APPENDIX - II

CORNELL CRITICAL THINKING TEST
LEVEL X

FIFTH EDITION

ROBERT H. ENNIS
JASON MILLMAN

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EXPLORING IN NICOMA

The year is 2052. It is the middle of June. Imagine yourself to be in the second group from Earth to land on the newly discovered planet Nicoma. Nothing has been heard from the first group, which landed on Nicoma two years earlier. Your group has been sent to make a report about what happened to the first group.

In this booklet, you will be told about some things learned on Nicoma by your group. Then you will be given problems that call for clear thinking. Answer these problems as if the things you are told are true.

Do not guess wildly at any answer. If you have no idea what the answer is, leave a blank. If you have a good idea, even though you are not positive, answer the problem.

The test has four parts. In the first two parts you must not go back to a problem once you have passed it.

Now wait until you are asked to begin.
SECTION I
WHAT HAPPENED TO THE FIRST GROUP?

The first job of your group is to find out what happened to the first group of explorers. Your group has landed on Nicoma and has just discovered the metal huts put up by the first group. From the outside, the huts appear to be in good condition. It is a warm day, and the sun is shining. The trees, rocks, grass, and birds make Nicoma appear like much of North America.

You and the health officer are the first to arrive at the group of huts. You call out, but you get no answer.

The health officer suggests, "Maybe they're all dead." You try to find out if he is right.

Listed below are some facts you learn. You must decide whether each fact supports the health officer's idea or suggests that the health officer's idea is mistaken—or neither.

For each fact, mark one of the following on your answer sheet:

A. This fact supports the health officer's idea that everyone in the first group is dead.
B. This fact goes against the health officer's idea.
C. Neither: this fact does not help us decide.

Here is an example of the kind of problem in this part of the test:

1. You go into the first hut. Everything is covered by a thick layer of dust.

Is this fact for or against the health officer’s idea, or neither? It certainly isn’t enough to prove him right, but it does give some support. If a fact supports the health officer’s idea, you should mark A on your answer sheet. Mark A for Number 1.

Mark your answer for this next example:

2. Other members of your group discover the first group's rocket ship nearby.

The answer is C. Knowing that the first group’s rocket ship has been discovered doesn’t help you decide one way or the other. Since this fact doesn’t help you decide whether the health officer is right or wrong, C is correct.
Here is a list of facts. For each one, mark A, B, or C. If you have no idea which to mark, leave a blank and go on to the next one. Consider each fact in the order in which it is numbered. Work carefully, and do not return to a problem once you have passed it.

Reminder—mark as follows:
A. This fact supports the health officer’s idea that they are all dead.
B. This fact goes against the health officer’s idea.
C. Neither: this fact does not help us decide.

3. There are ten huts. You go into the second hut and again find that everything is covered by a thick layer of dust.
4. You go into the third hut. There is no dust on the cookstove.
5. You find a can opener by the cookstove in the third hut.
6. In the third hut, you find the daily record of a member of the first group. It is written by a man named John Stilltron. The date of the last entry, July 2, 2050, is one month after the arrival of the first group.
7. You find that the two beds in the third hut are covered with a thick layer of dust.
8. You read the first entry in Stilltron’s record: “June 2, 2050. We arrived today after a tiring trip. We put up the huts near our landing place.”
9. You read the second entry in Stilltron’s record: “June 3, 2050. There is a plentiful supply of food. Ducks, squirrels, and deer are here and are easily caught.”
10. You read the third entry in Stilltron’s record: “June 4, 2050. The water in the nearby stream has been tested by our health official. He says it is safe to drink. We are not drinking it yet. We’re going to try it with some guinea pigs we brought from Earth.”
11. You read the last entry in the book: “July 2, 2050. I am getting weaker and can’t hold out much longer.”
12. In different but shaky handwriting below the last entry, you read, “John Stilltron died the same day.”
13. The health officer has now looked in each of the ten huts. He reports that there is a thick layer of dust in each of them.
14. You examine the beds in each of the first three huts. You find that in each case the blankets and sheets are stripped from the beds and folded neatly in the closets.

