

# Audio Scripts

This section contains the audio scripts for all of the exercises and practice tests in this book. Please note the use of the following abbreviations for speaking parts:

(Man S) for Man Student

(Man P) for Man Professor

(Woman S) for Woman Student

(Woman P) for Woman Professor

## DIAGNOSTIC TEST: Listening Section

### Questions 1–6

Listen to part of a lecture in an American government class.

(Woman P) So today I want to go over the main points about what's called the Electoral College, that is, the way that presidents are chosen in the United States. Also vice presidents too, of course. Now – some of you may think that the president is the candidate who gets the most votes from the voting public. Often that's true. But the way it works, it's not necessarily the one who gets the most votes from the public. In practice, it's the candidate who wins the most votes from the Electoral College. OK. So let me try to make this clear.

First of all, what is an elector? Well, an elector is a person – a member of a political party – who has been chosen by that party in a given state. OK, so this person, this elector, is pledged to his or her party's candidate for president. So in any state there are several electors. The number of electors in a state is equal to the number of U.S. Senators plus the number of U.S. Representatives in that state. Don't get confused here. The senators and representatives are not the same people as the electors. It's just that the numbers are the same. So . . . there are always two senators in each state, as you know, but the number of representatives depends on the population of the state. So a populous state has several representatives and a state without a lot of people will have only a few representatives. Some states, such as Alaska, which has a small population, for example, have only one representative at the current time. That means that Alaska will have three electors chosen by each political party. In total, there are currently 538 electoral votes in the whole country.

OK. So what happens when you vote in the presidential election? Well, what you have when you vote is a ballot – which normally says "Electors for" and then the names of each of the presidential candidates running. So you choose "Electors for" the candidate of your choice.

Here's the interesting part, in a way. Whichever candidate wins the most popular votes in a state also wins all the electors of that state. So back to the case of Alaska: the candidate who wins the greatest share of the vote from the general public wins three electoral votes. Those three electors become the electors of that state. Now, OK, there are a couple of exceptions to that – but we'll have a look at those next week.

Now the election for president, where all the voting public cast their votes, is, as you know, in early November. OK. So, the electors of the state, remember, these are the people who were in effect chosen through popular vote – and who will vote for the candidate of their party – meet in December and they cast their votes, one for the president and one for the vice president.

OK, so the candidate with the most Electoral College votes, provided it's an absolute majority, that is, over half the total of Electoral College votes, is declared president. The same goes for the vice president. If no one gets an absolute majority, then the U.S. House of Representatives chooses the president from among the top candidates.

Well, there are also some problems associated with this system that you will hear raised from time to time. One problem, for example, that I can mention right off the bat, is that it's possible that the person who is declared president through having won the most Electoral College votes may not have won the majority of the general public's votes. This has to do with the fact that the distribution of electoral votes tends to over-represent people in less populous states. Now those who favor this system point out, however, that it more accurately represents all parts of the country, not just the metropolitan populous regions. So, in effect, it balances out rural and urban regions – and contributes to national cohesion. There are several other things that opponents of this system have put forward, but I'd like you to read up on those before we meet next week.

Now get ready to answer the questions. You may use your notes to help you answer.

1. What is the lecture mainly about?
2. According to the professor, who becomes an elector?
3. Why does the professor say this: Don't get confused here. The senators and representatives are not the same people as the electors.
4. Why does the professor use the example of Alaska in the lecture?
5. Which candidate wins the presidential election?
6. What does the professor mean when she says this: There are also some problems associated with this system that you will hear raised from time to time.

**Questions 7–11**

Listen to a conversation between a student and a professor.

(Woman S) Good morning, Dr. Blake. Sorry I'm running late.

(Man P) Oh, no problem, Angie. It gave me a bit of time to review your research proposal.

(Woman S) Oh, good. Um, so you had a chance to look at my proposal. And what did you think?

(Man P) Well, it's reasonably well presented, but if you really want to get that grant, I think you should explain how you're going to set up, get a more focused statistical analysis.

(Woman S) Oh, I hadn't really given that point much thought, 'cause frankly, I'm not so sure what is the . . . what the best way to go about it is.

(Man P) Well, you really need to clear that up. Why don't you go to the Computer Center? You can tell the woman at the information desk, Miriam, I think her name is. Tell Miriam what you need and she'll direct you to one of the statisticians there, you know, someone who can tell you the best way to set up your experiment in order to get your statistics in a meaningful form. Then that procedure needs to be explained in your proposal.

(Woman S) OK . . . I better do that right away.

(Man P) Yeah, I think that's a good idea. Proposals have to be in before the office closes on Friday, and you're going to want to have a clear idea of how you're going to deal with your data.

(Woman S) Thanks. Bye.

(Man P) Uh, just a minute, Angie?

(Woman S) Yes?

(Man P) Before you go, there are a couple more points. Let's see, I wrote a couple of comments on this draft you gave me . . . Oh, here you are. My concern is how you've defined – or I should say haven't defined – your subjects. You mentioned that you'll be testing nonnative speakers' linguistic recognition of certain English stress patterns . . . but you haven't clearly defined the group of subjects.

(Woman S) Well, I've made contact with a group of international students who are willing to work on the project.

(Man P) Yeah, I know, but there are some issues that the committee will question. The proposal as you have it seems, well, somewhat like comparing apples and oranges. We've talked about your subjects being given an oral fluency test so that you can choose subjects with about the same linguistic level. But you haven't made that clear in your proposal. The committee will say that the data from, let's say, a tonal-language speaker at a high level can't be compared to a romance-language speaker at a beginning level. The data would be ambiguous. You see, you need to explain how you're going to select your subjects.

(Woman S) You mean I should write more about the oral test we talked about?

(Man P) That's right.

(Woman S) Oh, I'm sorry, Dr. Blake. I have a class in 20 minutes and I want to get to the Computer Center – it's on my way to the classroom building – to set up an appointment. So could I come back around 3:30?

(Man P) No. That's not a good time for me. Why don't you read through my comments and work through the explanation about subject selection? And would you have time to bring your next draft in first thing tomorrow morning? We could go over the final details quickly, and that would give you time to make any other necessary changes before turning it in.

(Woman S) Oh, I would really appreciate that, Dr. Blake. Thank you so much for your help. Bye.

Now get ready to answer the questions. You may use your notes to help you answer.

7. Why does the student go to see the professor?
8. Why does the professor suggest that the student go to the Computer Center?
9. According to the professor, what information should the student add in her proposal?
10. Why does the professor say this: The proposal as you have it seems, well, somewhat like comparing apples and oranges.
11. What does the professor imply about the people who will decide on the grant money?

**Questions 12–17**

Listen to part of a discussion in a business correspondence class.

(Woman P) We've been concentrating on formal letters in business communications, but today I'd like to talk about some issues in using e-mail. Actually, we'll be looking at this topic for the next

couple of class sessions, as it's likely much of your written communication in business will be done with e-mail – and the etiquette of using e-mail is extremely important in the business world.

So, OK, there are two types of e-mails that you'll be using in business: internal, those sent within the office, and the external – customers, suppliers, agencies.

Now, we discussed the paper letter and how it could get separated from its envelope. So it's essential for a paper letter to have all the receiver/sender information in the letter itself. Now, most e-mail programs include the receiver/sender information – so the message can't get separated from this information. But, there are a few options that some people are not aware of – and unfortunately, not all programs have all these options. OK. Let's say there are thirty people in the office where you work and you want to tell them about a change in policy. How do you set up your e-mail? I mean, who do you send this message to? What do you put into the box?

(Man S) Well, I'd put the names into the "to" box, you know, the box where I put the names of the people who will get the message.

(Woman P) OK. So you would type all 30 names into the receiver box?

(Man S) Well, probably not type. I might make a mistake. I'd copy them in – or use the "reply to all" icon from another e-mail, and of course, I change the message and the subject.

(Woman P) OK. That is one way. Yes?

(Woman S) Um, yeah, I have to do a lot of official e-mails, and I get really annoyed when people send me a message with lots of names in it. Sometimes I print out the message – and I get three pages of people's addresses for half a page of message.

(Woman P) So what do you suggest?

(Woman S) Well, I usually set up my address book so that I can put all the names of people into one group. And then when I want to send them all a message, I just put the name of the group into the receiver box – and then everyone gets the message. That way, if they print it out, then only the name of the group is on the page.

(Man S) Yeah, I don't like that because . . . well, what annoys me is I need someone's address, right? So, I go to a message to get it and it isn't there – because just the group name is there. Or I want to see if everyone is on the list and that no one has been left out.

(Woman P) OK. So we have two differing opinions on what to put into the receiver box for mail within a company. We'll come back to this point in a

moment. Now, let's change the audience. Suppose the message is that you'll be moving to a new office, and you want to tell all your customers the new location.

(Man S) Well, that's different then. 'Cause you can't put all the customers' names and addresses into the receiver box. I mean, that's private information, isn't it? So you gotta use a group name . . .

(Woman S) No, I don't agree. I mean . . . I do agree that it's important to have customer anonymity, but if you put a group name, then it isn't personalized. I really think the customer wants to be addressed by their name, not something like "customer group." Using a name is saying "You are an important individual" instead of "You're just a name on this list."

(Woman P) So what would you do? You don't want to put their names in a list for all to see, and you don't want to address them impersonally.

(Woman S) Well, I guess I would write to them individually so that I could keep, well, . . . maintain privacy and still be sort of personal.

(Woman P) That sounds like a lengthy process – especially if your customers are in the thousands. A lot of work. Any other suggestions? No one? OK. Remember when we were discussing the formal business letter, we talked about a "blind copy"? Remember how you use a blind copy when you don't want the receiver to know who else is receiving copies? Most e-mail systems have a blind-copy function, but it doesn't usually appear automatically. You have to change your settings for it to show up on your screen. I send myself the message, and put everyone's address, including my own as a check, into the blind-copy box. Every individual receives the message, addressed as if he or she was the only recipient of the message.

Now get ready to answer the questions. You may use your notes to help you answer.

12. What is the discussion mainly about?

13. Listen again to part of the discussion. Then answer the question.

(Woman P) OK. So we have two differing opinions on what to put into the receiver box for mail within a company. We'll come back to this point in a moment. Now, let's change the audience.

Why does the professor say this: We'll come back to this point in a moment. Now, let's change the audience.

14. What can be inferred about the students?

15. Listen again to part of the discussion. Then answer the question.

(Woman P) That sounds like a lengthy process – especially if your customers are in the thousands. A lot of work. Any other suggestions? No one? OK. Remember when we were discussing the formal business letter, we talked about a “blind copy”?

Why does the professor ask this: Remember when we were discussing the formal business letter, we talked about a “blind copy”?

16. According to the discussion, which way both protects customer identity and promotes customer personalization?

17. Which of the following are valid points about messages sent to a group address instead of individual addresses?

### Questions 18–23

Listen to part of a lecture in a literature class.

(Man P) Before I continue, I want to sketch in some of the significant events of the life of the writer Jack London. This biographical outline is really just to give you a general picture . . . so that you can perhaps appreciate how his life and work were related. It's quite clear, I think you'll agree, that the kind of life London led really did show up in the kinds of stories he wrote. But, before I go on, I want to remind you all that on Tuesday I'll be presenting an overview of London's major works – so in preparation for that I'd like you to read his small masterpiece, *To Build a Fire*.

OK. Now, where was I? London was born in San Francisco in 1876. In fact, he never knew his real father, who had left his mother before Jack was born. Biographers have suggested that the anxiety London felt at not knowing the identity of his real father is clearly shown in the themes of many of his books – which often deal with the struggle for survival and the harshness of the natural and human world. So, I think it's true that we get a feel in his stories that London is often trying to make sense of the difficult events of his childhood.

As a young man, Jack worked at various jobs – some menial and dangerous, and often adventurous. For example, he sailed the Pacific, worked on a fish patrol to catch poachers, raided oyster farms, prospected for gold, joined an army of unemployed workers, and even spent time in jail. Now why is all this so significant? Well, it really comes back to the way London used his life experiences in the characters and themes of his stories. In light of the often harsh experiences he dealt with in these kinds of jobs, I think we can also understand what attracted him to socialism and the struggle for improved social and working conditions.

London's learning was gained largely outside of institutions. In other words, he learned mainly

from experience, but was determined to improve himself and enrolled as a student at the University of California. However, he dropped out after one semester due to a lack of money, and perhaps disillusionment with university life. Any of you feel that way?

Of course, it's true that he was always a keen reader and studied the works of other writers in order to learn to become a writer himself. I think we can say that he consciously chose the life of a writer in order to escape the unpleasant prospect of manual work. The adventurous life he led provided him with a great deal of material from which to create imaginative literature. Most writers and intellectuals, of course, know about the struggle for survival only from their readings and observations. London, by contrast, experienced poverty, struggle, and danger first hand. Take, for example, one of his first published stories, *Story of a Typhoon off the Coast of Japan*, which was taken directly from his experience as a sailor in the Pacific when he was just 17. It is clear in this story, as in so many others of London's, that we the readers feel the directness of his writing and this, I think we can say, is because he wrote about what he knew and experienced so deeply.

Now at first, his submissions to publishers met with very little success. However, he was very determined – and he forced himself to write one thousand words per day. This disciplined approach to writing eventually paid off, and he gained international fame, with a large output of writing. In total, he published over 150 stories, 18 novels, and seven books of nonfiction. And many of them were translated into different languages. His novel *The Call of the Wild* was the one that brought him lasting fame, and many of his short stories are considered classics. It's true to say, though, I think we can admit . . . that not all his works are especially good literature. He often wrote carelessly . . . and there's a considerable part of his output which, I think it is fair to say, is uninspired and uninteresting to the modern reader.

In the last period of his life, London tried his hand at agriculture. Much of his later writing, in fact, is concerned with the pleasures of country life and the satisfaction to be gained from earning a living from the land. He pursued this interest with characteristic energy at his ranch in California and he continued a tight work schedule right up to his premature death at the age of 40 in November 1916.

Now get ready to answer the questions. You may use your notes to help you answer.

18. What is the lecture mainly about?

19. According to the professor, what effect did the absence of a father have on London?

20. What does the professor mean when he says this:  
However, he dropped out after one semester due to a lack of money, and perhaps disillusionment with university life. Any of you feel that way?
21. Why does the professor think that London read so many books?
22. What does the professor imply about London's success?
23. What does the professor think of London's work?

### Questions 24–29

Listen to a discussion in an anthropology class.

