is Jones.

Mary doesn't live in the green house.

Then would this be true?

Mary's last name is not Jones.

26. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 10

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

27. Suppose you know that

If the coat in the closet is brown, then it

belongs to Sue.

The coat in the closet is brown.

Then would this be true?

The coat in the closet does not belong to

Sue.

27. A. YES

B. NO

C. MAYBE

28. Suppose you know that

There are black cats only if there are

pink cats.

There are black cats.

Then would this be true?

There are pink cats.

28. A. YES

B. NO

C. MAYBE

29. Suppose you know that

If the bicycle in the garage is Bob's, then

it is red.

The bicycle in the garage is not red.

Then would this be true?

The bicycle in the garage is not Bob's.

29. A. YES

B. NO

C. MAYBE

30. Suppose you know that

If there is an X, then there is a Y.

There is a Y.

Then would this be true?

There is an X.

30. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 11

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

31. Suppose you know that

If mice have five legs, then they run

faster than horses.

Mice do have five legs.

Then would this be true?

Mice run faster than horses.

31. A. YES

B. NO

C. MAYBE

32. Suppose you know that

If Jane fell off her horse, then she hurt

herself badly.

Jane hurt herself badly.

Then would this be true?

Jane fell off her horse.

32. A. YES

B. NO

C. MAYBE

33. Suppose you know that

The short pencil is not Bill's favorite

pencil.

The short pencil is not Bill's favorite,

only if it is dull.

Then would this be true?

The short pencil is dull.

33. A. YES

B. NO

C. MAYBE

34. Suppose you know that

If there is an X, then there is a Y.

There is not an X.

Then would this be true?

There is not a Y.

34. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 12

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

35. Suppose you know that

If John lives in the white house, then his

last name is Smith.

John's last name is not Smith.

Then would this be true?

John does live in the white house.

35. A. YES

B. NO

C. MAYBE

36. Suppose you know that

Birds can fly only if they can play the

piano.

Birds cannot play the piano.

Then would this be true?

Birds can fly.

36. A. YES

B. NO

C. MAYBE

37. Suppose you know that

The car will start.

If the temperature is not below freezing,

the car will start.

Then would this be true?

The temperature is not below freezing.

37. A. YES

B. NO

C. MAYBE

38. Suppose you know that

There is an X only if there is a Y.

There is an X.

Then would this be true?

There is a Y.

38. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 13

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

39. Suppose you know that

If dogs have four legs, then they have

three eyes.

Dogs don't have three eyes.

Then would this be true?

Dogs do have four legs.

39. A. YES

B. NO

C. MAYBE

40. Suppose you know that

If Jean goes to the park, she will see her

friend Pat.

Today, Jean is going to the park.

Then would this be true?

Today, Jean will see her friend Pat.

40. A. YES

B. NO

C. MAYBE

41. Suppose you know that

If horses are green, then they have two

tails.

Horses have two tails.

Then would this be true?

Horses are green.

41. A. YES

B. NO

C. MAYBE

42. Suppose you know that

The red pencils belong to Sally only if

they are on the table.

The red pencils are not on the table.

Then would this be true?

The red pencils do not belong to Sally.

42. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 14

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

43. Suppose you know that

If Paul rides his bike to school, he goes

the long way.

Paul rode his bike to school today.

If Paul goes the long way, he gets to

school late.

Then would this be true?

Paul was not late for school today.

43. A. YES

B. NO

C. MAYBE

44 Suppose you know that

If the chair is green, then the table is

black.

Then would this be true?

If the table is black, then the chair is

green.

40. A. YES

B. NO

C. MAYBE

45. Suppose you know that

If there is a blue pencil in the second

box, then there is a green pencil in

the first box.

If there is a green pencil in the first box,

then there is a red pencil in the third

box.

Then would this be true?

If there is a blue pencil in the second

box, then there is a red pencil in the

third box.

45. A. YES

B. NO

C. MAYBE

46. Suppose you know that

If Mrs. Smith entered the flower show,

then she entered her roses.

Then would this be true?

If Mrs. Smith didn't enter her roses, then

46. A. YES

B. NO

C. MAYBE

she didn't enter the flower show.

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

47. Suppose you know that

Bill will see Audrey, if and only if he

goes to Montreal .

Bill will not see Audrey this year.

Then would this be true?

Bill is going to Montreal this year.

47. A. YES

B. NO

C. MAYBE

48. Suppose you know that

If Gary sees Sharon, he goes to Canada.

This winter Gary saw Sharon.

Gary goes skating only if he goes to

Canada.

Then would this be true?