GO ON TO THE NEXT PAGE.
DO NOT GO BACK TO CHANGE OR GIVE AN ANSWER.
Reminder—mark as follows:
A. This fact supports the health officer’s idea that they are all dead.
B. This fact goes against the health officer’s idea.
C. Neither: this fact does not help us decide.

15. The health officer reports that the beds in all the other huts are in the same condition. The blankets and sheets are neatly folded in the closets.

16. You notice a mound of earth behind Stilltron’s hut. You examine it and find a stone with these words on it: “John Stilltron. July 2, 2050. He died as he lived—with honor.”

17. The first group’s truck is missing.

18. In the tenth hut you find a note dated March 15, 2052:
   If anyone should come looking for us, we have all gone exploring in the truck. We plan to head in the direction of the sunrise. (Signed) Captain Sardus, Leader of the Nicorna Explorers.

19. You see a note added at the bottom:
   P.S. We plan to be back within a week.

20. Eight members of your group get in one of your group’s trucks and head in the direction of the sunrise. You follow a rough broad valley for 20 miles and find the first group’s truck by a stream. The truck looks abandoned.

21. You find a note in the driver’s seat:
   Engine breakdown. We plan to hike downstream. Perhaps there’s a large body of water in that direction. (Signed) Captain Sardus.

22. One of the eight, who is a mechanic, examines the truck’s engine. He says that it is in bad condition.

23. You notice that the truck’s front tires are flat.

24. You start to drive downstream, since the land is level and clear. After 10 miles of driving, you see smoke rising in the distance. As far as you know, there are no volcanoes on Nicorna.

25. You soon come to a cliff too steep for the truck, so all eight of you get out and walk toward the smoke.

DO NOT GO ON TO THE NEXT PART UNLESS TOLD TO DO SO.
DO NOT GO BACK TO CHANGE OR GIVE AN ANSWER.
SECTION II

EXAMINING THE VILLAGE ON NICOMA

It grows dark, so you camp overnight. You set out again in the morning. After walking for an hour, your party comes upon a village of stone huts. The village is empty. The sun is shining brightly. Reports are brought to you by other members, since you are the leader of the party.

You will be given the reports two at a time. Read both and then decide which, if either, is more believable.

If you think the first is more believable, mark A on your answer sheet.
If you think the second is more believable, mark B.
If you think the two are equally believable, mark C.

Here is an example (for each problem, the statements to decide about are underlined):

<table>
<thead>
<tr>
<th>26. A. The auto mechanic investigates the stream by the village and reports, “The water is not safe to drink.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. The health officer says, “We can’t tell yet if the water is safe to drink.”</td>
</tr>
<tr>
<td>C. A and B are equally believable.</td>
</tr>
</tbody>
</table>

Mark an answer. The correct answer is B. The health officer should know more about whether the water is safe to drink than the mechanic.

Here are some more pairs. Consider each pair in the order it is given. Do not go back to a problem once you have passed it. Remember to decide only about the statements that are underlined.

<table>
<thead>
<tr>
<th>27. A. The health officer says, “This water is safe to drink.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Several others are soldiers. One of them says, “This water supply is not safe.”</td>
</tr>
<tr>
<td>C. A and B are equally believable.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>28. A. The mechanic says, “The water looks clear.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. The health officer, after making tests, says, “The water is safe to drink.”</td>
</tr>
<tr>
<td>C. A and B are equally believable.</td>
</tr>
</tbody>
</table>

GO ON TO THE NEXT PAGE.
DO NOT GO BACK TO CHANGE OR GIVE AN ANSWER.
Reminder:
If the first statement is more believable, mark A.
If the second statement is more believable, mark B.
If the two statements are equally believable, mark C.