(Woman P) So I'd like to move on to a discussion of a group of people who vanished from the Earth around 30,000 years ago after having existed successfully for approximately a quarter of a million years. They're known as the Neanderthal people, named by the way, after a place in Germany where their bones, their remains were first found in 1856. Now, let's first look at how these people compared with the other main group of humans existing at that time, known as the Cro-Magnon. Now the remains of Cro-Magnon people show that they were anatomically similar, in other words, their body structure was physically more or less identical to modern humans. OK, does anyone know how our Cro-Magnon ancestors looked different from these Neanderthals?

(Man S) Didn't they have a different skull shape?

(Woman P) Yes. But can you be more precise?

(Man S) Um, well, OK. The Neanderthals had a sloping forehead and no real chin.

(Woman P) OK. Certainly their chins were not prominent and their foreheads sloped backwards. So they looked rather different from the Cro-Magnon. OK. Now, what about their cultural and technological lives? Were they so much different from their Cro-Magnon cousins? Yes?

(Man S) They had the ability to make stone tools – so that was a similarity.

(Woman P) Yes, although their tool-making ability appears to have been less developed than that of the Cro-Magnon. They did know how to make stone into useful tools but they don't appear to have developed fine points or blades. And their wooden spears seem to have been adapted for stabbing but not for throwing. The Cro-Magnon, on the other hand, developed spears with tips carved from bone and stone and other materials. They also used bows and arrows and invented handles for their tools and weapons. Those are things the Neanderthals didn't develop. Yes?

(Woman S) Well, didn't the Neanderthals know how to make fire?

(Woman P) Yes, now that's a very good point. They could make fire and transport it when necessary. And that is an important skill that they shared with the Cro-Magnon. Also, they may have had some simple art forms, but again, fairly undeveloped in comparison with the Cro-Magnon, whose artistic sophistication is well documented. But, you know, there's a recent find – a polished baby mammoth tooth – which suggests that the Neanderthals may have produced items for personal adornment. Both these points show that the Neanderthals may not have been as backward as was once claimed.

(Woman S) Do you think the Neanderthals had the ability to produce language?

(Woman P) Oh, now that's an interesting question. Studies of skull capacity and shape indicate that they probably had similar neurological capacities to modern humans. So, in other words, they certainly had the mental apparatus to produce language. Now, by examining the bone remains of the vocal tract area, we can say that they could produce sounds too, but they would not have been able to produce a large number of sounds and their speech articulation may have been slow. By contrast, the Cro-Magnon would have had the ability to produce language and speech sounds just as modern humans.

OK, so what happened to the Neanderthals? Well, this question has produced a lot of controversy – even division – within the scientific community. So, broadly speaking, we can say that there are two main lines of thought here. First, it's possible that the Neanderthals may have died out due to a relative lack of sophistication in comparison to the Cro-Magnon. The Cro-Magnon people arrived in regions inhabited by Neanderthals about 40,000 years ago. And, then around 30,000 years ago the climate became more severe – and the Cro-Magnons would have been better adapted to survival under these conditions – since they had, as we noted earlier, better weapons and tools and more developed speech. So in competition for territory or in hunting, they would have been more successful. Some people have gone so far as to suggest that the Neanderthals were deliberately destroyed by the newcomers – or perhaps killed off by diseases brought in with them.

So that's one general line of thought. Now, a second approach is to hypothesize that the Neanderthals and the Cro-Magnon interbred – and that over time, the Cro-Magnon genes became more dominant – so that eventually the Neanderthal characteristics disappeared. During the same period, the Neanderthal culture would also have been absorbed into the more dominant Cro-Magnon culture. If

they did manage to interbreed, this would mean, of course, that the two types of people were not separate species. And if this scenario is right, it would have appeared as though the Neanderthals had become extinct – whereas in reality they would have merged with the more dominant Cro-Magnon people. Now, I want to emphasize that this issue is still very much debated by anthropologists. A lot of the focus of current research is on trying to determine whether either Cro-Magnon remains or modern humans have any traces of Neanderthal DNA. If they do, then a better case for claiming that the two peoples interbred could be made, and hence, the second of these two hypotheses would be strengthened.

Now get ready to answer the questions. You may use your notes to help you answer.

24. What is the main purpose of the lecture?
25. Why does the professor say this: . . . they were anatomically similar, in other words, their body structure was physically more or less identical to modern humans.
26. Why does the professor refer to the Neanderthal's ability to make and transport fire?
27. What does the professor NOT mention about the Neanderthal's use of language?
28. Indicate whether each sentence below describes Neanderthal or Cro-Magnon characteristics.
29. According to the professor, why is a comparison of Neanderthal and modern human DNA useful?

### Questions 30–34

Listen to part of a conversation at a campus police station.

(Woman P) Yes. How can I help you?

(Man S) Yeah. Uh, I think my car has been stolen.

(Woman P) OK. Can you give me the details?

(Man S) Yeah. Uh, it's a 1999 four-wheel-drive blue Subaru.

(Woman P) OK, and when and where did you last see it?

(Man S) Well, this morning I parked it in front of Lacey Hall.

(Woman P) Let me check our records. Ah. It appears your car was in a faculty-only zone.

(Man S) Yeah, I know. But the handicapped parking spaces were all taken, and I had to find a place so I could get easy access to my classes.

(Woman P) Uh-huh, but since you don't have a faculty parking sticker, your car was towed.

(Man S) I was hoping that because I had a handicapped sticker, it would be OK.

(Woman P) There may have been a complaint from a faculty member. Well, sometimes that happens when a professor can't get to work on time because someone who isn't faculty is parked in faculty parking. So the tow truck was called.

(Man S) OK. Um . . . how do I get my car back?

(Woman P) Well, when a vehicle has to be towed, the owner must pay for the towing and storage fees before the car can be taken. And I'm sorry to say, there's also a parking fine.

(Man S) And how much will all that be?

(Woman P) The towing fee is \$90 and there's a storage fee of \$10 per day. So it'd be a good idea to pick up your car today, if possible. The parking fine is fifty, but if you pay within seven days, the fine is reduced to twenty.

(Man S) I think . . . well, all this is very unfair. If the university's going to charge so much, they should have more spaces. My car gets towed because the handicapped parking spaces are full. One of the cars didn't even have a handicapped sticker.

(Woman P) Uh, well, you know, don't you, that you do have the right to appeal? Since you believe that circumstances exist that may excuse you from certain university regulations.

(Man S) Oh. So how do I go about doing that?

(Woman P) Well, first, you write a letter of appeal – that can be done online. You can go to the university traffic regulations page. You know the university home page?

(Man S) Uh-huh.

(Woman P) OK. In your letter explain the situation and why you believe the ticket was unfair. You'll get a letter immediately, saying that your case is being reviewed. Later, you'll get a reply stating whether or not your appeal is accepted. The fine is put on hold as soon as the letter of appeal has been received. If the charge isn't dropped, then you have seven days to pay up or to make a further appeal.

(Man S) OK. Thank you for your help.

(Woman P) OK. Good luck.

Now get ready to answer the questions. You may use your notes to help you answer.

30. Why did the student go to the campus police?

31. What can be inferred about the student?

32. Listen again to part of the conversation. Then answer the question.

(Woman P) Well, when a vehicle has to be towed, the owner must pay for the towing and storage fees before the car can be taken. And I'm sorry to say, there's also a parking fine.

What does the officer mean when she says this: And I'm sorry to say. . . .

33. Listen again to part of the conversation. Then answer the question.

(Woman P) Uh, well, you know, don't you, that you do have the right to appeal? Since you believe that circumstances exist that may excuse you from certain university regulations.

Why does the officer say this: Uh, well, you know, don't you, that you do have the right to appeal?

34. What will the student probably do?

(Woman S) I still think I need more experience.

(Man S) You also won first prize in the science teaching competition, for your inquiry-based science project. Surely that'd count in the job market.

(Woman S) Maybe, but . . .

(Man S) I think that you ought to register. The service is free. The recruitment people come to campus, so you don't have to travel to an interview. You always said you'd like to work abroad and here's the opportunity. Then, if you aren't offered anything, at least you get the experience of having interviews and you can apply again after you get some teaching experience.

Now get ready to answer the question.

The man expresses his opinion about whether the woman should attend the job fair. State his opinion and explain the reasons he gives for his opinion.

You may begin to prepare your response after the beep. [beep]

Please begin speaking after the beep. [beep]

4. Please listen carefully.

Read the passage about misconceptions in mathematics. You have 45 seconds to read the passage. Begin reading now.

Now listen to part of a lecture on this topic in a math education class.

(Woman P) Misconceptions about simple notions in arithmetic are not readily given up. So for example, a child who believes that  $1/4$  is larger than  $1/2$  will not let go of this misconception when he or she gets back an assignment full of red correction marks. The child will let go of this misconception when he or she fully understands fractions. So, how do we develop this understanding?

I think this situation is partly caused by the practice in many schools of teaching mathematics by rote. In other words, children are taught to memorize a formula, to practice using that formula, and then go on to the next one. Children start to believe that math is boring and work through problems without understanding the nature of the concepts. So what happens is that kids can work a problem only if they remember the formula. Using the rote method of teaching doesn't take into account the child's pre-knowledge, or informal knowledge, of mathematics. Even a small child can tell the difference between a whole cookie and a half a cookie. So using this informal knowledge is a very important part of helping children learn fractions – or other math concepts, for that matter. Teachers tend to forget they must put these concepts into daily situations that children can relate to. Using real objects, children can come

## DIAGNOSTIC TEST: Speaking Section

1. Please listen carefully.

Describe changes in technology that have affected your life, and explain what effect they have had on you as a student. Include details and examples to support your explanation.

You may begin to prepare your response after the beep. [beep]

Please begin speaking after the beep. [beep]

2. Please listen carefully.

What kind of friend is better – one who is very similar to you or one who is very different? Which kind of friend do you prefer and why? Include details and examples in your explanation.

You may begin to prepare your response after the beep. [beep]

Please begin speaking after the beep. [beep]

3. Please listen carefully.

The University of the Rockies is announcing its annual job fair. Read the announcement from the Career Services Center. You will have 45 seconds to read the announcement. Begin reading now.

Now listen to two students as they discuss the announcement.

(Man S) Are you going to register to attend the job fair?

(Woman S) I'm not sure. I'd like the experience of living abroad, but I need a well-paid job to pay back my student loan. Not all the jobs pay that well.

(Man S) Some do.

(Woman S) Yeah, but the ones that pay well want experienced teachers. I've only done my student teaching, and that isn't enough.

(Man S) But you're certified to teach science, so you can probably get a job just about anywhere . . . you know . . . because of the shortage of science teachers.

up with the formula themselves. And having done that, the children learn and understand the formulas better. It's also true that teachers too often assume that children understand the mathematical symbols being used, for example, the symbol for percentages. Unfortunately, too often that is an incorrect assumption.

Now get ready to answer the question.

The professor describes the mistakes that are made in teaching children mathematics. Explain how these mistakes relate to the problems that children have in understanding fractions.

You may begin to prepare your response after the beep.  
[beep]

Please begin speaking after the beep. [beep]

5. Please listen carefully.

Listen to a conversation between two students.

(Man S) Sally, why the frown?

(Woman S) Oh, John. I've been trying to learn this list of vocabulary words and I'm just getting nowhere. Here, take the list and ask me one of the words. You'll see.

(Man S) OK, how about *arthropoda*?

(Woman S) Those creepy crawly things.

(Man S) But what kind of creepy crawly things? Snakes?

(Woman S) No. Like spiders and scorpions.

(Man S) Right. See? You do know at least one word. So, how did you remember it?

(Woman S) I don't know. I guess it's because it starts with *a* and I've managed to memorize the *a* words. But look at how long the list is.

(Man S) OK. Well I learned it by remembering that *arthro* means joints, like the disease arthritis affects the joints, and *pod* means foot, like a tripod for setting a camera on. I always try to connect new words with the words I already know. So *arthropoda* refers to all those creatures that have lots of jointed feet.

(Woman S) Oh, OK, well that's pretty easy. Although, you know what, now that I think about it, I kind of remember picturing all of the creatures in my mind every time I said the word.

(Man S) Ah, you mean visualizing them. That's a good way of remembering. Making a mental picture. You could try color-coding your words, too. Like a traffic light. That helps me.

(Woman S) OK, what's that? What do you mean by color-coding the words?

(Man S) Go through the list and, for example, color all the words you know well, green, because you can pass by them. And the words you kind of know, yellow, and the words you really don't know, red.

Then focus on the red words. You stop at them and think about them. Of course, you don't have to use those colors. That's just my coloring system.

(Woman S) OK, yeah, that sounds like a really good idea. Got any other ideas?

(Man S) Sure. Make a song or a poem out of them – like, let's see, an arthropod with arthritis met a cephalopod with sinusitis . . .

(Woman S) OK, wait. What is a cephalopod, and what does it have to do with sinusitis?

(Man S) Well, *cephalo* has to do with a head, right? Like the disease encephalitis is an inflammation of the brain. And a cephalopod is a big-headed creature like an octopus, for example, so a cephalopod with sinusitis would have a really bad sinus headache.

(Woman S) OK. I see. So finish your poem.

(Man S) Oh, I've forgotten it.

Now get ready to answer the question.

The students discuss several ways to memorize vocabulary. Summarize the ways. Then state which of the ways you prefer and explain why.

You may begin to prepare your response after the beep.  
[beep]

Please begin speaking after the beep. [beep]

6. Please listen carefully.

Listen to part of a lecture in an earth science class.

(Man P) Of course, you are all familiar with rainbows, perhaps the most beautiful of the atmospheric phenomena. However, there are other interesting, but less common phenomena that I will be speaking about today. These are produced when light from the sun, or sometimes from the moon, passes through hexagonal-shaped, or six-sided, ice crystals.

These ice crystals refract, that is, bend the light in the atmosphere. Imagine that the crystals are prisms bending each wavelength of light at a different angle.

I want to describe three different phenomena that occur depending on the ice crystals' orientation toward the surface of the Earth . . . how the crystals are arranged in relation to the Earth.

OK. So the first phenomenon is a ring called a halo. This happens when the ice crystals are randomly scattered in the atmosphere. If the light enters these crystals . . . randomly scattered crystals . . . the light is dispersed around the sun or moon and is seen as a ring around the light source. So, halos occur when the ice crystals that the light shines through are randomly dispersed in the atmosphere. OK. Sometimes, however, the ice crystals are oriented horizontally instead of randomly. Now,



this causes a different phenomenon. If the sun is low in the sky and its light shines through horizontal ice crystals, we see two bright spots on either side of the sun. These are called "sundogs" and are seen at an angle of 22 degrees from the sun. Both halos and sundogs are caused by refraction of light.