This winter Gary went skating.

48. A. YES

B. NO

C. MAYBE

49. Suppose you know that

If there is an A, then there is a B.

If there is a B. then there is a C.

Then would this be true?

If there is an A, then there is a C.

49. A. YES

B. NO

C. MAYBE

50. Suppose you know that

If birds can fly, then they have six legs.

Then would this be true?

If birds don't have six legs, then they

can't fly.

50. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 17

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

51. Suppose you know that

If the bus goes to town, then it passes

the old stone chu rch .

The bus goes to town.

If it passes the old stone church, then it

goes over the new bridge.

Then would this be true?

The bus doesn't go over the new bridge.

51. A. YES

B. NO

C. MAYBE

52. Suppose you know that

If the school team loses this game,

Brighton High will win the league

pennant.

If Joe does not hit a homer on this pitch,

the school team will lose this game.

Then would this be true?

If Joe does not hit a homer on this pitch,

Brighton High will win the league

pennant.

52. A. YES

B. NO

C. MAYBE

53. Suppose you know that

If Jean goes shopping, she goes to

Chicago.

Last Saturday Jean went shopping.

Jean visits her aunt only if she goes to

Chicago.

Then would this be true?

Last Saturday Jean visited her aunt.

53. A. YES

B. NO

C. MAYBE

54. Suppose you know that

Tom will go skating, if and only if he

can borrow Frank's jacket.

Tom is not going skating.

Then would this be true?

54. A. YES

B. NO

C. MAYBE

Tom can borrow Frank's jacket.

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

55. Suppose you know that

If Sam misses the bus, he will walk to

school.

If Sam walks to school, he will cross the

bridge.

Then would this be true?

If Sam misses the bus, he will cross the

bridge.

55. A. YES

B. NO

C. MAYBE

56. Suppose you know that

If Bob did not buy a new baseball glove,

then he played basketball today.

Then would this be true?

If Bob did not play basketball today,

then he did buy a new baseball

glove.

56. A. YES

B. NO

C. MAYBE

57. Suppose you know that

If Bill has an apple in his lunchbox, then

Sally has a cracker in her lunchbox.

Then would this be true?

If Sally has a cracker in her lunchbox, then

Bill has an apple in his lunchbox.

57. A. YES

B. NO

C. MAYBE

58. Suppose you know that

Betty is going to the movies.

Betty is not going to the movies, if and

only

if Ann is going to the movies.

Then would this be true?

Ann is going to the movies.

58. A. YES

B. NO

C. MAYBE

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

59. Suppose you know that

If there is an X, then there is a Y.

Then would this be true?

If there is a Y. then there is an X.

59. A. YES

B. NO

C. MAYBE

60. Suppose you know that

Elephants are pink, if and only if they

are large .

Elephants are not pink.

Then would this be true?

Elephants are large.

60. A. YES

B. NO

C. MAYBE

61. Suppose you know that

If there is an X, then there is a Y.

Then would this be true?

If there is not a Y. then there is not an X.

61. A. YES

B. NO

C. MAYBE

62. Suppose you know that

If John has the red chalk, then he is

making a poster for the play.

John has the red chalk.

If John is making a poster for the play,

then he is in the library.

Then would this be true?

John is in the library.

62. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 21

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

63. Suppose you know that

That bicycle belongs to John, if and only

if it is red.

That bicycle belongs to John.

Then would this be true?

That bicycle is not red.

63. A. YES

B. NO

C. MAYBE

64. Suppose you know that

If a dog can stand on its front legs, then

it is a puppy.

Then would this be true?

If a dog is a puppy, then it can stand on

its front legs.

64. A. YES

B. NO

C. MAYBE

65. Suppose you know that

If there is an X, then there is a Y.

There is an X.

There is a Z only if there is a Y.

Then would this be true?

There is a Z.

65. A. YES

B. NO

C. MAYBE

66. Suppose you know that

If Kate is in Mrs. Jones' class, then she is

out on the playground.

If Kate is out on the playground, then she is jumping rope.

Then would this be true?

If Kate is in Mrs. Jones' class, then she is

jumping rope.

66. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 22

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

67. Suppose you know that

If there is an X, then there is a Y.

There is an X.

If there is a Y. then there is a Z.

Then would this be true?

There is not a Z.

67. A. YES

B. NO

C. MAYBE

68. Suppose you know that

If Jane did not go to the movies

yesterday, then she saw her friend

Pat.

Jane went to the park yesterday only if

she saw her friend Pat.

Jane did not go to the movies yesterday.

Then would this be true?

Jane went to the park yesterday.