29. A. One soldier looks at some smoke rising. The smoke appears to him to be just behind the largest stone hut, which is on a hill about 100 yards away. He says, “The smoke comes from a fire about 100 yards away.”
B. Another soldier, who has just been behind the largest stone hut, says, “Oh no, the fire is much farther than that.”
C. A and B are equally believable.

30. A. The mechanic has made a quick round of the stone huts and heard a noise in the nearest hut. “There must be someone in that hut,” he reports.
B. The health officer, who was in the nearest hut for several minutes, reports, “Nobody is in that hut.”
C. A and B are equally believable.

31. A. After examining the nearest hut, the health officer says, “The first group of explorers built that hut.”
B. The anthropologist (someone who studies the way different races and tribes of people live) also examined the nearest stone hut. He states, “The first group probably did not build the hut.”
C. A and B are equally believable.

You take your group to the top of the hill behind the largest stone hut to see if you can tell where the smoke is coming from. In the distance you see a group of about 40 moving figures gathered around a smoky fire.

Your captain has offered a large reward to the person who first sees any one of the missing explorers. You would each like the honor of being the first to see them—if they are there. But at the same time you are careful, because those figures around the fire may be dangerous. There are several pairs of field glasses in the group. The sun is still shining brightly. With field glasses one can count the logs on the fire.

32. A. The mechanic, looking through his field glasses, says, “They are tan-skinned creatures with furry spots.”
B. The anthropologist, looking through his field glasses, says, “They don’t have furry spots. They are wearing skins of animals.”
C. A and B are equally believable.

GO ON TO THE NEXT PAGE.
DO NOT GO BACK TO CHANGE OR GIVE AN ANSWER.
Reminder:
If the first statement is more believable, mark A.
If the second statement is more believable, mark B.
If the two statements are equally believable, mark C.

33. A. The mechanic says, “I think there are 40 of them.”
B. The anthropologist says, “No, I think there are only 37.”
C. A and B are equally believable.

34. A. The anthropologist says, excitedly, “That’s Captain Sardus there on the left by himself!”
B. Then the mechanic reports, “That’s Sergeant Edema who just stood up on the right.”
C. A and B are equally believable.

35. A. One of the soldiers borrows the anthropologist’s glasses and says, “Yes, that’s Sergeant Edema on the right.”
B. At the same time, the health officer, who has borrowed the mechanic’s glasses, says, “Yes, that’s Sergeant Edema on the right.”
C. A and B are equally believable.

Now if the man on the left is Captain Sardus, the reward goes to the anthropologist. If not, it goes to the mechanic.

36. A. The health officer then looks through his field glasses at the one on the left. “That’s not Captain Sardus,” he says.
B. The anthropologist, who has his glasses again, replies, “Yes, it is.”
C. A and B are equally believable.

Then the man at the left rejoins the group of figures, and another person takes his place.

37. A. The health officer says, “That new one is not one of the explorers.”
B. The anthropologist agrees, “You’re right, he’s not.”
C. A and B are equally believable.
Reminder:
If the first statement is more believable, mark A.
If the second statement is more believable, mark B.
If the two statements are equally believable, mark C.

38. A. The anthropologist continues, “And look! There’s Captain Sardus facing our way with his hand over his eyes. That’s the same person as the one I called Captain Sardus before. I’ve been following him.”
B. The health officer says, “Yes, that’s Captain Sardus facing us now. But he’s not the one who was over there on the left. That one is sitting down with his back to us. I’ve been following him too.”
C. A and B are equally believable.

You ask them to see if they can agree on the number of beings in the group so that you can give an accurate report.

39. A. The health officer has had practice counting large numbers of objects on microscope slides. He announces, “There are exactly 39 figures in that group.” He has been using field glasses.
B. One soldier says, “No, there are 38.” He also has been using field glasses.
C. A and B are equally believable.

40. A. The mechanic takes his glasses back from the health officer and makes a count. “Yes, there are 39 of them,” he says.
B. The soldier repeats, “There are only 38.”
C. A and B are equally believable.