The third phenomenon is a sun pillar. Around sunrise or sunset, you might see a shaft of light stretching either upwards or downwards from the sun, a sun pillar. Unlike halos and sun dogs, though, with sun pillars, sunlight reflects – not refracts – off horizontally aligned ice crystals that are gently falling through the atmosphere.

Now get ready to answer the question.

Using the information in the lecture, explain the three atmospheric phenomena that the lecturer discusses.

You may begin to prepare your response after the beep.  
[beep]

Please begin speaking after the beep. [beep]

## DIAGNOSTIC TEST: Writing Section

Now listen to part of a lecture on the topic you just read about.

(Man P) Today I wanted to question the idea that rewards increase productivity in the workplace. Now, does this approach really work? Well, when people who have experienced a reward system were asked, we found they didn't like it. Most people, it seems, want to be paid, not encouraged through incentives. People want to be given respect for working extra hard.

In fact, I know of no controlled study that has genuinely shown a long-term improvement in work as a result of any productivity reward scheme. On the contrary, there are many studies that show productivity rewards are even counterproductive. Rewards make for less productivity rather than more.

So, why might this be true? Well, in fact, rewards actually punish. Yeah. If we compensate people for high productivity, they may perceive this as being controlled. People understand they're being manipulated and don't like it. But more importantly, people don't necessarily get the expected rewards. So the disappointment for not being rewarded is sort of the same as being punished. Think about it. The more desirable the reward you expect, the more disappointing it is if you fail to get it. Right?

Productivity schemes might even reduce the amount and quality of work. The workers' relationship with the supervisor could be damaged. Instead of trying to work collaboratively with the supervisor, an employee might conceal problems. For example, let's say you had a problem. You might be less likely to ask for help from a supervisor who can withhold rewards. To avoid a negative rating, you keep quiet. Can you see why this would tend to reduce performance rather than improve it?

Summarize the points made in the lecture you just heard, explaining how they cast doubt on the points made in the reading.

## PART 1 BUILDING SUPPORTING SKILLS

### EXERCISE P3 Analyzing speech patterns

(Man) Since the seventh century, large bells have been used in cathedrals, churches, and monasteries. The greatest bell in the world is in Moscow. This famous "King of Bells" weighs about 198 tons. The next two largest bells are also located in Russia. One near St. Petersburg weighs 171 tons, and another in Moscow weighs 110 tons. Great Paul, the bell at St. Paul's in London, is the largest bell in England, but weighs a mere 17 tons.

### EXERCISE P4 Indicating speech patterns

(Woman) Carnivals, with spectacular parades, masked balls, mock ceremonials, and street dancing, usually last for a week or more before Mardi Gras itself.

(Man) Since the seventh century, large bells have been used in cathedrals, churches, and monasteries. The greatest bell in the world is in Moscow. This famous "King of Bells" weighs about 198 tons. The next two largest bells are also located in Russia. One near St. Petersburg weighs 171 tons, and another in Moscow weighs 110 tons. Great Paul, the bell at St. Paul's in London, is the largest bell in England, but weighs a mere 17 tons.

### EXERCISE P5 Imitating speech patterns

(Man) Since the seventh century, large bells have been used in cathedrals, churches, and monasteries. The greatest bell in the world is in Moscow. This famous "King of Bells" weighs about 198 tons. The next two largest bells are also located in Russia. One near St. Petersburg weighs 171 tons, and another in Moscow weighs 110 tons. Great Paul, the bell at St. Paul's in London, is the largest bell in England, but weighs a mere 17 tons.

**EXERCISE P6 Listening to accents**

Speaker from the U.K.

(Woman) Since the seventh century, large bells have been used in cathedrals, churches, and monasteries. The greatest bell in the world is in Moscow. This famous "King of Bells" weighs about 198 tons. The next two largest bells are also located in Russia. One near St. Petersburg weighs 171 tons, and another in Moscow weighs 110 tons. Great Paul, the bell at St. Paul's in London, is the largest bell in England, but weighs a mere 17 tons.

Speaker from the U.S.

(Man) Since the seventh century, large bells have been used in cathedrals, churches, and monasteries. The greatest bell in the world is in Moscow. This famous "King of Bells" weighs about 198 tons. The next two largest bells are also located in Russia. One near St. Petersburg weighs 171 tons, and another in Moscow weighs 110 tons. Great Paul, the bell at St. Paul's in London, is the largest bell in England, but weighs a mere 17 tons.

Speaker from Australia

(Man) Since the seventh century, large bells have been used in cathedrals, churches, and monasteries. The greatest bell in the world is in Moscow. This famous "King of Bells" weighs about 198 tons. The next two largest bells are also located in Russia. One near St. Petersburg weighs 171 tons, and another in Moscow weighs 110 tons. Great Paul, the bell at St. Paul's in London, is the largest bell in England, but weighs a mere 17 tons.

## PART 2 BUILDING SKILLS: Listening

### EXERCISE L1 Writing what the speaker means

- (Man P) Alternative medicine's efficacy has never been, um, confirmed so, uh, obviously we need to put it under the same strict investigation as we would . . . we do with developing medicines, um, medicines under development.
- (Woman P) So the brain has this tendency and, and this shouldn't surprise you about the brain – you know about infants' recognition of faces, and we're all familiar, of course, with the face we call . . . uh . . . the man in the moon – this tendency is to interpret vague images as specific ones.
- (Man P) The savagery of the Mongols . . . probably, no doubt exaggerated, um, was moderated . . . moderated because they lived on tribute and, in order to collect tribute . . . only prosperous subjects can provide tribute.

- (Woman P) The technique, um, the technique of repeating the initial consonant sound, that's alliteration – I don't have to spell that for you, do I? – that's a common poetic device.

### EXERCISE L2 Answering questions about content

- (Woman P) Long-term food storage occurs in the ecto-, uh, I mean, endo-, endosperm of the seed.

Where does food storage occur?

- (Man P) We should be concerned about – as future teachers – does the average person understand the difference between science and pseudoscience . . . um, we seem to be failing in teaching fundamental cri-, critical-thinking skills.

Why does the professor believe teachers have not succeeded in teaching critical-thinking skills?

- (Woman P) If you take a universal unit of time . . . um, let's say a second. If you take a second, 1/60 of a minute, which is 1/60 of an hour . . . um, 1/24 of a day – you do the math – if you take that universal unit of time, you have to remember that the Earth does not rotate quite regularly . . . not an accurate enough standard for modern measurements.

What is the professor pointing out?

- (Man P) I think you already know my view on borrowing money. Um, it's good if what you're getting . . . say, a house in an up-and-coming area . . . will ultimately be worth more than, than the money and interest you pay back . . . and bad when you buy, um, a car, for instance, that you can't sell at a profit. Then, you don't want . . . you shouldn't borrow . . . you should never borrow to buy something that depreciates – goes down in value.

Under what conditions does the speaker think it's acceptable to borrow money?

### EXERCISE L3 Identifying the meaning of filler phrases and reductions

- (Man S) So if these tribes weren't um, literate, um, how did they send messages?

(Woman P) Well, let's say that if you wanted to communicate something important and weren't literate, you'd, um, you'd draw a stylized picture, um, a simplified one – something that was agreed upon.

What does the woman mean by "let's say that"?

- (Man S) Excuse me. Um . . . I've made an appointment – they recommended that students get a flu shot. Um, here's my student ID.

(Woman S) OK. Hmmm. Lemme see. Uh-huh. Here are your records, Jeff. Go ahead an' take a seat. A nurse will be with you in just a second.

What does the woman mean by "lemme see"?

3. (Man S) I just don't remember how to do this calculus problem.

(Woman S) Oh, come on now. You attended Dr. Brown's lecture . . . you did, didn't you?

What does the woman mean by "come on now"?

4. (Woman S) Well, uh, how does smok-, the mother's smoking actually hurt the baby? How does the smoke get to the fetus, and um, reduce the oxygen to the unborn baby?

(Man P) Well, see, carbon monoxide, instead of oxygen, is absorbed from hemoglobin molecules in the mother's blood.

What does the man mean by "see"?

#### EXERCISE L5 Identifying referents in conversation

1. (Man S) You know the author Harriet Beecher Stowe?

(Woman S) Um, the one who wrote Uncle Tom's Cabin, about slavery, right?

(Man) Yeah, well, when he met her, President Lincoln supposedly called her "the little lady who started the Civil War."

2. (Woman S) Whadja find out about the Alaskan Purchase?

(Man S) Well, when the U.S. Secretary of State . . . who was William Seward then, when he arranged to purchase it from Russia in 1867, people thought the idea was crazy and they started calling Alaska, uh, the Alaskan purchase, Seward's Folly.

(Woman) Oh, I remember reading that.

3. (Man S) Whadja finally decide to do your political science paper on?

(Woman S) I'm doing a comparative study between the American Congress and the British parliament.

(Man S) Hmmm, find anything interesting?

(Woman S) Well, for one thing, there are no restrictions on debates in the English House of Lords, so if its members think something is really important, they talk the issue through until they are all satisfied.

4. (Woman P) Now I'd like all of you to try to get to the, uh, Turkish cultural arts exhibition at the Metropolitan Museum of Art.

(Man S) D'you know how long it will be on for?

(Woman P) Yes, till November, uh, eighteenth. The museum opening times are ten to five from Tuesday through Saturday and at, uh . . . twelve to five on Sundays. The museum is closed on

Mondays. OK? There'll be a number of events to complement the exhibition. These will include three lectures. Of course, I, I realize you have busy schedules, but try to attend at least one.

(Man S) Uh, d'you have the topics and dates of the lectures?

(Woman P) No, I don't, not with me anyway. I'll let you know next week. Also, there will be an evening of traditional Turkish music.

(Man S) Oh, I'd be very interested in that. Could you try to get more information on the music as well?

#### EXERCISE L6 Identifying referents in a lecture

1. (Man P) Because of the disintegration, uh, breakdown of the traditional family in many countries – we have seen this happening here – many elderly people have no, uh, what you could describe as a, a place to call home and there's no one, no family members to help these people if they have . . . in case of an emergency. So, in order to address these problems . . . of the delegates . . . I mean, the elderly, in order to address the problems of the elderly, delegates to the U.N. formed the United Nations Symposium on Population to meet, and to pool their ideas, discuss the different possibilities . . . and make recommendations.

2. (Woman P) To climb Mount Everest is possibly or probably the dream of every mountaineer. But you can't just go out and climb Mount Everest. It takes a lot of planning, expenses to think about, and so on and so forth. One of the things that a club – you have to form a kind of group, an alpine club. You can't go climb Mount Everest by yourself. Anyway, in order for an alpine club to make this climb, it must . . . uh . . . apply to the Nepalese Tourism Ministry for a permit. You need a permit. Normally, these are granted to only a few groups each season.

3. (Man P) Blaise Pascal, uh . . . the guy that's known for Pascal's Law. He also invented the first digital calculator. He did this to help his father. His father was a tax collector. Anyway, a particular problem that he faced was the division of the French currency at the time. Unlike the Euro, or even the French franc, the currency during Pascal's time was more complicated. So, anyway, at that time – Pascal was working on this in the 1640s – the currency was in livres, sols, and deniers. 12 deniers made a sol and 20 made a livre. It was much more difficult technology-wise to build a machine to calculate such divisions of currency than it would have been, say, if the currency was like today's currencies which are divisible by 10.

**EXERCISE L7** *Following signals*

1. (Man P) Land reform can involve large estates being parceled out in smaller plots. In contrast, it can also involve small landholdings being consolidated into larger estates.
2. (Man P) Using word connotations that have powerful associations for your reader or listener has the effect of making your facts or opinions appear more attractive or less attractive. Consequently, writers and speakers use connotations to persuade their audience.
3. (Man P) Sea defenses are built to prevent beaches from being washed away. However, these defenses may be the cause of land erosion further along the coastline.
4. (Man P) After the beginning draft of a paper is finished, first put away the paper and do something else and then go back to it later with a clear mind.
5. (Man P) The decomposition in organic matter is important for the release and circulation of minerals into the environment. In particular, detritus feeders, like shrimp in the sea and earthworms on land, have a role in the breakdown of dead material.

**EXERCISE L8** *Using signals for understanding conversations and lectures*

1. (Woman P) The importance of these dinosaur tracks that were discovered is how much information about dinosaurs that we can get from them. Uh, first, these tracks are in an area near where, at the time of these animals, there were seas. So they were walking along a beach and sinking into the sand. OK? Second, besides the tracks themselves, giving a location and well, there also appear to be tracks of young dinosaurs near tracks of older ones. So, we can imagine a moving herd, like a herd of elephants. Third, the tracks are in sequences of about eight to ten paces. Now this enables scientists to calculate both the animals' stride and speed. And finally, the depth of the print of the larger animals contrasted with the smaller ones, well, we can use this information to show that the dinosaurs may have weighed as much as 10,000 pounds and been 23 feet tall.
2. (Man P) OK, so this study showed that trees could defend themselves against insects. Pests came and stripped the leaves, OK? Now, as a result of the attack, the trees appeared to defend themselves by undergoing changes in the nutritional quality of their leaves. These changes were directly caused by the pest attack. But an interesting thing about the attack was, what was found was that the leaves of nearby trees underwent the same

changes in nutritional quality as the ones that were attacked. Now, why would a pest attack on one tree cause other trees to make these nutritional changes in their leaves as well? So what was happening here? How did the neighboring trees know when they should make these changes? Well, it's hypothesized that the trees that were being studied, the ones attacked, were emitting chemical substances. So the second result of the attack was that the trees under attack seemed to chemically transmit that information to other trees, sort of chemically told the others about the attack. Consequently, the trees that were not under direct attack began to set up their defenses. It's for that reason, that trees can chemically communicate "pest attack," that these same chemical substances are being looked at as a possible way to control pests.