68. A. YES

B. NO

C. MAYBE

69. Suppose you know that

If Nancy bought a new dress, then she

went to the shop on Main Street.

Then would this be true?

If Nancy didn't go to the shop on Main

Street, then she didn't buy a new

dress.

69. A. YES

B. NO

C. MAYBE

70. Suppose you know that

If John is not in school, then he has a

cold.

Then would this be true?

If John has a cold, then he is not in

school.

70. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 23

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

71. Suppose you know that

If Sally is writing a report at home, then

the library is closed.

Sally is writing a report at home.

Dick is using the classroom dictionary

only if the library is closed.

Then would this be true?

Dick is using the classroom dictionary.

71. A. YES

B. NO

C. MAYBE

72. Suppose you know that

If there are no blue pencils in the first

box, then there is a green pencil in

the second box.

If there is a green pencil in the second

box, then there is a red pencil in the

third box.

There are no blue pencils in the first box.

Then would this be true?

There are no red pencils in the third box.

72. A. YES

B. NO

C. MAYBE

73. Suppose you know that

If an animal is a turtle, then it can fly.

If an animal can fly, then it has feathers.

Then would this be true?

If an animal is a turtle, then it has

feathers.

73. A. YES

B. NO

C. MAYBE

74. Suppose you know that

If there is a yellow marble in the first

box, then there is a blue marble in

the second box.

Then would this be true?

If there is not a blue marble in the

second box, then there is not a

74. A. YES

B. NO

C. MAYBE

Cornell Conditional-Reasoning Test, Form X Page 24

yellow marble in the first box.

Cornell Conditional-Reasoning Test, Form X Page 25

Here is a reminder of the meaning of the possible answers:

A. YES It must be true.

B. NO It can't be true.

C. MAYBE I t may be true or it may not be true.You

weren't told enough to be certain whether it

is "YES" or "NO".

75. Suppose you know that

If people have fins, then they live in

water.

People have fins.

People can swim only if they live in

water.

Then would this be true?

People can swim.

75. A. YES

B. NO

C. MAYBE

76. Suppose you know that

If this animal is a dog, then it can fly.

This animal is a dog.

If an animal can fly, then it has feathers.

Then would this be true?

This animal does not have feathers.

76. A. YES

B. NO

C. MAYBE

77. Suppose you know that

If John is on the volleyball team, then he

is good at volleyball.

Then would this be true?

If John is good at volleyball, then he is

on the volleyball team.

77. A. YES

B. NO

C. MAYBE

APPENDIX 2

READING COMPREHENSION TEST

(Cliff's TOEFL Preparation)

Directions: In this section you will read several passages. Each one is followed by a number of questions about it. You are to choose the one best answer, A, B, C or D, to each question. Then, on your answer sheet, find the number of the question and fill in the space that corresponds to the letter of the answer you have chosen.

Questions 1-11

The work of the railroad pioneers in America became the basis for a great surge of railroad building halfway through the nineteenth century that linked the nation together as never before. Railroads eventually became the nation's number one transportation system, and remained so until the construction of the interstate highway system halfway through the twentieth century. They were of crucial importance in stimulating economic expansion, but their influence reached beyond the economy and was pervasive in American society at large.

By 1804, English as well as American inventors had experimented with steam engines for moving land vehicles. In 1920, John Stevens ran a locomotive and cars around in a circular track on his New Jersey estate, which the public saw as an amusing toy. And in 1825, after opening a short length of track, the Stockton to Darlington Railroad in England became the first line to carry general traffic. American businesspeople, especially those in the Atlantic coastal region who looked for better communication with the West, quickly became interested in the English experiment. The first company in America to begin actual operations was the Baltimore and Ohio, which opened a thirteen- mile length of track in 1830. It used a team of horses to pull a train of passenger carriages and freight wagons along the track. Steam locomotive power didn't come into regular service until two years later.

However, for the first decade or more, there was not yet a true railroad system. Even the longest of the lines was relatively short in the 1830's, and most of them served simply to connect water routes to each other, not to link one railroad to another. Even when two lines did connect, the tracks often differed in width, so cars from one line couldn't fit onto tracks of the next line. Schedules were unreliable and wrecks were frequent. Significantly, however, some important developments during the 1830's and 1840's included the introduction of heavier iron rails, more flexible and powerful locomotives, and passenger cars

were redesigned to become more stable, comfortable, and larger. By the end of 1830 only 23 miles of track had been laid in the country. But by 1936, more than 1,000 miles of track had been laid in eleven States, and within the decade, almost 3,000 miles had been constructed. By that early age, the United States had already

surpassed Great Britain in railroad construction, and particularly from the mid-1860's, the late nineteenth century belonged to the railroads.