The people around the fire get up and start toward the village. You quickly take your small party to a place on a nearby hill. There you can see the village without being seen. You want to find out whether this is a friendly village, whether the explorers are prisoners, and how many explorers are left. The mechanic writes down what people say they see.

41. A. One soldier counts the people as they move around in the village. He reports, “Only 32 came back from the fire.”
B. Another soldier says, “You must have missed two. I counted as they filed past the big hut. And 34 came back. I don’t believe any of them came back another way.”
C. A and B are equally believable.
CORNELL CRITICAL THINKING TEST

Reminder:

If the first statement is more believable, mark A.
If the second statement is more believable, mark B.
If the two statements are equally believable, mark C.

42. A. The anthropologist reports, “One of them had on a green hat when they returned from the fire. But he’s the only one. I watched them carefully as they went by the big hut.”
B. The health officer says, “There are two with green hats. First I saw one on the left. Later I saw one way over on the right.”
C. A and B are equally believable.

43. A. A soldier says, “Five times in the last minute that one in the green hat has talked to someone and pointed. Immediately that person has run off in the direction he pointed.”
B. “He must be the leader,” adds another soldier.
C. A and B are equally believable.

44. A. “Look, Captain Sardus and two other explorers are coming up to that one in the green hat, who is pointing to the big hut. The one in the green hat is ordering them to go in,” the anthropologist says.
B. “Here comes Sergeant Edema and one other explorer. The one in the green hat is pointing to the big hut. They’re going in also,” adds the anthropologist.
C. A and B are equally believable.

45. A. Several more groups of explorers enter the hut. The health officer asks the mechanic, who has been keeping a record, “How many do you think are in there now? I’ve told you each time one went in. I think there are 13.”
B. The mechanic replies, “According to my record, there are 14.”
C. A and B are equally believable.

46. A. The anthropologist states, “That one with the green hat is going into the hut to the right of the big hut. Three others are following him in.”
B. The health officer says, “Look, here comes another with a green hat. So the one in there is not the leader, since there are two. Let’s check the people who go into that hut.”
C. A and B are equally believable.

GO ON TO THE NEXT PAGE.
DO NOT GO BACK TO CHANGE OR GIVE AN ANSWER.
Reminder:
If the first statement is more believable, mark A.
If the second statement is more believable, mark B.
If the two statements are equally believable, mark C.

47. A. The anthropologist has been describing the people as they go in, trying to get some idea of what they might be like. He states, “I saw 18 people go into that hut.”
B. The mechanic disagrees, “According to the record of what you have said, only 17 went in.”
C. A and B are equally believable.

48. A. The anthropologist then looks over to the large hut and says, “Do you see those two men? Perhaps they are guarding the explorers. Oh, look! They’re changing positions. The one who is walking stops about 15 feet from the door, and then the one standing by the door walks over to him.”
B. The health officer says, “Yes, I’ve watched them make ten changes now. But you have the order wrong. The man by the door leaves his post before the one who is walking reaches the place where they meet.”
C. A and B are equally believable.

49. A. The mechanic, who also has been watching says, “I think the health officer is right.”
B. The anthropologist says, “I think he’s wrong.”
C. A and B are equally believable.

50. A. One soldier says, “Oh, look at the tall man. He has an odd way of walking. He brings his left hand across almost to his right shoulder before his left foot touches the ground.”
B. Another soldier replies, “It is odd. I’ve been watching him for about five minutes, though, and you have the order backward. He brings his left hand across after his left foot touches the ground.”
C. A and B are equally believable.
SECTION III
WHAT CAN BE DONE?

With your party you try to decide whether the villagers are friendly or not. If not, it may be necessary to rescue the explorers. You try to reason things out.

In each of the problems in this part, you must decide what follows from the reasons given. That is, for each problem, suppose that what the person says is true. Then decide what else would have to be true.

Mark A, B, or C, or leave it blank if you don’t know. Consider each problem by itself. In this part, it is all right to go back to a problem after you have passed it. Here is an example:

51. The mechanic says, “If these beings are people from Earth, then they will welcome us. Certainly they are people from Earth.”