3. (Man S) Are you ready for the marine biology test?  
(Woman S) Well, uh, yeah. Quiz me.  
(Man S) OK. What are the three types of tail fins, uh, caudal fins?  
(Woman S) Right. Caudal fins or tail fins are, um, rounded, forked, and lunate.  
(Man S) Right. And what's the difference?  
(Woman S) Well, rounded fins are soft and flexible.  
(Man S) What are they good for?  
(Woman S) Let's see. Um, they're good for maneuvering and, and effective for speed, no, for acceleration.  
(Man S) OK. And forked fins?  
(Woman S) Oh, rounded fins aren't very efficient for continuous swimming 'cause of the drag and the fish gets tired, but a fish with forked fins can swim quickly without getting tired out. Forked fins have less drag.  
(Man S) That's right. And what about lunate fins?  
(Woman S) Oh, those are good for going continuously for long distances.  
(Man S) And how is that possible?  
(Woman S) Well, um, they're rigid.  
(Man S) So?  
(Woman S) That makes for high, the book said, high propulsive efficiency and there's very little drag because of a small surface area.  
(Man S) So why don't all fish have lunate fins? If they're so effective?  
(Woman S) Oh, because . . . um, the rigidity. It makes it hard for the fish to maneuver.  
(Man S) Well, it sounds like you know your caudal fins. Let's hope there's a question about them on the test.

## 4. (Man S) How's the physics class going?

(Woman S) Let's not even talk about it. I'm so confused.

(Man S) Oh. What don't you understand?

(Woman S) Well, all this. Stable or statically stable equilibrium or whatever.

(Man S) OK. Um. You're talking about static stability versus, um, dy-, dynamic stability, I bet.

(Woman S) I don't know. Yeah, I think those are the terms.

(Man S) I think you're getting confused by the terms rather than the ideas.

(Woman S) [sigh]

(Man S) Let me give you a simple illustration, OK?

(Woman S) If you think it'll help.

(Man S) Visualize a kid on a tricycle and one on a bicycle. Got it?

(Woman S) OK.

(Man S) Well, if a child stops and sits on his tricycle with his feet on the pedals, it would stand there. It couldn't be pushed over very easily. Right?

(Woman S) Right.

(Man S) But if a kid stops on a bicycle, he can't just sit there on the bike at a dead stop with his feet on the pedals. He'd topple over, right?

(Woman S) Right.

(Man S) So, physicists say that the tricycle has static stability. That means it balances at a standstill whereas the bicycle doesn't balance at a standstill. Are you with me?

(Woman S) OK. Um, trike stable when standing still, bicycle not.

(Man S) Right. Now think of the kid riding the bicycle. You've seen people speeding along. And then they lean into the corner to go around it. Did you ever go really fast on your trike as a kid and then make a fast turn? What happened?

(Woman S) I can't remember my tricycle days. But I can imagine that the kid on the tricycle will crash.

(Man S) Yeah. Yeah that's right. The kid on the tricycle will crash and the one on the bike won't. And this is called, um, dynamic stability. The bicycle has dynamic stability, and the tricycle doesn't.

(Woman S) So, the bicycle is stable when moving, dynamic stability and the tricycle is stable when not moving, static stability. OK. Yeah. I can understand that.

**EXERCISE L9 Predicting the topic**

- (Woman P) The United Kingdom is made up of four countries: England, Northern Ireland, Scotland, and . . . uh . . . Wales.
- (Man P) Architects from around the world vote for one architect, the one architect they believe should receive the Award for Architecture.
- (Woman P) Let me show you samples of Irish linen to help you get . . . um, a better idea of the various patterns.
- (Man P) There are a number of human- and uh, animal-shaped figures carved in hillsides around the world.
- (Woman S) I attended Professor Brown's talk on the geology of Mars last night.

**EXERCISE L10 Identifying the topic from the first statement**

- (Man P) The practice of acupuncture began in China about five, uh, five thousand years ago.
- (Woman P) Muscles are made of lots of, uh . . . many fine fibers about twenty-five millimeters long.
- (Man P) A whole new world of opportunities and, and challenges in education has been opened up by radio . . . uh, I mean satellite, satellite-communications technology has opened up lots of possibilities and challenges in education.
- (Woman P) We will be concentrating specifically on the Golden Age of Spanish literature in this seminar and . . . uh . . . the historical setting in which the literature flourished.
- (Man P) Although some of the signs and symptoms of the common cold are similar to those of influenza, influenza is a highly contagious, contagious and potentially life-threatening disease.
- (Woman P) Lack of animal protein in the human diet is a serious cause of, uh . . . malnutrition in many parts of the world.

**EXERCISE L11 Determining if the topic is stated in the first sentence**

- (Man P) We have given the name "magic square" to a square-shaped arrangement of numbers, in which the numbers are arranged so that the groups of numbers all add up to the same figure. In other words, if you were to add the horizontal numbers, you would come up with the same answer as you do when you add the numbers vertically or diagonally. Now the largest magic square ever devised has the amazing number, anyway, in my opinion, amazing. The number of boxes is 578,865.

2. (Woman P) The wealthy have kept their own private collections of animals for thousands of years. The first public zoo, however, was not opened until, uh, 1793. That was the zoo at the Jardin des Plantes in Paris. Zoos have not only protected endangered species but they also allow people to see exotic animals without having to travel to distant countries.

3. (Woman P) In the mid-1800s, the Overland Mail stagecoach carried the mail across the American continent. But, uh, because this service was unsatisfactory – kind of slow and not reliable – a freighting firm established a new service called the Pony Express. I'm sure most of you have heard of the Pony Express. The way the Pony Express worked was by use of a relay system. So, these daring young riders made weekly treks on horseback across the rough and dangerous terrain between St. Joseph, Missouri, and Sacramento, California. Although it was very successful, the Pony Express was short-lived. That was because after only sixteen months of being in service, the telegraph came into use. Basically, the telegraph put the Pony Express out of business.

4. (Man P) Penang, Malaysia, is the home of the world's largest butterfly farm. This farm is both a sanctuary and breeding center for something like about 2,000 recorded species of Malaysian butterflies . . . butterflies, which are being driven away from populated areas by pollution and industry, industrialization. So the studies being conducted on the farm are uh, studies into tropical butterflies' habitats, diseases that attack caterpillars, and pest control. Also, research is being done on how the ecological balance would be affected if foreign butterflies were to be imported and bred on the farm.

5. (Woman P) Did you enjoy the architecture excursion to Saint Martin's Cathedral?

(Man S) Yes, very much, Professor. And uh, we really appreciate your arranging everything for us.

(Woman P) Thank you. Was there anything special that impressed you?

(Man S) I especially liked the gar-, gargoyles. But I was wondering, uh . . . Why did stoneworkers put those grotesque heads on cathedrals, anyway? To frighten away bad spirits, or what?

(Woman P) No, not at all. Nothing like that. They're designed to catch the water that runs off the roof when it rains or when the snow melts.

(Man S) Ah, I see. That makes sense. The water collects in the gargoyle's mouth and the gargoyle kind of like spits the water out onto the street.

(Woman P) That's right. That protects the walls from moisture that would otherwise drip down and cause erosion.

### EXERCISE L12 Identifying a change in topic

1. (Woman P) Folk dances, the steps and movements of the folk dances, have been passed on from one dancer to another over the years. The movements weren't written down. Since this system is not always very accurate, choreographers had to invent ways of writing down the movements. So, at first, they drew little pictures under the music. Then, later, they came up with a system that uses dots on lines. These dots represent hands, feet, and heads.

2. (Man P) It was during his search for a new route to India that Columbus reached America. You may find it surprising that even though he made his discovery in 1492, it took a little over a hundred years for people to finally settle in the New World. So, why did they decide to come? Well, some settlers were hoping to escape from the problems of the Old World by moving to the new. Then, there were reports that excellent crops could be produced in Virginia, especially. That induced many more people to undertake such a long journey across the ocean. So, America was not the sought after India, but it did offer its settlers a new and potentially rich life.

3. (Woman P) It used to be widely accepted that photographs provided a perfect way to document historical events. It seemed that a photographic image preserved – in extraordinary detail – deeds, deeds of both the famous people and, and of the unknown masses. But this is no longer the case, or at least not the case with contemporary photographs, because technological advances in the field of photography in recent years have made it possible to manipulate and alter photographic images – a process you all know as digital imaging. So digital imaging, as fun as it might be or as useful in some fields that it might be, has, in fact, made it increasingly difficult, well, impractical really, to use contemporary photographs as a reliable source of information. We can't conclude anymore that photographic records, for those interested in the historical records, can be used for any serious inquiry. You have to take contents of a contemporary photograph with a grain of salt, so to speak.

4. (Woman P) You hear snatches of Spanish, French, Russian, Chinese, and a dozen other languages which you probably don't recognize on the streets of major cities in America. Right? OK, even though all kinds of languages are heard, the vast

majority of people living in the United States communicate in English. So, the United States is considered an English-speaking country. But is English the official language in the U.S.?

(Man S) Well, sure. All the official stuff – the discussions in the Congress, the official documents – that’s all in English.

(Woman P) Can you tell me where in the United States Constitution it says that English is the official language?

(Man S) Uh, no. But maybe it isn’t in the Constitution. Maybe it’s in a different document.

(Woman P) Well, the fact is that no single language is recognized as an official language in the United States Constitution. Now having said that there’s no official language that’s written, stated at the federal level. Don’t forget that there are also state constitutions.

(Man S) Ahh. OK.

(Woman P) However, like the U.S. Constitution, most state constitutions don’t recognize an official language either. Does anyone know of any state constitutions that do recognize an official language?

(Woman S) Well, I’m, I’m from Louisiana, and, and I think that the Louisiana State Constitution recognizes both English and French as official languages.

(Woman P) OK. The state of Nebraska made English its official language sometime early in the twentieth century and, and, from time to time, this issue pops up and is discussed in various states.

## Listening Mini-test 1

### Questions 1–3

Listen to part of a discussion between two friends.

(Woman S) Hey, Sammy. How’s your job at the library working out? You’re at the university library aren’t you?

(Man S) Yeah. It’s great. I’ve been working in the acquisitions department.

(Woman S) Oh. What do you do there?

(Man S) Logging in new books, mostly. It’s kind of neat ‘cause I get to open all the boxes that arrive . . . boxes containing all of the newly purchased books. It’s kind of like a birthday, unwrapping presents.

(Woman S) That sounds like fun.

(Man S) That part is, but then I have to enter each book into the computer. I don’t mind that too much, but the worst, the worst thing is attaching the bar

code on the cover. That can get kind of tedious, you know, just doing the same thing over and over again.

1. What are the people discussing?
2. What is the woman referring to when she states, “that sounds like fun”?
3. Which duty does the man like the least?

### Questions 4–6

Listen to part of a lecture from a history class.

(Woman P) William Cody, well . . . you probably know him as Buffalo Bill. OK, so William Cody became an American showman and founded the great Wild West Show. That was in 1883. He traveled around Europe with other famous people that you probably have also heard of, like people such as the sharpshooter Annie Oakley and the Indian chief Sitting Bull. This Wild West Show traveled, as I said, around Europe, and performed for many heads of state, like the queen of England – Queen Victoria . . . the show was featured at her Golden Jubilee celebrations. And the Czar of Russia, that would have been the Czar . . . uh . . . Alexander III. His father, Alexander II, had been assassinated in 1881. So Alexander III would have seen Cody’s show.

4. What is the talk mainly about?
5. What is the woman referring to when she states, “That was in 1883”?
6. In addition to Annie Oakley, which other famous person traveled with Buffalo Bill?

### Questions 7–9

Listen to part of a lecture from a music class.

(Man P) Just before the turn of the twentieth century, a new musical form captivated America . . . and that was ragtime. I suspect you’ve all heard of ragtime. The main feature of ragtime is its syncopation. Syncopation – you know how a waltz has a beat of ONE two three ONE two three and a polka has ONE two three four? These beats are regular, but in ragtime there’s syncopation, a displaced beat or accent. Traditional strong beats become weak and vice versa, weak become strong or the beat isn’t evenly spaced, but comes a little earlier than expected, or later. Although ragtime had its start in 1897 with William Krell’s “Mississippi Rag”, and I’m going to be playing that for you in a moment – it was Scott Joplin who popularized the rag with his “Maple Leaf Rag.” We’ll hear that one as well. Now, it was John Philip Sousa, best known for marches actually, who began to feature rags in his band concerts in America and Europe. And by the early 1900s, ragtime was the most popular musical art

form in America. OK? Now let's listen to . . . I'd like to play a few of these pieces I've been telling you about.

7. What does the speaker mainly discuss?
8. According to the professor, what is ragtime?
9. What does the professor contrast in his lecture?

### Questions 10–12

Listen to a conversation between two students.

(Woman S) Didja hear on the news last night that, that the City Museum had just recovered the missing painting by Rembrandt? They said, um, lemme get this right. The curator said the painting had been returned after being out on unauthorized loan for three years.

(Man S) Yeah, I heard that, but I just got in on the tail end of the story. The part I saw, when I was watching it, I kept wondering . . . why that painting? What's so special, you know, about that particular painting? I mean there are so many more valuable items in the museum. Why was that one stolen?

(Woman S) Yeah, well, they explained that on the news. That same Rembrandt's been taken, stolen, four times in the last twenty years. Thieves seem to favor it . . . and the museum curator believes it may have something to do with its size, you know, it's kind of small – nine inches by eleven.

(Man S) Hmmm. That would make it easy to take. Just put it under your coat and walk out.

(Woman S) Don't get any ideas. [laugh] They do have surveillance cameras.

(Man S) I'd say they need something more.

(Woman S) The museum has taken extra security precautions.

(Man S) How valuable is it, anyway? Did they say?

(Woman S) Yeah, well, the curator said that it's been appraised at five million dollars, but he didn't know what a thief could get for it.

(Man S) That Rembrandt is very well known, isn't it?

(Woman S) Uh-huh.

(Man S) So why would anyone want a stolen painting that's so easily recognized?

(Woman S) The news reporter asked that same question and the curator wasn't sure, but he told a story about the Mona Lisa being stolen and a man painted a bunch of copies and then sold all the fakes as the real stolen one.

10. What are the people discussing?
11. What does the woman mean by the phrase "being out on unauthorized loan for three years"?

12. What reason is given for the painting's popularity among thieves?

### EXERCISE L13 Understanding restatements

1. (Man P) The dialect spoken in Kárpáthos is so old that many words date back to the time of Homer.
2. (Woman P) A Frenchman's 25-minute flight in a hot-air balloon in 1783 was the first manned flight.
3. (Man P) One of the most beautiful birds in the world, the quetzal, takes its name from the Aztec word meaning tail feather.
4. (Woman P) Twenty-two men from Mao Tse-tung's Red Army had to storm the Luding Bridge after an all-night march to capture a needed escape route for Mao's forces.
5. (Man P) Many relief centers were set up in the drought-stricken areas.
6. (Woman P) Recently discovered fossils have revolutionized our concept of the human past.
7. (Man P) Recent explorers have been unable to locate the island that was vividly described in the captain's log in March 1783.
8. (Woman P) The executive secretary of the Protection of the Marine Environment Organization has reported that a large number of dead fish, dolphins, and whales have been spotted off the East Coast.