1. The word "stimulating" in line 5 is closest in meaning to

(A) helping (B) changing (C) promoting (D) influencing

2. The word "their" in line 6 refers to

(A) railroad pioneers (B) railroads

(C) the interstate highway system (D) American society

3. Which of the following can be inferred from the passage?

(A) The United States regarded Great Britain as a competitor in developing the most efficient railroad system

(B) Steam locomotive power was first used in 1832

(C) American businessmen saw railroads as a threat to established businesses

(D) Steam locomotives replaced horses because of the distances across the country

4. The author concludes that for the first decade or more, there was not yet a true railroad system because

(A) passenger cars were not stable, comfortable or large

(B) locomotives were not powerful enough

(C) schedules were unreliable and wrecks were frequent

(D) lines were relatively short and not usually linked

5. The word "schedules" in line 23 is closest in meaning to:

(A) safety procedures (B) employees

(C) timetables (D) railroad tracks

6. Which of the following is NOT true about the 1830's and 1840's (line 24)

(A) passenger cars became larger (B) schedules were reliable

(C) locomotives became more powerful (D) tracks were heavier

7. The word "stable" in line 26 is closest in meaning to

(A) fixed (B) supportive (C) reliable (D) sound

8. By what time had almost 3,000 miles of track been laid?

(A) 1830 (B) 1836 (C) 1840 (D) mid-1860s

9. The word "surpassed" in line 29 is closest in meaning to

(A) exceeded (B) beaten (C) overtaken (D) equaled

10. Where in the passage does the author outline the main conclusions about the importance of railroads in America?

(A) Lines 3-7 (B) Lines 14-18 (C) Lines 19-21 (D) Lines 29-31

11. Why does the author include details about Great Britain in the passage?

(A) To compare developments in both the United States and Great Britain

(B) To illustrate the competitiveness between the two countries

(C) To show where Americans got their ideas and technology from

(D) To provide a more complete historical context

Questions 12-19

The Nobel Peace Prize is awarded annually and the first woman to win this prize was Baroness Bertha Felicie Sophie von Suttner in 1905. In fact, her work inspired the creation of the Prize. The first American woman to win this prize was Jane Addams, in 1931. However, Addams is best known as the founder of Hull House.

Jane Addams was born in 1860, into a wealthy family. She was one of a small number of women in her generation to graduate from college. Her commitment to improving the lives of those around her led her to work for social reform and world peace. In the 1880s Jane Addams traveled to Europe. While she was in London, she visited a 'settlement house' called Toynbee Hall. Inspired by Toynbee Hall, Addams and her friend, Ellen Gates Starr, opened Hull House in a neighborhood of slums in Chicago in 1899. Hull House provided a day care center for children of working mothers, a community kitchen, and visiting nurses. Addams and her staff gave classes in English literacy, art, and other subjects. Hull House also became a meeting place for clubs and labor unions. Most of the people who worked with Addams in Hull House were well educated, middle-class women. Hull House gave them an opportunity to use their education and it provided a training ground for careers in social work.

Before World War I, Addams was probably the most beloved woman in America. In a newspaper poll that asked, "Who among our contemporaries are of the most value to the community?", Jane Addams was rated second, after Thomas Edison. When she opposed America's involvement in World War I, however, newspaper editors called her a traitor and a fool, but she never changed her mind. Jane Addams was a strong champion of several other causes. Until 1920, American women could not vote. Addams joined in the movement for women's suffrage and was a vice president of the National American Woman Suffrage Association. She was a founding member of the National Association for

(20)

(25)

the Advancement of Colored People (NAACP), and was president of the Women's International League for Peace and Freedom. . Her reputation was gradually restored during the last years of her life. She died of cancer in 1935.

12. With which of the following subjects is the passage mainly concerned?

(A) The first award of the Nobel Peace Prize to an American woman

(B) A woman's work for social reform and world peace

(C) The early development of Social Work in America

(D) Contributions of educated women to American society

13. Which of the following can be inferred from the passage?

(A) the work of Baroness Bertha Felicie Sophie von Suttner was an inspiration to Jane Addams

(B) Jane Addams is most famous for her opening of Hull House

(C) those who lived near Hull House had very poor literacy skills

(D) Jane Addams considered herself as a citizen of the world rather than of one particular country

14. The word "commitment" in line 6 is closest in meaning to

(A) involvement (B) obligation (C) dedication (D) enthusiasm

15. Jane Addams was inspired to open Hull House because:

(A) it gave educated women an opportunity to use their education and develop careers in social work