Which follows?
A. These beings will not welcome us.
B. These beings are not from Earth.
C. These beings will welcome us.

Mark an answer. The correct answer is C. If what the mechanic said is true, then C must also be true. Go on to the rest. There is one best answer for each problem.

52. “If these beings are from Earth, then another space ship must have landed on Nicoma. These beings are definitely people from Earth.”

Which follows?
A. Another space ship has landed on Nicoma.
B. These beings are not from Earth.
C. Another space ship has not landed on Nicoma.

53. “If these beings are from Earth, then another space ship must have landed on Nicoma. But no other space ship has landed on Nicoma.”

Which follows?
A. Another space ship has landed on Nicoma.
B. These beings are not from Earth.
C. These beings came here by mistake.

GO ON TO THE NEXT PAGE.
54. “Whenever lookouts are used, the groups are unfriendly. Those two women are lookouts.”

Which follows?
A. The groups are friendly.
B. The groups are unfriendly.
C. If groups are unfriendly, lookouts are used.

55. “All Earth people are able to talk. These are Earth people.”

Which follows?
A. They are able to talk.
B. They are unable to talk.
C. If people are able to talk, they are from Earth.

56. “If a group of beings is greeted in a friendly manner, the group will be friendly. This group of beings is not friendly to the explorers.”

Which follows?
A. The explorers greeted them in a friendly manner.
B. The explorers did not greet them in a friendly manner.
C. This group of beings was unfriendly before the explorers met them.

57. “If a group from Earth lands on a planet, the landing is announced throughout the world in newspapers. No landing on Nicorna was announced, except for our landing and the landing of our explorers.”

Which follows?
A. If the newspapers announce a landing, then there has been a landing.
B. The group of beings is from Earth.
C. The group of beings is not from Earth.
58. “A group that is really unfriendly to outsiders will starve them. Our explorers certainly are not starved.”
Which follows?
A. Our explorers are really friendly.
B. The group of beings is really unfriendly to our explorers.
C. The group of beings is not really unfriendly to our explorers.

59. “This group is friendly to our explorers. If a group is friendly to another group of beings, it will not put them in prison.”
Which follows?
A. Our explorers were not put in prison.
B. Our explorers were put in prison.
C. Unfriendly groups try to put each other in prison.

60. “There have been only two announcements of landings on Nicoma—our landing and the landing of our explorers. All landings of people from Earth on other planets are announced in the newspapers of Earth.”
Which follows?
A. The group of beings is not from Earth.
B. The group of beings is from Earth.
C. The newspapers never make mistakes.

61. “If a group is friendly to another group of beings, it will not put them in prison. A group that is not in prison would be out working on a day like this. Our explorers are not out working.”
Which follows?
A. The group is friendly to our explorers.
B. Unfriendly groups try to put each other in prison.
C. The group is unfriendly to our explorers.
62. “Look! One of our explorers climbed out a window and started
to run away. He stopped running and put his hands up when a
sentry aimed a rifle at him and shouted. A friendly group would
let its guests leave.”

Which follows?
A. Unfriendly groups put their guests in prison.
B. This group of beings is very careful.
C. This group of beings is unfriendly.

63. “If we can talk to our explorers, we can find out for sure if
these beings will make peace. We can talk to our explorers by
sneaking in the back when the guards change places.”

Which follows?
A. We can find out for sure if these beings will make peace.
B. We cannot find out for sure if these beings will make
peace.
C. We cannot sneak in the back if the guards are very careful.

64. “If they are from Earth, they are well armed. If they are well
armed, they must be taken by surprise. They are from Earth,
that is certain.”

Which follows?
A. They are poorly armed.
B. They can be approached in peace.
C. We must surprise them.

65. “If we attack them, we will kill some. If we kill some, we will
lose information about Nicoma. Now we must not lose any
information about Nicoma.”

Which follows?
A. We must attack.
B. We must kill some of them.
C. We must not attack.