### EXERCISE L14 Finding two answers

1. (Man S) You didn't come to art class yesterday, did you?  
(Woman S) Uh-uh. I got out of my chemistry lab late. Anything important I missed?  
(Man S) Yeah. Dr. Mathews has arranged for us to meet at the art museum next week, um, next Tuesday, I think that's the 26th. 'Cause the museum's got a special exhibition on fish rubbings.  
(Woman S) Fish rubbings? Uh, what's that? Not a hands-on exhibition I hope.  
(Man S) No. Well, uh, not exactly. You missed a good lecture, though. Fish rubbings – it's an ancient art form in which fish are used to make prints.  
(Woman S) Sounds slimy. Where was this practiced?  
(Man S) Um, in the Far East and by some native peoples in America.  
(Woman S) Will Dr. Mathews expect us to make some of our own fish rubbings afterwards?  
(Man S) I suppose that's up to you. I think it might be interesting to give it a try.

What can be said about fish rubbings?



2. (Woman P) The world's heaviest gold coin is worth millions of dollars. It was minted in the year 1613 in India. The name of its issuer, Mughal Emperor Jehangir, his name is stamped on the coin. Prior to the reign of this emperor, prior to his reign, rulers in India had to obtain permission to mint coins from the caliph, the ruler in Baghdad. OK? However, Emperor Jehangir changed this tradition. OK? He, uh, started his own policy of issuing coins, coins in his own name. It was during the time of the Mughal dynasty that many art forms were encouraged to flourish, Emperor Jehangir supported the arts. Therefore, it's not surprising that the art of minting coins began and, uh, reached its peak of perfection during his reign.

What is true about Mughal Emperor Jehangir?

3. (Man P) When microscopes are referred to, most people think of optical microscopes. These instruments were developed principally to meet the needs of the biological sciences. They aren't that useful for metallurgists. They, uh, metallurgists have large, and awkwardly shaped specimens. So, those who need to examine metal objects or metal structures use a metallurgical microscope. This is a special . . . the observing and illuminating systems of a metallurgical microscope are mounted in a way that allows adjustment for accommodating odd-shaped samples. Metallurgical microscopes are equipped with devices that provide the capacity to measure an object in the X, Y, and Z axes. These microscopes are frequently used in the field instead of in the laboratory, so they must be, must be more durable.

How is a metallurgical microscope different from an optical microscope?

4. (Woman P) Since people communicate mostly through speech, you can imagine that a defect in speaking or hearing abilities can be an enormous handicap, right? OK. There are three conditions in which communication disorders can result. Any ideas what these may be? Three conditions . . . yes?

(Man S) Well, the obvious condition, I think would be a physical one. Let's say, like, if someone's eardrum has been damaged because of an illness or an injury, that person might not be able to hear. And, um, being deaf or partially deaf not only affects the person's ability to hear, but also deaf people's speech sometimes isn't all that clear, so that makes it difficult for others to understand them.

(Woman P) You bet. If something goes wrong with the speech or hearing mechanisms, communication disorders can result . . . Sue?

(Woman S) Well, I have a cousin who suffered brain damage in an accident and he can't speak very well. And some people are just born with uh, something wrong.

(Woman P) Yes. That's a condition we would classify . . . we classify it under the condition of abnormal functioning of the brain. Besides accidents, people may be born with this condition or it can occur as a result of a stroke or a tumor. And the third condition? Anybody?

(Man S2) Well, some people have been uh, badly shocked, uh, traumatized, and they get kind of emotionally upset, you know. I read about a boy who just stopped talking after he saw this really terrible accident.

(Woman P) Good point. Yes. An unusual emotional or psychological problem can cause communication disorders. OK. So communication disorders can result from uh, one, something going wrong with the speech or hearing mechanisms, uh, two, abnormal functioning of the brain, and finally, an unusual emotional or psychological problem. Now, fortunately, most communication disorders can be improved to, to some degree, with the help of a speech pathologist.

What is true about communication disorders?

#### EXERCISE L15 *Getting all the facts*

1. (Man P) So, Victoria C. Woodhull is best remembered as, uh, for being the first woman candidate to run for the U.S. presidency. She did this in 1872 against Ulysses S. Grant. Now, in fact, Woodhull had long been involved in many radical movements, movements including spiritualism, utopian socialism, and women's rights. She was a first, the first woman in other endeavors, as well. Let's see, in 1868 she co-founded the first woman-owned brokerage firm and a couple years later, she established an outspoken political journal, a journal which promoted a variety of extreme views. Although Woodhull lost the presidential election, she continued her political work for several decades, however, over time with less radical views and, uh, with a quieter public profile.

What details about Victoria C. Woodhull's life does the lecture include?

2. (Woman P) OK, now, the coral reef is right below us. So, first, I want all of you to check all your diving equipment. Do you have a full oxygen tank? Is all your equipment functioning properly? OK.

Everyone ready? Now I want everyone, each of you to . . . to find your diving partner. Once you are in the water, remember, stay with your diving partner. Stay together. You should always have someone with you who can signal for help in case of an emergency.

(Man S) Uh . . . my diving partner isn't here today. Is there anyone else who doesn't have a partner, someone who needs a partner?

(Woman P) There doesn't seem to be anyone without a partner so you can join Linda and Jeff. OK? The three of you. Keep an eye on each other. Now, stay together as we descend to the coral reef. It's only about 25 feet below. Follow me as I go along the reef and try to identify the kinds of corals we looked at in class. I'll give a signal when it's time to return to the boat.

What details are included in the diving teacher's instructions to the students?

3. (Woman S) Dr. Jackson, I was reading an article the other day and it referred to a study, uh, a phenomenon called the "hundredth-monkey" phenomenon. It didn't explain the study, but I was curious to know more about it. Are you familiar with it?

(Man P) Yes, I am. Um, this study involved a group of monkeys inhabiting an island off the coast of Japan. The monkeys were shown how to eat sweet potatoes in a particular way, a way that wasn't typical of monkeys. Supposedly, other monkeys living on the island began to copy this behavior, and soon a hundred monkeys were eating sweet potatoes in the new way. At this point, it is claimed that monkeys from another island about two hundred miles away began eating, began the same sweet-potato eating behavior. These monkeys had never been in contact with the monkeys on the first island.

(Woman S) That's really intriguing. Why do you sound so, uh, skeptical?

(Man P) Well, let me me say this. It doesn't sound very likely and I haven't seen the study mentioned in a serious journal. Only in a popular science magazine that . . . might not have investigated the source of the research.

What details about the "hundredth-monkey" study does the professor give?

4. (Man S) OK. Um. For my presentation I decided to talk about puppetry. First, I'm gonna talk about some traditional puppets and then I'm gonna go into some more unusual puppets. So, um, puppetry is an art form used for entertainment and education. It consists of a show in which puppets, figures made to represent humans and

other creatures – these can be authentic or mythical representation – they are used to tell a story. So, traditional puppets come in many forms. The most common type of puppet and the easiest to make and use, and one that I'm sure all of you have played with at sometime in your lives, is the hand puppet. So this puppet is like a glove and is worn over the hand of the puppeteer. You, the puppeteer, work the head and arms of the puppet by moving your fingers. OK? So, another common type of puppet is known as the marionette. That's the one that looks kind of like a doll and has all these joints on the body and you control it by moving, uh, manipulating the strings. The puppeteer usually stands on a bridge over the stage and makes the marionette move by pulling the strings. OK. And the last traditional puppet I'm gonna talk about is the third kind of puppet, the shadow puppet. Now, these puppets are controlled by rods. These rods are attached to their hands, the puppets' hands and the puppeteer makes the puppet move by manipulating the rods from below the stage. So, the legs of the figure hang loosely, kind of dangling down, and have freedom of movement. The performance with these kind of puppets takes place behind a screen with lighting set up so that the puppet casts a shadow.

What details about puppetry does the presentation include?

#### EXERCISE L16 Recognizing information

1. (Woman P) The homing instinct of pigeons, uh, pigeons have a homing instinct and this is what makes them popular for racing. But you have to start training a bird when it's young so . . . a bird's training begins when it's about seven year-, uh, excuse me, seven weeks old. At first, this training consists of giving it short exercise flights, teaching the bird to recognize its owner's call. It also has to be taught to enter its cote, uh, a cote, the pigeon's home. Then, the next phase, when the bird is about four months old . . . the next phase of training is started. In this stage, the pigeon is taken short distances from its home and then released. So the distance of these flights is gradually extended from 3 miles up to 100 miles as the bird's stamina increases. And then, when the bird, the pigeon is ready, the owner may enter it in a race, against other trained pigeons. So, the owners take their birds to a central meeting place and all the birds are tagged. The tag is a small metal ring attached to one leg. Then they are released all at once, simultaneously, all these birds take off for home. Now a bird is not considered to be home until it has entered its

cote – that's why it's important to teach it to enter its cote – and . . . its owner removes the tag and this is inserted it into this special kind of clock that records the bird's arrival time. Uh . . . because owners live at different distances from the release point, the first pigeon home may not be the fastest flier. It's the bird that makes the best time in flying the distance home . . . that bird is the winner.

In the lecture, the speaker describes the steps in pigeon training. Indicate whether each of the following is a step in the process.

2. (Man P) I wanted to talk today about the American suffragettes who finally won their battle for the right to vote, when the right to vote in a democratic election was extended to women in 1919. But, because of women's equal rights being harmed by discriminatory legislation, the ERA, um, Equal Rights Amendment was introduced in 1923. This was a special time when the feminist symbolized a young generation of women. It was a time in America's history . . . young women were carefree, exuberant, eager to break out of traditional roles and enjoy personal independence.

All this optimism came to an end during the Great Depression, an economic crisis precipitated by a stock market crash in 1929. OK? At the depth of the Depression, over one-third of the labor force, let me repeat that, one-third of the labor force, that is one out of every three people, was unemployed.

As you can imagine, as men lost their jobs, they became resentment-, uh, resentful, they became resentful, toward those women who had jobs, whose jobs were protected because of the Equal Rights Amendment. This resentment became widespread. And laws were passed that restricted women's rights. One such law was the married-person's clause. OK? The married-person's clause prevented the civil service from hiring more than one member of a family. This law left many women unemployed. Following the assumption that a man is or should be the primary wage earner, many school boards fired married women. Even women in positions of power supported policies that made women's conditions worse rather than improved them.

Now, at the same time that women were losing their rights, there was a propaganda campaign by social workers and public figures which was intended and effectively did its job of convincing women that their responsibility, their duty was to maintain family values. A consequence of this campaign was the strengthening of belief in traditional roles and, uh, an acceptance on the

part of women to stay at home instead of pursue a career.

In the lecture, the professor describes events that undermined the gains the suffragettes had made in women's rights. Indicate whether each of the following is an event that hampered the movement.

3. (Woman P) In the natural world, a multitude of symbiotic relationships has developed, uh, between different organisms. In many of these, the partnership is one sided; in other words, one of the symbionts – the two creatures involved in the partnership – one of the symbionts benefits from the association while the other may be harmed by it.

Sometimes two species develop a relationship that is beneficial to both parties. This is called mutualism. OK. So, a symbiotic relationship in which both organisms benefit is called mutualism. Let me give you an example of such an alliance – the relationship of ants and aphids.

Aphids are tiny pear-shaped insects that typically feed exclusively on a particular plant – I think most of you have seen them – they live in crowded clusters on the underside of leaves or on stems. The aphid's mouthparts are adapted to piercing plant tissue and sucking out the sap; they are very efficient at getting the sap, but they can't metabolize it all, so they have to get rid of it. OK? So, from the back of the insects are two cornicles – kind of like a tailpipe of a car – protruding from the back of the insects. The aphids get rid of this sap by secreting it from these tailpipes, these cornicles. Uh . . . this sap, a sticky substance called honeydew, is high in nutritive value. The honeydew falls onto the ground or onto the leaves of the plant and is collected by ants. The ants use this honeydew substance as a food source. Some ant species stroke the back end of aphids, sometimes these aphids are called the ants' cows – the ants stroke the aphids with their legs and antennae in order to stimulate the flow of the honeydew liquid. It's thought that aphids may actually withhold the honeydew . . . waiting until ants caress them. Some ants take care of whole herds of aphids. They build shelters for the aphids and carry them to new plants . . . to new plants when the old plants die.

So the aphid's mouthparts – as I said – are adapted to piercing the leaves and sucking out sap. In contrast, the ants' mouthparts are not well modified for getting the sap from plants. So the ants rely on the aphids to get the sap for them. The aphids are not well adapted for fighting off predators and consequently, they rely on ants to provide this protection service for them. See the

mutualism? Both these creatures, ants and aphids, benefit from this arrangement of close cooperation. This relationship is somewhat analogous to the relationship between cattle and human beings.

In the lecture the professor describes a relationship between ants and aphids. Indicate whether each of the following is a benefit that aphids get from ants.

### EXERCISE L17 Organizing information

- (Man P) It may be true that no two snowflakes are exactly alike, but they can be classified by their shape, and this is dictated by the way water molecules in the atmosphere react to temperatures. Good snowflake formation needs low temperatures. OK. So what are the different shapes and what influences the final shape that a snowflake takes? Now, there are three different types of snowflakes. The most familiar type of these three basic types is the star, which looks like the common picture-book illustration of a star with six points. The second type, type two, is a solid prism shape, a column, like a section cut through a lead pencil. The third type, the plate, looks like a tiny, hexagonal dinner plate. OK? So how do they get those shapes? Well, extreme conditions like those in the polar areas produce the perfect prisms, but there isn't enough precipitation there, in the polar areas, for stars to form, stars need precipitation in order to form. So you usually don't find stars at the poles. The plates are sort of in-between the prisms and stars. Plates need higher temperatures than those found at the poles where the prisms form, but they need less humidity than is needed for the formation of stars. Now, in places where the temperature is too high or where there's a high wind, snowflakes tend to be irregular. The crystals have not really formed properly or have become damaged by the weather conditions. That's why we frequently don't see nice formations here, and of course, since we don't live at the poles, we never see prisms.