(B) she traveled to Europe in the 1880s

(C) she visited Toynbee Hall

(D) she was invited by a 'settlement house' in Chicago

16. The word "their" in line 15 refers to

(A) children of working mothers (B) middle-class women

(C) visiting nurses (D) labor union members

17. The word "contemporaries" in line 18 is closest in meaning to

(A) people of the same time (B) famous people still alive

(C) elected officials (D) people old enough to vote

18. According to the passage, Jane Addams' reputation was damaged when she

(A) allowed Hull House to become a meeting place for clubs and labor unions

(C) joined in the movement for women's suffrage

(C) became a founding member of the NAACP

(D) opposed America's involvement in World War I

19. Where in the passage does the author mention the services provided by Hull House?

(A) Lines 5-10 (B) Lines 10-15 (C) Lines 15-20 (D) Lines 20-25

Questions 20-29

The medieval artists didn't know about perspective; they didn't want to make their people look like real, individual people in a real, individual scene. They wanted to show the truth, the eternal quality of their religious stories. So these artists didn't need to know about perspective.

In the European Renaissance period, artists wanted to show the importance of the individual person and his or her possessions and surroundings. A flat medieval style couldn't show this level of reality and the artists needed a new technique. It was the Italian artist Brunelleschi who discovered the technique of perspective drawing. At first the artists of the Renaissance only had single-point perspective. Later they realized that they could have two-pointed perspective and still later multi-point perspective.

With two-point perspective they could turn an object (like a building) at an angle to the picture and draw two sides of it. The technique of perspective which seems so natural to us now is an invented technique, a part of the "grammar of painting". Like all bits of grammar there are exceptions about perspective. For example, only vertical and horizontal surfaces seem to meet on eye level. Sloping roof tops don't meet on eye level.

For 500 years, artists in Europe made use of perspective drawing in their pictures. Nevertheless, there are a range of priorities that artists in displaying individual styles. Crivelli wanted to show depth in his picture and he used a simple single-point perspective. Cezanne always talked about space and volume. Van Gogh, like some of the other painters of the Impressionist period, was interested in Japanese prints. And Japanese artists until this century were always very strong designers of "flat" pictures. Picasso certainly made pictures which have volume and depth.   However, he wanted to keep our eyes on the surface and to remind us that his paintings are paintings and not illusions.

It is technically easy to give an illusion of depth. However, a strong two dimensional design is just as important as a feeling of depth, and perhaps more important.

20. The passage mainly discusses

(A) the difference between medieval and Renaissance art

(B) how the technique of perspective influenced the modern art

(C) the discovery of the technique of perspective

(D) the contribution of Renaissance artists

21. The word "eternal" in line 3 is closest in meaning to

(A) timeless (B) infinite (C) frequent (D) constant

22. According to the passage, which is the main concern for medieval artists?

(A) the individual person and his/her possessions and surroundings

(B) real people, real scenes

(C) eternal timeless truth of the earth

(D) themes of religious stories

23. The discovery of perspective was the result of

(A) Renaissance artists' to prove that the medieval artists could show level of reality

(B) the need to turn an object at an angle and draw more than one side of it

(C) the subject being shifted from religious stories to individual person and surroundings.

(D) natural evolution of human senses

24. The word "it" in line 12 refers to

(A) the picture (B) perspective (C) angle (D) the object

25. The word "Grammar " in line 13 is closest in meaning to

(A) construction (B) grammatical rules

(C) rules and regulations (D) tones and volume

26. The author's purpose to give the example in line14-15 is to

(A) explain how perspective work in painting

(B) support two-pointed perspective

(C) illustrate that there are exceptions about perspective

(D) point out that the technique of perspective though seems so natural is an invented technique

27. The following artists' priorities in style shift away from perspective EXCEPT

(A) Crivelli (B) Cezanne (C) Japanese artists (D) Brunelleschi

28. The word "Illusion" in line 25 is closest in meaning to

(A) deception (B) photograph (C) decoration (D) illustration

29. It can be inferred from the passage that Renaissance artists

(A) embraced the medieval style of eternal truth

(B) needed to develop a new approach towards painting to show a new level of reality

(C) were inspired by vertical and horizontal surfaces in inventing the technique of perspective

(D) saw two dimensional design more important than a feeling of depth

Questions 30-39

There are two main hypotheses when it comes to explaining the emergence of modern humans. The 'Out of Africa' theory holds that homo sapiens burst onto the scene as a new species around 150,000 to 200,000 years ago in Africa and subsequently replaced archaic humans such as the Neandertals. The other model, known as multi-regional evolution or regional continuity, posits far more ancient and diverse roots for our kind. Proponents of this view believe that homo sapiens arose in Africa some 2 million years ago and evolved as a single species spread across the Old World, with populations in different regions linked through genetic and cultural exchange.