DO NOT GO ON TO THE NEXT PART, UNLESS TOLD TO DO SO.
SECTION IV
REPORTING BACK AND DECIDING WHAT TO DO

After watching the village for about an hour, you lead your party back to the main camp. You send Sergeant Kowak to report to the captain.

In making her report, she takes certain ideas for granted, without actually saying them. They are part of the basis for her reasoning. Your job is to select ideas that she probably takes for granted in this reasoning. Here is an example:

66. “The explorers can’t escape, because they can’t break down the walls of the stone hut.” Which one of the following is probably taken for granted?
   A. The explorers can jump out the window.
   B. The guards are alert.
   C. All ways of escape, except through the walls, are impossible.

Mark an answer. The correct answer is C. Among the choices, C helps the reasoning the most.

There is one best answer to each of the following. Again, in this part it is all right to return to a question after you have passed it.

67. “Since our explorers are prisoners, we cannot talk to them without being discovered.” Which one of the following is probably taken for granted?
   A. In general, prisoners cannot be talked to, unless their guards know about it.
   B. In general, if we talk to people, they will tell others about it.
   C. In general, if we talk to people, they will not tell others about it.

68. “If we talk reasonably to those beings, they’ll release our explorers. After all, those beings are human beings, and the release of our explorers would help humanity.” Which is probably taken for granted?
   A. When you talk reasonably to human beings, they will act in a way to help humanity.
   B. Anything that human beings do is intended to help humanity.
   C. You have to talk reasonably to human beings in order to get them to do something.

GO ON TO THE NEXT PAGE.
69. “The shorter of the two people wearing green hats is a female.
I know because I saw her long hair when she removed her hat.”
Which is probably taken for granted?
A. All females have long hair.
B. Only females have long hair.
C. A person wearing a green hat is likely to be a female.

70. “Since about half of the villagers have very short hair, I think that
at least half are male.” Which is probably taken for granted?
A. Half are female.
B. All males have short hair.
C. Only males have short hair.

71. “If at least half of them are men, then in a fight we will have
to fight at least half of them.” Which is probably taken for
granted?
A. Women are not fighters.
B. Men are fighters.
C. We cannot beat them all, if they are all fighters.

72. “We need not worry about more than 10 of them at a time, since
there are only 10 guns.” Which is probably taken for granted?
A. Guns can hurt us.
B. Knives cannot hurt us.
C. Only guns can hurt us.

73. “They have only 10 guns. I know because each lookout had one
gun and eight guns were stacked in the middle of the village.
That’s all that could be seen.” Which is probably taken for
granted?
A. All the guns they have are in plain sight.
B. The eight stacked guns are loaded.
C. Guns are their only weapons.
74. “The villagers did not have any scouts out. This I can tell because we saw none, and we looked carefully.” Which is probably taken for granted?
   A. Scouts are used only by people who want somebody to investigate for them.
   B. Scouts can be seen by people who are alert for them.
   C. If you see a scout, then that scout has been careless.

75. “The villagers do not know we are here since there are no scouts out.” Which is probably taken for granted?
   A. If a group knows that another group which might be unfriendly is nearby, the group will have scouts out.
   B. If there are scouts out, then the group from which they came knows that another group is nearby.
   C. If a village sends out scouts, the villagers suspect trouble.

76. “The villagers are not from Earth, because we have not heard of any other landings on Nicoma by people from Earth.” Which is probably taken for granted?
   A. All landings on planets are announced.
   B. All landings by Earth people on planets are announced to other explorers from Earth.
   C. Explorers from Earth do not hear of landings by explorers from other planets.

END OF THE TEST. If you have time, you may go back and check over your answers, but only in the last two parts (problems 51 through 76).

Here’s the rest of the story: The explorers decided to send a party to see whether the villagers would release the first group without a fight. But they also prepared for an attack, in case one should be necessary. Fortunately, the villagers agreed to release the first group. When they learned that the explorers meant no harm, they were happy to release them. In fact, they were glad to have met people from a friendly planet.