The speaker talks about the shapes of snowflakes. Match each type below with the conditions under which it develops.

- (Woman P) Many folk cures that have been around for centuries may be more therapeutic, more medically useful than previously suspected. Some home remedies have been found to have antiviral properties and others have antibacterial properties. So, the importance of documenting these . . . remedies and experimenting to see if they really work can't be overemphasized.  
A case in point is the wormwood plant. This plant has been used for hundreds of years in China and Vietnam to combat malaria. In fact, an early

record of wormwood, of the medicinal use of wormwood, was found in a recipe discovered in a Southeast Asian tomb, a tomb dating from 168 BC. So the properties of the wormwood were closely investigated, and a new anti-malarial drug came out of this study. So, its antiviral properties led to the development of a drug for malaria, because, because the research found that it was, indeed, effective against this virus. So its antiviral properties were found to be correct.

Another case is sugar. See, in parts of South America, a powder obtained from grinding sugar cane is used for healing infections in wounds. And this usage may date back several hundred years. So experiments carried out on several hundred patients indicated that ordinary sugar in high concentrations kills off bacteria. Its suction effect helps by eliminating dead cells and creating a glass-like layer, and this glass-like layer protects the wound and ensures its healing.

Another antibacterial folk medicine that scientists are investigating is one used by Arab fishermen who rub their wounds with a venomous catfish to quicken healing. This catfish excretes a gel-like slime, and this slime has been found to contain not only antibiotics, but a coagulant that helps close injured blood vessels, anti-inflammatory agents, and a chemical that directs production of a glue-like material that aids healing.

Because traditional herbal treatments are often locally available and inexpensive, that makes them ideal for use by local people. Documentation of traditional medicines worldwide needs to be undertaken before those traditions are lost. An analysis of the substances can be made, and artificial, synthetic substances can be developed for human use around the world.

The speaker talks about folk cures and what they were used for. Match the folk treatment to the properties it supposedly has.

- (Man P) Today I want to talk about the development of refrigeration. There is evidence that early humans stored food underwater. They, early humans, probably noticed that their meat would last longer if it was kept underwater or stored in a cave or . . . was packed in snow. Later, ice was actively harvested from frozen lakes and rivers, and this ice would be stored in specially constructed buildings called icehouses to preserve food until the following winter. Is anyone familiar with these buildings? Yes, Tom.

(Man S) Well, yeah, in my hometown there's one that's been made into a museum. I think it was used to store ice, um, until the 1920s.

(Man P) Uh-huh. Could you describe the building for us?

(Man S) Uh, well, it's a large, windowless building. A brick and stone building and the ice blocks were packed in straw so that the ice would-, wouldn't melt. The straw kept the ice from melting for a while, anyway.

(Man P) OK, yeah, that's a good description of an icehouse. A later storage container was the icebox. And what would be the advantages of an icebox, an icebox over an icehouse? Susan?

(Woman S) Well, as I understand it, the icebox is a kind of early refrigerator. So, icehouses served whole communities, whereas iceboxes were small enough to put in your house, so it was more private and good for house, uh, domestic use. They kind of look like a cupboard, often with legs, and were made of wood.

(Man P) Uh-huh. That's correct. The inside of the box was lined with tin or zinc, and sawdust was frequently used for insulation purposes. Blocks of ice were delivered to people's homes like morning newspapers. So when do you think this method of refrigeration began to be obsolete?

(Man S) Presumably when modern electric refrigerators were introduced. Iceboxes didn't use electricity, did they?

(Man P) That's right, Tom. That's right. And refrigeration technology didn't stop there. It continues to develop today.

The class discussion is about the development of refrigeration. Match each description with the corresponding form of refrigeration.

4. (Woman P) In underground cave systems, rainfall containing minerals absorbed from carbonate rock and plant debris builds up formations known as speleothems. Let me spell that for you. S-P-E-L-E-O-T-H-E-M-S, speleothems, the formations that build up in caves. So over geological time, a variety of fantastically shaped structures can develop within a cave system. I'd like to talk about the different speleothems and how they're formed, usually by one of two types of water conditions: water dripping or water flowing. For some speleothems to develop, mineral-laden water drips through the cave roof. The minerals from the dripping water start to build up vertical elongated hollow tubes hanging from the ceiling of the cave. These tubes are known as soda straws. They look like a soda straw and water drips from them, like when you take a straw out of a drink. So drops of water run down the inside of the tube, leaving mineral residues at the opening. Over

time these soda straws can build up to several feet in length, and eventually they become plugged up so the water can't run through the straw anymore, so it runs down the outside surface. When this happens – this dripping down the outside of the straw – the formation evolves into an icicle-shaped stalactite.

Of course, this constant dripping of water off the end of the straw, or the stalactite, hits the floor of the cave under the formation and this builds up a vertical formation, rising from the floor, directly underneath, uh, the stalactite, and this formation is known as a stalagmite. Stalagmites typically have rounded ends due to the water splashing down from above, but their shapes vary a lot. Sometimes stalactites and stalagmites grow together to form a column from floor to ceiling.

Other kinds of formations found in caves besides soda straws, stalactites, and stalagmites are those formed by flowing water. OK? So, sometimes the water flows down the inclined ceiling of a cave, and when this happens, the mineral solution is deposited in thin trails. The deposits build up in a series of ripples and folds, and it looks like a layer of cloth. This kind of speleothem is called a drapery. You can visualize this speleothem as a piece of cloth draped over a ramp of some sort. OK. Now, if the water falls down a vertical surface, instead of a slope, the resulting formations take on the appearance of a waterfall, and this is known as flowstone.

Now speleothems are found in a variety of colors as well as shapes. This is due to the impurities – both natural and artificial – that mix with the dripping or flowing water as it seeps underground.

The professor talks about cave formations. Match each cave formation with the corresponding water condition.

## Listening Mini-test 2

### Questions 1–4

Listen to part of a discussion in an environmental science class.

- (Woman P) It's now well established that our planet's protective ozone layer has been thinning in recent decades. This ozone layer lies between 15 and 30 kilometers above the Earth's surface and absorbs ultraviolet rays emitted by the sun. You all know about using skin creams and sunglasses for protection against ultraviolet rays. The thinning of the ozone layer, the loss of ozone is caused because artificial chemicals called chlorofluorocarbons, or CFCs, combine with the oxygen atoms of the ozone. So every oxygen atom that combines with

CFCs, this chemical reaction between CFCs and oxygen is what, is uh, how the amount of ozone is being depleted. Um, this ozone depletion has serious consequences because the more ultraviolet light reaches the Earth, the Earth's surface, the more damage it causes in DNA in humans and animals. The most well-known effect of this is the recent dramatic increase in skin cancers.

(Man S) So who's responsible for creating these CFCs? I mean, we've known about this for a long time. Isn't something being done about it?

(Woman P) Well, to answer your first question, uh, who's responsible, well, in a sense we all are. CFCs are a main component of dry cleaning and refrigerating chemicals. They are also produced in various manufacturing processes, and in nitrogen fertilizers, and aerosols used in products like hair sprays and polishes. Isn't something being done about it, your second question, well, yes. Uh, fortunately, CFCs use in aerosols has been phased out in most countries. But, these chemicals are dispersed in the lower atmosphere where they can linger for years before migrating to the stratosphere where the damage is done.

(Woman S) Dr. Alameda, this all sounds very pessimistic. Haven't there been international agreements to phase out CFCs?

(Woman P) Yes, in fact, since 1985 several international conventions have produced agreements.

(Man S) So, uh, would you say you are optimistic about the future, the future of the ozone layer?

(Woman P) I would say that, that I'm guardedly optimistic for the long-term future. It's true that the various agreements are beginning to take effect. The problem is that it takes many years for the CFCs to disperse, and the fact is, not all countries are enthusiastic about phasing out their production, for economic reasons. However, it's generally hoped that the ozone layer will recover completely by the year 2060 if we all abide by the international agreements.

1. In the discussion, the professor briefly explains the process that breaks down the ozone layer. Indicate whether each of the sentences is a step in the process of ozone depletion.
2. Why is the professor cautious in her prediction of the future?
3. According to the professor, how do CFCs get into the atmosphere?
4. According to the discussion, which of the following are contaminants?

### Questions 5–8

Listen to part of a lecture in a psychology class.

(Man P) OK. We all know that people can and do influence each other. However, the real question, the disturbing question is . . . how far can people's minds be influenced against their own will? There are three techniques that have been used in attempts to control other people's behavior, and I'd like to tell you a little about each one of these techniques.

One technique, subliminal perception, is frequently referred to as subception. This technique is based on the observation that people notice a great deal more than they consciously realize. This is not a new observation. We have been aware of it for a long time. But, it has been given special attention since the results of an experiment that took place in a New York movie theater were reported. In this experiment, what they did was, well, an advertisement for ice cream was flashed onto the screen during the feature film. Apparently, the ad was shown for such a brief moment that no one consciously saw the intrusion. Got the picture? Everyone was watching the movie and being shown an ice cream ad so quickly that they weren't aware of it. What was found was that ice cream sales increased dramatically. You could say they soared for the duration of time that the experiment continued. That was subception.

Hypnosis is another technique that can be used for controlling people's minds. OK, so while in a deep trance, people can be told to do something at a specific time or at a certain signal. They can also be told that they won't remember anything when they come out of the trance, what had been said or what they were told to do, at what particular signal, once out of the trance. This is called a post-hypnotic suggestion. It's still unclear whether a subject can be made to carry out an action that otherwise would be unacceptable in that person's mind.

The third technique I want to mention is brainwashing. Brainwashing entails forcing people to believe something, usually something false, by continually telling them or showing them evidence that's supposedly true. The person being brainwashed is, uh, prevented from thinking about whatever it is, thinking about it properly or considering other evidence. Now, brainwashing can take some extreme forms. For example, brainwashing can be done by first causing a complete breakdown of individuals. This is done through acts such as starving them, preventing them from sleeping, intimidating them, and keeping them in a state of constant fear. Eventually, the person, the individual loses their sense of reality . . . and when this happens, new, false ideas can be planted in their minds.

5. In the lecture, the professor describes three types of mind control. Match each behavior with the associated mind-control technique.
6. According to the professor, what is true of subliminal perception?
7. What else is true of subliminal perception?
8. Which of the following did the professor not mention when speaking about brainwashing?

### Questions 9–12

Listen to part of a lecture on biotechnology.

(Woman P) Nature has always provided a stimulus for inventive minds. Look at early flying machines, they clearly were an attempt to emulate the freedom of birds. Architects and engineers have often consciously modelled buildings on forms found in nature. A more recent example of inspiration from nature is the invention of that common fastening device, Velcro®. The inventor of Velcro® was out walking his dog and noticed that small burrs – you know, those seedpods that get attached to your clothes? Small burrs had become entangled in his dog's coat by grasping the hairs with tiny hooks. This led him to invent a synthetic fabric, one whose surfaces mimic the clasping properties of these natural seedpods that he was pulling out of his dog's coat.

Animals and plants have evolved solutions to the same kinds of problems that often interest engineers and designers. So lots of current research in material science is concerned with actively examining the natural world, especially at the molecular level, for inspiration to develop materials with novel properties. This is a relatively new field of study, sometimes known as biomimetics, since it consciously attempts to mimic nature. I don't need to write that on the board, do I? Bio from biology, and mimetics from mime or mimic. OK? Biomimetics.

OK. Well, researchers have been investigating several interesting areas, well, what I think are interesting areas. For example, they have studied how the molecular structure of antler bone contributes to its amazing toughness, how the skin structure of a worm contributes to its ability to crawl, how the sea cucumber softens its skeleton and changes shape so that it can squeeze through tiny gaps in rocks, or, uh, what gives wood its high resistance to impact. These investigations have led to several breakthroughs in the development of composite materials with remarkable properties.

Predictions for future inventions that may be developed from these lines of research include so-called smart structures. Those are structures

that design and repair themselves in a similar way to a variety of processes in the natural world. For example, engineers have envisaged bridges that would detect areas heavily stressed by vehicle movement or wind. See, the bridge structure would automatically add or move material to the weak areas until the stress is reduced. The same principle might be used to repair damaged buildings. Other new materials that have been imagined are substances that would copy photosynthesis in green plants. What good is that, you might ask. Well, photosynthesis could be a way to create new energy sources. The potential impact of biomimetic research is so great that we may end up calling the twenty-first century the Age of Materials.

9. In the lecture, the professor explains the field of study called biomimetics. Indicate whether each of the following is an example of biomimetic application.
10. According to the professor, what inspires architects and engineers?
11. When talking about smart structures, what is the professor doing?
12. What are some of the areas that researchers are investigating?

### Questions 13–16

Listen to part of a discussion in a criminology class.

(Woman P) Today I'd like to look at the problem of theft . . . theft of cultural antiquities and art. You probably aren't aware . . . what a large problem it is. Let me give you some facts. Illegal trafficking in cultural property has become a massive criminal activity, so massive that today it ranks in economic terms alongside illegal trading in weapons or drugs. Think about that . . . equal to the illegal trade in weapons and drugs. OK, so where do these art treasures come from? Well, in fact, no part of the world is immune from this problem. Works of art are stolen from museums and looted from historic or religious buildings everywhere, and eventually they find their way to wealthy buyers. Frequently, smaller stone or wooden carvings are simply cut or chopped away from a wall or base – sadly, destroying the integrity of the overall work. In some regions of the world, these thefts have seriously reduced the stock of national treasures. So, what kinds of measures do you think would be most appropriate for dealing with this situation? Anyone? Yes, Luis?

(Man S) Well, electronic surveillance of exhibitions and historical monuments would help.

(Woman P) OK. Electronic surveillance. That, no doubt, would act as a deterrent and would be a very good

means of combating some thefts. But, that's not always an affordable or practical option. It can be too expensive and, especially since many cultural objects are located in remote places, not practical at all. Other ideas? . . . for dealing with thefts? Yes?

(Woman S1) Isn't there a move to get owners, uh, countries, to catalog their cultural possessions?

(Woman P) Yes, Mary, there is. Remember that one of the chief problems in policing this kind of crime is that very often, too often, the original owners, whether they are governments, museums, or private collectors, these owners can't furnish an accurate description of the property that has been stolen, and therefore, they can't prove their ownership. So, yes, there are several organizations concerned with combating this illegal trade by stressing the importance of owners' making accurate inventories. These inventories should include relevant data. Data about the object. Data, such as date of fabrication, kind of material, shape, size, the presence of any kind of identifying markings. Of course, these inventories should also include detailed photographic illustrations, so if a thief takes something – let's say a painting, and cuts it up into pieces, selling it as two or three different paintings – a piece can still be identified as coming from the original.