Of these two models, Out of Africa, which was originally developed based on fossil evidence, and supported by much genetic research, has been favored bythe majority of evolution scholars. The vast majority of these genetic studies have focused on DNA from living populations, and although some small progress has been made in recovering DNA from Neandertal that appears to support multi-regionalism, the chance of recovering nuclear DNA from early human fossils is quite slim at present. Fossils thus remain very much a part of the human origins debate.

Another means of gathering theoretical evidence is through bones. Examinations of early modern human skulls from Central Europe and Australia dated to between 20,000 and 30,000 years old have suggested that both groups apparently exhibit traits seen in their Middle Eastern and African predecessors. But the early modern specimens from Central Europe also display Neandertal traits, and the early modern Australians showed affinities to archaic Homo from Indonesia. Meanwhile, the debate among paleoanthropologists continues , as supporters of the two hypotheses challenge the evidence and conclusions of each other.

30. The passage primarily discusses which of the following

(A) Evidence that supports the "Out of Africa" theory

(B) Two hypotheses and some evidence on the human origins debate

(C) The difficulties in obtaining agreement among theorists on the human origins debate

(D) That fossils remain very much a part of the human origins debate

31. The word "emergence" in line 1 is closest in meaning to

(A) complexity (B) development (C) appearance (D) decline

32. The word "proponents" in line 6 is closet in meaning to

(A) experts (B) advocates (C) inspectors (D) historians

33. All of the following are true except

(A) three methods of gathering evidence are mentioned in the passage

(B) the multi-regional model goes back further in history.

(C) the Out of Africa model has had more support from scholars

(D) DNA studies offer one of the best ways in future to provide clear evidence.

34. The word "slim" in line 14 is closest in meaning to

(A) small (B) narrow (C) thin (D) difficult

35. Which of the following is not true

(A) the vast majority of genetic studies have focused on living populations

(B) early modern human skulls all support the same conclusions

(C) both hypotheses focus on Africa as a location for the new species.

(D) early modern Australian skulls have similarities to those from Indonesia.

36. In line 18, the word "their " refers to which of the following

(A) Middle Easterners and Africans (B) skulls

(C) central Europeans and Australians (D) traits

37. Which of the following is NOT true about the two hypotheses

(A) Both hypotheses regard Neandertals to be the predecessors of modern humans

(B) Genetic studies have supported both hypotheses

(C) Both hypotheses cite Africa as an originating location.

(D) One hypothesis dates the emergence of homo sapiens much earlier than the other.

38. It can be inferred from the passage that

(A) there is likely to be an end to the debate in the near future

(B) the debate will interest historians to take part in

(C) the debate is likely to be less important in future

(D) there is little likelihood that the debate will die down.

39. According to the passage, the multi-regional evolution model posits far more diverse roots for our kind because

(A) Evidence from examinations of early modern human skulls has come from a number of different parts of the world.

(B) DNA from Neandertal appears to support multi-regionalism

(C) Populations in different regions were linked through genetic and cultural exchange

(D) This has been supported by fossil evidence

Questions 40-50

Although management principles have been implemented since ancient times, most management scholars trace the beginning of modern management thought back to the early 1900s, beginning with the pioneering work of Frederick Taylor (1856-1915) Taylor was the first person to study work scientifically. He is most famous for introducing techniques of time and motion study, differential piece rate systems, and for systematically specializing the work of operating employees and managers. Along with other pioneers such as Frank and Lillian Gilbreth, Taylor set the stage, labeling his philosophy and methods "scientific management'. At that time, his philosophy, which was concerned with productivity, but which was often misinterpreted as promoting worker interests at the expense of management, was in marked contrast to the prevailing industrial norms of worker exploitation.

The time and motion study concepts were popularized by Frank and Lillian Gilbreth. The Gilbreths had 12 children. By analyzing his children's dishwashing and bedmaking chores, this pioneer efficiency expert, Frank Gilbreth, hit on principles whereby workers could eliminate waste motion. He was memorialized by two of his children in their 1949 book called "Cheaper by the Dozen".