(Man S) But inventories by themselves can't prevent this trade. It just kind of helps in the recovery, and this information can only be really useful if it's widely available to all the people involved in policing – customs agents, border guards.

(Woman P) Yes. Yes. You're absolutely right, Luis. In fact, the development of electronic networks allows the various police forces to use inventories to identify objects and to disseminate information about the objects to any of many official offices worldwide. This information can also be used by customs agencies, the insurance industry, and cultural heritage organizations. Can you think of any other measures that might help stem this illegal trade? Yes?

(Woman S2) Well, I think . . . it seems like a person could buy an artifact without being aware of its historical or cultural value, or that the object may have been stolen. So maybe travelers should be told about this danger. This might go a long way to reducing the trade.

(Woman P) Uh-huh. Uh-huh.

(Man S) Well, I was thinking, not so much about the theft, but how do customs people recognize that something is illegal art as opposed to some cheap trinket? I mean when we, when my family went to Mexico, to see the Mayan pyramids . . . in the Yucatan, well, there were lotsa peddlers selling

things like, well, copies of Mayan artifacts, and, uh . . . how would a border official recognize if a particular person is a tourist . . . is crossing with a trinket or someone trying to smuggle in a priceless treasure?

(Woman S2) Yeah . . . say, a farmer finds a Mayan piece in his field and sells it to a tourist without either of them understanding its value. And, of course, there would be no inventory, uh, no record of the item when the tourist crosses the border. How would a border guard recognize that? I mean, if it were stolen, there might be a report and the guard is on the lookout or a smuggler might give himself away through . . . uh . . . body language or something. But a tourist . . .

(Man S) Or . . . think about the long border between Mexico and the States. A smuggler could wade across the Rio Grande.

(Woman S1) And the border guards are more concerned with drug smuggling or illegal immigration, so someone with what looks like a trinket . . . an official might think this is just a guy bringing trinkets into the States.

13. According to the discussion, which of the following is true about the illegal trade in art?
14. What does the professor say about inventories of cultural properties?
15. Which problems in policing the trade in national treasures were discussed?
16. What does the professor say about electronic surveillance?

#### EXERCISE L18 Understanding inferences

1. (Woman P) At her trial, Mata Hari was dubbed the greatest spy of the First World War, of World War I. Her French accusers brought eight charges of spying against her. However, research suggests that she, Mata Hari, was not really a spy.  
Mata Hari was probably given a sentence for spying.
2. (Woman S) By the way, Fred, I heard, someone said, that you took an interesting course last summer. Whadja' take?  
(Man S) I did. It was a course on building adobe houses. You know, houses made of mud.  
(Woman S) What? Houses of mud? Are you joking?  
(Man S) No. I'm not. First, we studied the styles of traditional adobe homes in different parts of the world. That was interesting. Then we learned the techniques of mixing sand, straw, and water. Then we put the mixture into molds to dry, and, and when the mud bricks were ready, we built a structure of our own – the class's own structure, not each of us making one. A group effort.



(Woman S) So when are you going to build your house of mud?

(Man S) Well, not in the near future.

(Woman S) (teasing) Well, you'll have to let us know so we can help you. We, well, I, at least, used to like making mud pies as a kid.

The woman will probably sign up for the course.

3. (Woman P) A fossil of an extinct and previously unknown seabird has been excavated. This bird has been identified as history's largest flying seabird. The fossils indicate that it had a wingspan of more than 18 feet and it probably weighed around 90 pounds. Now if we compare that to the largest seabird of today, the albatross, the albatross weighs up to 20 pounds and has a wingspan of about 11 feet. The albatross is the largest living seabird today.

There are probably many fossils of today's albatross.

4. (Man P) The synovial membranes in the body produce fluids that lubricate the areas between the bones. Besides lubricating these areas, they also keep the cartilage tissues in good condition. So, can anyone tell me why it's important to keep the cartilage tissues in good condition?

(Man S) Well, cartilage tissues protect the ends of the bones. They kind of act like elastic shock absorbers.

(Man P) That's right. Now if the cartilage tissues are damaged, regeneration is slowed down or stopped. Yes, Linda?

(Woman S) Yeah, once cartilage has been damaged, is there anything that can be done to repair the damage?

(Man P) Well, there are experiments being conducted to renew damaged cartilage by transplanting synovial membrane cells. And so far, the results have been encouraging, very encouraging in fact, but further experiments need to be conducted before a decision can be made concerning their use on humans.

The transplant operation of synovial membrane cells has probably not been done on humans.

### EXERCISE L19 Drawing conclusions

1. (Woman P) Polio is a crippling disease that you've all heard about. It reached epidemic proportions during the 1950s. Unfortunately, many sufferers from that decade started experiencing a return of the symptoms thirty years later. Strange, isn't it? The reason behind this recurrence is not yet understood, but it has given scientists further information about the disease.

For what field might the new information about polio be most useful?

2. (Man S) I would really like to get my foreign language requirements out of the way, but I went to register and when I got there to sign up for beginning Spanish, all the Spanish courses were closed. So, do you have any suggestions, Dr. Abbot?

(Woman P) Well, if you are insisting on getting your requirement out of the way, you could sign up for a different language. The Italian teacher on our staff is excellent, and the classes are smaller, so there's more opportunity to practice speaking.

(Man S) Hmmm, I never thought of Italian. Thanks for the advice.

What will the man probably do as a result of this conversation?

3. (Woman S) You were telling us about the famous fashion designer Jean Muir yesterday at the end of the class period. But we had to rush off. I know it wasn't part of your lecture, but we thought it was interesting. Could you finish what you were saying?

(Man P) Sure. What were you interested in?

(Woman S) Well, you were talking about her discovery that she had terminal cancer and how she set about changing the way she managed her fashion business. But you didn't get into those changes. I'd like to know what things she did.

(Man P) I was just saying that she concentrated her time and energy on four women. These women had worked for her over the years. So Muir gradually increased their responsibilities and their training. Together they worked on both Muir's mainline collection and the studio collection using her original ideas and patterns. At the time of her death, she had left enough material for these women to produce collections for twenty years.

(Woman S) She was really passionate about design, wasn't she?

Why might Jean Muir have given so much attention to her staff?

4. (Woman P) Two University of Alaska professors devised a novel way of getting junior high school students interested in the economic history of their state. How many of you are interested in the economic history of your state? No hands up. Uh-huh. OK. So, these professors produced a 120-page comic book that traces the economic history of Alaska from the mid-eighteenth century until the granting of statehood in 1959. Most adolescents seem to find the comic-book format a more

entertaining way for learning a subject. So this seems to be the ideal way to pass on information. The writers use fictional and historical characters to illustrate economic concepts and historical events, such as the hunting of whales and the Klondike gold rush of the 1890s. The response from students was overwhelmingly enthusiastic and, as you can imagine, teachers also appreciated the ease with which their students grasped economic concepts taught in this way.

To what group of university students might this talk have been given?

### EXERCISE L20 *Inferring reasons*

1. (Woman S) I saw in the course catalog that the university is offering a batik class this semester. Is it still open?

(Man S) I don't know. Do you have the course number?

(Woman S) 309.

(Man S) Lemme see. Yeah, it's open. It meets Monday, Wednesday, and Friday at nine o'clock.

(Woman S) D'you know if it can be used to, as an undergraduate, uh, to meet undergraduate course requirements for art majors?

(Man S) Just a minute . . . uh . . . Yes, it fulfills course requirements for both art and home economics majors.

(Woman S) Good. I'd like to register for it, please.

Why does the woman ask if the course meets the requirements for art majors?

2. (Man P) Sound-activated toys . . . a toy that responds whenever the child talks to it . . . these toys are just one example of how high technology has affected childhood experience. There's a doll on the market that has a memory like a personal computer. It has a soft face that looks alive because it moves when the doll speaks. Its eyes respond to light by blinking, its hands are sensitive to heat, and it has a voice-recognition facility that gives it the ability to respond to the child playing with it. But one of the things we have found . . . uh . . . considering all the high technology that goes into making such expensive toys, you may be surprised, or maybe not be surprised, to find that children become bored with the new toy after its novelty has worn off. What children get the most out of . . . children seem to get the most lasting enjoyment from balls . . . ordinary sticks, uh . . . common cardboard boxes. This is probably because these toys can be turned into anything the child's imaginative play needs, whereas a high-tech doll is just that, a doll. It can never be anything else.

Why does the speaker mention balls, sticks, and boxes?

3. (Woman P) Before we go over those sentences I asked you to translate for today, I want to announce that the Foreign Language Department has set up a foreign-film festival. Uh, it will take place during the first two weeks of November. I'm especially excited about the Spanish-language films they'll be showing. There are two from Spain and three from Mexico. Besides those films, Chile, Argentina, Cuba are represented, and . . . just a minute . . . ah, yes . . . there's a Puerto Rican film that takes place among the New York City Puerto Rican population . . . These films will give you a wonderful opportunity to listen to regional accents. I've posted a schedule of all the movies outside the door of the Foreign Language Department office. I've also typed up a list of the names, days, and times of just those in Spanish, which I'll pass out at the end of the hour. OK. Now, I realize that some of these showings may conflict with your individual schedules, but I recommend that you try to make every effort to get to as many movies as possible.

Why does the professor encourage students to see the films?

4. (Woman P) I think you all know the reason I'm here. Sadly, well, first of all, I want to say I regret that violent crime has reached our campus, and of course, until the perpetrator is caught, all of you need to take extra precautions. I know some of you are frightened, and I don't mean to frighten you any more. I want to assure you that assault is a very rare occurrence here, and the chances of your becoming a victim are remote. However, as women, we all need to be alert and be cautious here or any other place we go. There are simple procedures we can follow. Try not to be out alone at night, and never use shortcuts, like unlit alleyways or routes across vacant lots. When you're out, walk facing the traffic so a car can't pull up behind you. I know that some of you take night classes. If you don't have anyone to meet you after class, call campus security. They'll send someone to pick you up from your classroom and escort you to your bus, car, or dormitory. At this point I'd like to introduce Mr. Lang, who's going to demonstrate some ways to protect yourselves through body language as well as the best ways to conduct yourselves if . . . if you are confronted. He will also teach you some techniques to break someone's hold on you if it should become necessary. So I'd like you to welcome Mr. Lang.

Why is the speaker giving the talk at this time?

**EXERCISE L21 Identifying attitudes**

1. (Woman S) Aren't you a little old to be reading comic books?

(Man S) Hey, this isn't just any comic book. It's a Walt Disney classic.

(Woman S) Classic or not, this is a university.

(Man S) I'll have you know that this is required reading for my American popular culture course.

(Woman S) What? I can't believe it. Here I am reading stacks of major works by important authors . . . uh . . . Dickens, and Tolstoy for my survey of nineteenth-century literature course, and you're reading comic books!

(Man S) Well, this isn't the only required reading material in the course. We have to read a lot about the events that influenced the comic-book writers, and study contemporary art movements, and how women and minorities are depicted in, uh, comics and other pop art. This course isn't as easy as you think.

2. (Man S) Well, Jane, how was your first day of classes?

(Woman S) Great. I signed up for an American history course. It's about the Revolutionary War period— with Professor Lewis — he's fantastic.

(Man S) Uh, history . . . sounds boring to me. I never did like history.

(Woman S) How can you find history boring when — oh, I guess you never had a teacher like Dr. Lewis. He describes the events so vividly that it seems as though you are actually there, like, caught up in the issues. You would really get into it.

(Man S) Well, maybe.

(Woman S) Oh, come on. Why don't you take it? It's not too late to add a course.

(Man S) Well, I don't need it for my major, and there are other courses I'd rather take as electives.

3. (Woman S) Dr. Reed, are you busy?

(Man P) Hi, Donna. So you've come back to visit your old university, have you?

(Woman S) Yeah, our mid-term break starts a few days earlier than here, so I'm home to see my folks.

(Man P) And how are they?

(Woman S) Oh, just fine.

(Man P) Good. Good. And . . . uh . . . how do you like your program?

(Woman S) Oh, it's great. It's a lot of work, though.

(Man P) Well, now that you are at the doctorate level, you can expect that.

(Woman S) Yes, of course, and Dr. Jennings is — do you know Dr. Jennings?

(Man P) Of him, yes, . . . not personally.

(Woman S) Uh-huh. Well, he's arranging for a field-study group to work in Easter Island over the semester break. I've signed up to go.

(Man P) Fantastic. That'll be a great experience. I'd like to hear more about it, but I have a class in a few minutes. It's good to see you, Donna. Maybe you could pop into my office tomorrow afternoon, say about 2:30?

(Woman S) Sure.

4. (Woman P) Good morning. Can I help you?

(Man S) Yeah. Who do I see about a complaint?

(Woman P) Well, uh, that would be me. What seems to be the problem?

(Man S) [Sigh] Well, we've just moved into student family housing and the apartment is awful, just awful.

(Woman P) Hmm . . . That's odd. All our units are inspected and decorated before new people move in.

(Man S) I'm sorry, but not in this case. The walls are dirty and the refrigerator doesn't work and—

(Woman P) I see . . . uh . . . that's highly unusual. Could you please tell me the number of your unit?

(Man S) Um. It's 42 in South Court.

(Woman P) 42? Are you sure? Let me look . . . and your name?

(Man S) Anderson. Daniel Anderson.

(Woman P) Ah, I see. Here's the problem. You've been issued the wrong unit. Number 42 hasn't been redecorated yet. I'm really sorry about this. Let's see, you should have been given number 43. It's directly across from number 42.

**EXERCISE L22 Identifying the speaker's purpose**

1. (Man P) So, does competition promote success?

Think about it. Does competition promote success? Well, doesn't that depend on what you consider, how you define success? So, if you define success as beating your rival, then yes. But if you define success as finding satisfaction in relationships, possibly, very possibly competition is detrimental to success.

Why does the professor say this: Think about it.

2. (Woman P) In looking at the teeth of skeletons from the, uh, Mesolithic period, it was found that those from Northern Europe had fewer cavities than those from Southern Europe. Why? Simple. Diet. The breakdown of non-carbohydrate foods like

meats and fish does not form acidic by-products, whereas carbohydrates are cariogenic . . . uh . . . you know, caries, cavities, in other words, causing tooth decay. Carbohydrates, especially the sugars, are cariogenic. They produce acids that destroy teeth.