The Gilbreth methods included using stop watches to time worker movements and special tools (cameras and special clocks) to monitor and study worker performance, and also involved identification of "therbligs" (Gilbreth spelled backwards) – basic motions used in production jobs. Many of these motions and accompanying times have been used to determine how long it should take a skilled worker to perform a given job. In this way an industrial engineer can get a handle on the approximate time it should take to produce a product or provide a service. However, use of work analysis in this way is unlikely to lead to useful results unless all five work dimensions are considered: physical, psychological, social, cultural, and power.

40. What is the passage primarily about?

(A) The limitations of pioneering studies in understanding human behavior

(B) How time and motion studies were first developed

(C) The first applications of a scientific approach to understanding human behavior

(D) The beginnings of modern management theory

41. The word " which" in line 9 refers to

(A) scientific management (B) philosophy

(C) productivity (D) time and motion study

42. It can be inferred from the first paragraph that

(A) workers welcomed the application of scientific management

(B) Talor's philosophy is different from the industrial norms

(C) by the early 1900s science had reached a stage where it could be applied to the workplace

(D) workers were no longer exploited after the introduction of scientific management.

43. The word "prevailing" in line 10 is closest in meaning to

(A) predominant (B) broadly accepted (C) prevalent (D) common

44. According to the passage, Frank Gilbreth discovered how workers could eliminate waste motion by

(A) using special tools such as cameras and clocks

(B) using stop watches

(C) applying scientific management principles

(D) watching his children do their chores

45. The basic motions used in production jobs were given which one of following names by Frank Gilbreth?

(A) dimensions (B) gilreths (C) therbligs (D) monitors

46. According to the passage, the time it takes a skilled worker to perform the motion of a given job can be measured by using:

(A) stop watches (B) all five work dimensions

(C) special tools (D) therbligs

47. The word "motions" in line 20 is closest in meaning to

(A) stop watches (B) habits (C) actions (D) special tools

48. Where in the passage does the author comment that the principles of scientific management were often misunderstood?

(A) Lines 1-5 (B) Lines 6-10 (C) Lines 11-15 (D) Lines 16-20

49. The word " dimensions" in line 24 is closest in meaning to

(A) sizes (B) extents (C) aspects (D) standards

50. All of the following are true except

(A) scientific management was concerned with productivity.

(B) the beginnings of modern management thought commenced in the 19th century.

(C) Frank Gilbreth's fame was enhanced by two of his children writing a book.

(D) analyzing work to increase productivity is not likely to be useful unless all of the dimensions are considered.
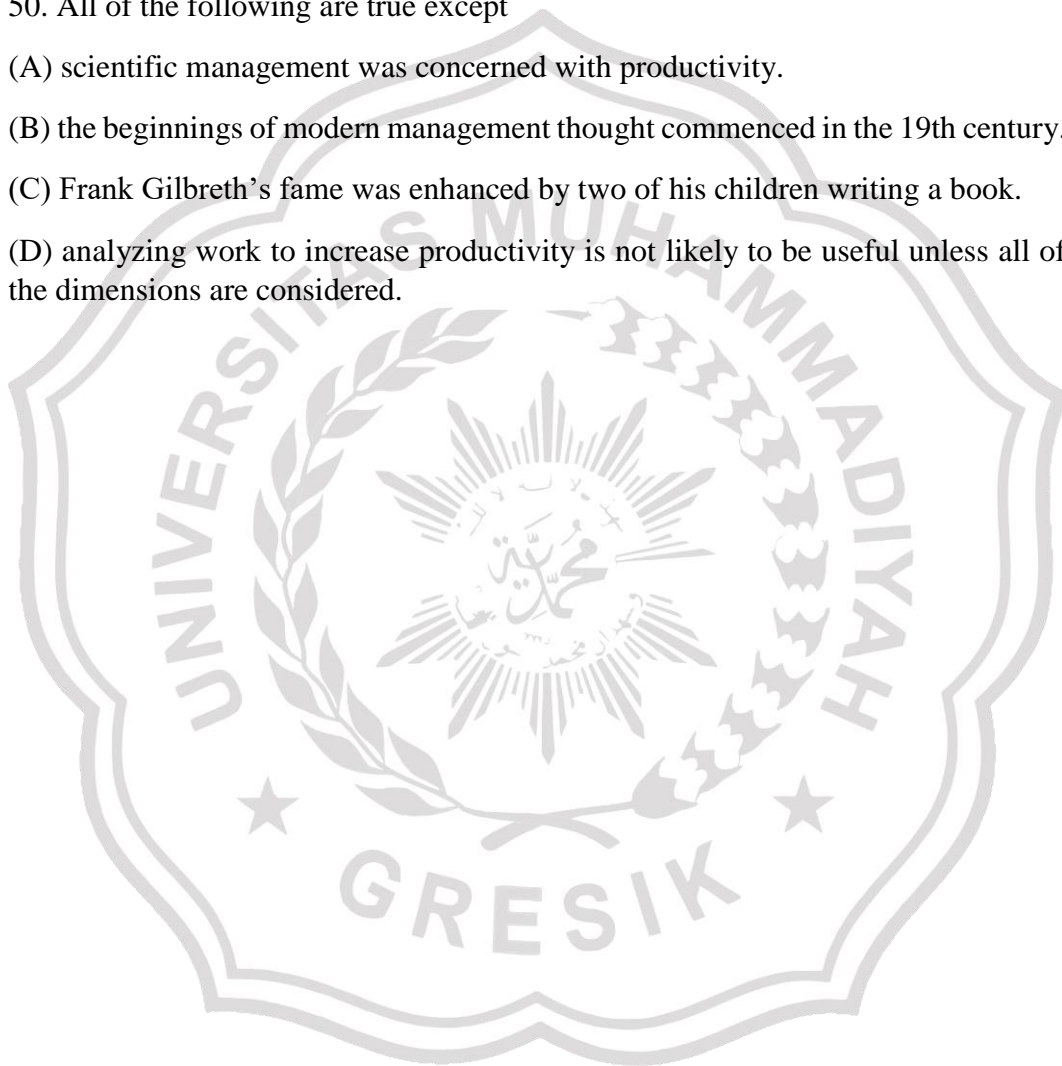
APPENDIX 3

LIST OF SAMPLE STUDENTS	Critical Thinking Test	Reading Test
ALFINA AMALIA PUTRI HARTONO	17	42
DANANG MAULANA PUTRA	20	46
DESVITA ELOK MAHARANI	65	60
DWI MAGHFIROH SA'ADAH	73	76
IRA ROHMAWATI	20	44
MAFRICHATUZ ZUHROH	28	50
MAULIDAH QILMAATUS SAADA	65	64
MAYA SILVIA RAHMAH	56	62
MEGA CITRA UTAMI	63	68
MOHAMMAD FACHRUL RAFLI	61	42
MUHAMMAD TAQIYYUDDIN	42	40
NANDA AMALIA SYAHRANI	20	38
NI'MATUL MUFIDAH	56	68
NOVITA APRILIA	62	64
RIKA FITRIA LISTI	34	60
ABELIA AGUSTIN	35	40
ACHMAD LUTFI FACHRIZAL	38	42
ALYA DAROJATUN NISA'	42	50
ANDINI PRAMESTI ANWAR	56	54
AYU PUTRI NUR WULANDARI	59	56
CHOIRI NASRY	79	56
CINDY ELYSIA ELORA	48	64
CITRA BUNGA AFIFAH	48	64
DELLA NOVIANTI	61	42
FANISA ANDINI	42	58
HAMMAM HASBI ASH SHIDDIEQI	20	62
ISTIQOMAH CAHYA AZZURA	56	70
MUHAMMAD FARRELINO AUREA YULIAWAN	62	68
MUHAMMAD SULTHONI AKBAR	34	44
NABILA AINURROHMAH	35	68
ALIF INTAN RAMADHANI	38	72
DWI AYU LESTARI	42	60
ELVIRA WULANDARI	56	68
FADHILAH APRILIA AYYATUL ROSYDAH	59	64
FITRI DWI NOVITA	79	60
LIDIYA NUR HANISAH	48	40
SITI MUTMA'INAH	48	60

ALIFIAH PUTRI HARIFAH	62	38
DEVITA LEILA BESTYARANI	34	44
DIAN PUJI RAHAYU	35	68
ELSA NURAINI	38	44
ISTIANAH RAFIKA	42	68
JEIHAN FADHILLA YAZIDINA	56	72
NABILA WAKHIDATUS SYAFA'A	59	60
ROIHATUL JANNAH	79	68
ULYA SABILA RAHMAH	48	64
ALFINA NURUL AZKIYAH	48	60
ALMA ALMIRA SALSABILLAH	34	40
DINDA AYU DWI NASETIYA	62	60
MUTIARA PUTRI DWI INSANI	58	38
NUR JANNAH	49	44
RISMA AYUNI MAULIDIA	65	64
DELLA CITRA ANGGRAINI	68	60
SAFIRA ANGGRAINI	28	40
FAMELLA PINKY FRANCIZZIA	65	60
IZZA AYU AISYAH	42	40
JUWITA SAFITRI	65	42
QUEENA MAULIDA RAHMI	42	40