Why does the professor say this: you know, caries, cavities, in other words, causing tooth decay.

3. (Man P) Think about how you prepare for your courses. You read the textbook, take notes during your lectures, you try to learn the concepts. Then, you take a test . . . one that supposedly shows that you've gained that knowledge. But if you get the answer wrong, does that mean you're wrong?

(Woman S) Well, yes. If I get the answer wrong, then I didn't know the concept or didn't understand it. Right? I suppose I could have misread the question.

(Man S) It might mean the question was badly written.

(Man P) It could be any of those things. But I want you to look at this in a different way. When we study the way children gain language, we see certain steps, some of which appear as if the child is regressing in language acquisition instead of progressing. Let me give you an example. When a child has acquired a certain amount of language, she uses the form "I went" correctly. But later in her language development, she starts using the ungrammatical form, "I goed," a word that doesn't exist in English. The child has probably never heard anyone say that. This, by the way, can be very unsettling for parents. But after a while the child goes back to using the correct form. Now this is a natural progression in child language acquisition. So with this in mind, think about a test you didn't do well on. Now the incorrect answers you chose, were they an indication of where you were in the process of understanding particular concepts? In other words, maybe they were correct in terms of the stage of your learning.

(Man S) Does that mean, Dr. Blake, that when I fail your final, I'll get a pass?

(Man P) [laughter] I'm afraid not, Tom.

Why does the professor say this: But I want you to look at this in a different way.

4. (Woman P) Well, we've been rock-climbing together now on several occasions, and I think everyone has made excellent progress. So with that in mind, I thought you might be interested in a special climbing workshop at the State Park Climbing Center. The thing that really strikes me is the people who will be leading the workshop.

Jim Brown, for example . . . you know . . . one of the most experienced rock climbers in the world today. I hope that you'll be able to arrange to attend. I'm sure that participants in the course will gain a great deal of confidence, and refine their techniques. So, here are the details: The groups' size will be limited, so everyone will be given lots of personal attention. The cost for the weekend including accommodations and food is \$300. There will also be an extra, but small, a small charge for equipment for those participants who don't have their own gear. And, um, a \$30 non-refundable deposit is required by the end of next week, with the balance . . . the balance should be paid by July 20th. I do urge everyone here to take advantage of this wonderful opportunity. So, if you can register, I'll be handing out application forms after our climb this morning. Return the form and the deposit to my office as soon as possible.

Why does the professor say this: The thing that really strikes me is the people who will be leading the workshop.

### EXERCISE L23 Identifying the speaker's meaning

1. (Man P) Sue, you know you missed the deadline, don't you?

(Woman S) Yes. I know, but could I get my report in by early next week?

(Man P) Well, I'm not so concerned about deadlines as such. We all have setbacks from time to time.

(Woman S) Thank you, sir.

(Man P) I'm more concerned about your getting behind in general. I've seen students get so far behind that they can't catch up. If you can't keep up in this course, you're really wasting my time and your time and money. If that's the case, Sue, you should drop now, while you can, before it's too late to drop without penalties.

Listen again to part of the conversation. Then answer the question.

(Man P) If you can't keep up in this course you're really wasting my time and your time and money. If that's the case, Sue, you should drop now, while you can, before it's too late to drop without penalties.

What does the professor mean when he says this: If that's the case, Sue, you should drop now, while you can, before it's too late to drop without penalties.

2. (Man S) I dropped my physics course because I discovered it didn't meet my degree requirements. You wouldn't know anyone in the class who'd like to buy the course book, would you?

(Woman S) Not offhand. But if you bought it new and kept the receipt, I'm sure you could get your money back or exchange it for one you do need.

(Man S) Really? I could do that, could I?

(Woman S) Well, yeah, if it's within a reasonable period of time.

Listen again to part of the conversation. Then answer the question.

(Woman S) Not offhand. But if you bought it new and kept the receipt, I'm sure you could get your money back or exchange it for one you do need.

(Man S) Really? I could do that, could I?

What is the man doing when he says this: Really? I could do that, could I?

3. (Woman P) OK. Now that I have all your decisions . . . your individual and group decisions written on the board, I want to show you this transparency of the, uh . . . each choice has a risk factor. So here are the statistics showing how risky, how much of a gamble each of the alternatives is. So take a moment to compare the risk values with the choices you made. What kind of jumps out at you? Yes, Jason?

(Man S) Well, the individual decisions within each group are, well not always, but they tend to be less risky than the decision the group made.

(Woman P) Right. Do you see how as individuals, most of you were not willing to take the gamble? But as a group you were. The term for this phenomenon is risky shift. Risky shift. A shift in position from less risky to more risky. If we were to average the risk factor of the groups' individual members, it usually, but not always, shows that individuals are more cautious about taking a gamble, while a group decision has a higher risk. So, what implications does this have? Think about business and political decisions in particular.

Listen again to part of the lecture. Then answer the question.

(Woman P) So take a moment to compare the risk values with the choices you made. What kind of jumps out at you?

What does the professor mean when she says this: What kind of jumps out at you?

4. (Woman P) The Declaration of Independence makes the pursuit of happiness a political goal. Life, liberty, and the pursuit of happiness. It's probably true that a country that doesn't have some degree of happiness among its people is going to end up with some sort of strife. But what about the pursuit of happiness? What are the implications of such a goal?

(Woman S) Well, I think it's important that people are free to pursue happiness. I mean . . . if we're free to do that, to follow a dream . . . uh, our interests will lead to development, progress in scientific pursuits, and things like that.

(Man S) Oh, now hold on a minute. Anyone can see what a selfish society we've become in our pursuit of happiness. I think that's clear. Just look at all the materialism here.

Listen again to part of the lecture. Then answer the question.

(Woman S) Well, I think it's important that people are free to pursue happiness. I mean . . . if we're free to do that, to follow a dream . . . uh, our interests will lead to development, progress in scientific pursuits and things like that.

(Man S) Oh, now hold on a minute. Anyone can see what a selfish society we've become in our pursuit of happiness. I think that's clear. Just look at all the materialism here.

What can be inferred about the students?

### Listening Mini-test 3

#### Questions 1–5

Listen to an architecture professor talk about hazards in the home.

(Woman P) It used to be that the safety of a house was judged simply by whether it stood up or not. Well, things have changed. During the twentieth century, people began to build houses with synthetic materials. Unfortunately, these materials have proved over time that they endanger the health of the owners, or the houses' occupants, since the owner doesn't necessarily live in the place. So what are these synthetic materials? Well, asbestos, for example, asbestos, which was used as roofing sheets and paneling. This was found to cause memory loss. No, I'm sorry, it causes lung cancer. Asbestos has been found to cause lung cancer and formaldehyde causes memory loss. Formaldehyde was used in insulating foams, synthetic resins, and glues in things like plywood, chipboard, and hardboard. Formaldehyde used in this way causes damage to the nervous system and as I said before, memory loss, severe memory loss. Then there are wood preservatives. Now they contain, wood preservatives contain potent fungicides and insecticides. These cause cirrhosis of the liver, bone marrow atrophy, and nervous disorders. I'm really painting a bleak picture, aren't I? And that brings us to paints. At one time, lead was the major ingredient in paint. You may think that when lead levels were restricted due to lead

poisoning, that was the end of the problem. Now, get this: Paint technologists came up with even more poisonous metals, such as cadmium, to add to paints.

OK. The dangers of synthetic material are most apparent when a fire breaks out. Experts say that today more people are killed by toxic fumes in house fires than by the fire itself. We may have used a lot of synthetic materials in house building, but in fact, for every synthetic material used in a home, there's a biological or natural counterpart. OK, well, we can't all go . . . we can't very well go and tear down our houses and start from scratch. However, there are ways to recognize and safely remove some synthetic material and replace it with natural alternatives.

1. Listen again to part of the lecture. Then answer the question.

(Woman P) Well, asbestos, for example, asbestos, which was used as roofing sheets and paneling. This was found to cause memory loss. No, I'm sorry, it causes lung cancer.

Why does the professor say this: No, I'm sorry, it causes lung cancer.

2. Listen again to part of the lecture. Then answer the question.

(Woman P) These cause cirrhosis of the liver, bone marrow atrophy, and nervous disorders. I'm really painting a bleak picture, aren't I?

Why does the professor say this: I'm really painting a bleak picture, aren't I?

3. Why does the speaker mention fires?
4. What would be an example of a natural building material?
5. What might the listeners do as a result of this lecture?

### Questions 6–9

Listen to a discussion between a professor and his students.

(Man P) Are there any questions concerning the required reading list I just passed out?

(Woman S) Yes, I have one. I was wondering . . . I see that some of the book titles have an asterisk by them. Uh . . . could you explain why?

(Man P) Yes, of course. Hmm, those books are out of print. I asked the library to purchase them, but unfortunately, they can't be purchased. So, I've put my personal copies on reserve at the library. Since you can't take materials on reserve out of the library, you'll have to read them there. You have to go to the reserve desk on the second floor to check out anything on reserve. OK? Anything else?

(Man S) Yeah, I was wondering about the list of articles on the second page. I don't really understand the numbers.

(Man P) Hmm. Those are articles on microfiche. Have you ever used microfiche?

(Man S) No, I haven't.

(Man P) Could you see me after class and I'll explain it?

(Woman S) Uh, Dr. Burns. I don't know for sure, but I don't think . . . I think that there are a lot of us that don't know about microfiche.

(Man S) Yeah, that's right.

(Man P) Oh. OK. Then I guess I'd better explain. You see, microfiche materials are at the reserve desk as well. You give that number to the librarian at the reserve desk, and the person on duty will give you a small folder containing the articles on microfiche. Then you go to the microfiche room . . . uh . . . it's directly across from the reserve desk, it's where the microfiche machines are. There are instructions beside each machine explaining how to insert the microfiche. It's really very easy.

(Woman S) All right. Thank you.

(Man P) OK. Well, that's all for today. Please be prepared to discuss the first reading in our next class.

6. When would this discussion most likely take place?
7. What would most likely be found at a library reserve desk?
8. What can be inferred about the articles?
9. What can be inferred about the two students?

### Questions 10–14

Listen to a talk given by a guest inventor.

(Woman P) It's been said that necessity is the mother of invention, and this may be true in some cases, but most things that people need already exist. We inventors tend to be a group of dissatisfied people. We see the drawbacks of products that are already in existence. I think most people do. Think of something that annoys you . . . your partner leaving the cap off the toothpaste, for instance. Now the difference between most people and an inventor is that while most people grumble, an inventor starts to visualize solutions. We really get swept away with this enthusiasm, this passion for remedying the problem. We aren't grumpy, unhappy people. Let me say this. We may be dissatisfied, but we also tend to be very optimistic problem solvers. One has to be optimistic, extremely optimistic, to persist through the inevitable failures. Why? Because we fail a lot, but inventors thrive on failures. Where most people get discouraged and give up, inventors

use failures as stepping stones to new approaches and then to eventual success. I shouldn't say success because once the invention is completed, we often see another fault. Sometimes, in fact, an invention brings about a change that requires another invention. A case in point is the aspirin bottle. Small children managed to get into aspirin bottles with, uh, unfortunately, sometimes fatal results, so the childproof bottle cap was invented. However, arthritis sufferers couldn't open the childproof bottle to get their medicine. In response to this problem, the two-way cap was invented. So now users can choose the most convenient way to close the bottle. Problem solved? No, because a small child and an arthritis sufferer could share the same household. What are we going to do about it? Let's toss some ideas around to get your inventor brains operating.

10. Why does the lecturer say this: It has been said that necessity is the mother of invention, and this may be true in some cases, but most things that people need already exist.
11. Why does the lecturer say this: Let me say this. We may be dissatisfied, but we also tend to be very optimistic problem solvers.
12. Why does the speaker mention aspirin bottles?
13. What might happen as a result of this talk?
14. How does the speaker close the talk?

### Questions 15–18

Listen to a discussion in a cultural anthropology course.

(Man P) One way cultural anthropologists can study a culture is by sifting through garbage dumps. Garbage is the remains of what a society used or threw away. Let's take, for example, an orange peel. What can I tell by looking at an orange peel?

(Woman S) Well, uh . . . I think that you could possibly tell whether that orange was eaten or made into juice.

(Man P) OK. Good. Hmmm, let's imagine that we have a pile of orange peels. OK? This pile of orange peels indicates they were squeezed to make juice. What information can I gain from that?

(Man S) You could find out . . . uh . . . count those peels and estimate the number of oranges used. Uh, enough for two glasses may indicate a single person or, or a couple. And enough for a couple of quarts might indicate a family.

(Man P) Good. So we can make estimates on numbers of people. We can make even more assumptions. For example, what could we infer if there's enough for 50 people? Um, what would a seasonal change in the number of peels indicate? As you can see,

an analysis of what is discarded can help us map out patterns and give us insights into human behavior. Unfortunately – or fortunately, depending on one's point of view – much of what is thrown away is organic, so when we're sifting through, say, the garbage dump of a Paleolithic village, the remains are limited. Of course, there are places where artifacts are better preserved – areas with dry desert air, such as Egypt, for instance, or with freezing temperatures, such as the Arctic regions. Oh, we've run out of time. OK. I want you to think about – when you pass a pile of garbage – look at it and think about what that garbage can tell you. Tomorrow we'll discuss cultural anthropologists and the issue of grave robbing.

15. What are the students probably interested in?
16. Why does the professor mention orange peels?
17. What would most likely be found in a Stone Age garbage dump?
18. Why does the professor regret that most garbage is organic?

## Listening Section Practice Test

### Questions 1–7

Listen to part of a lecture in a psychology class.

(Woman P) So today we're going to continue our discussion of various mental disorders. Specifically, I'm going to focus on various anxiety disorders. Now, of course, everyone feels **anxious** or **uneasy** now and again. You may feel **anxious** on your first day of a new job, or when you have to meet someone important, for example. Some people feel anxious when they visit the dentist. Some typical symptoms include a **pounding heart**, **sweaty palms**, or a **dry mouth**. But now – suppose that the anxiety is serious enough to keep you from enjoying life; maybe it **interferes with your work** or **controls much of your daily routine**. Or maybe you experience occasional instances of **anxiety** that are terrifying enough that you **become immobilized with fear**. Maybe you will **take extreme measures** to get away from the object or situation causing the fear.

Now these anxieties can be put into three main groups according to what causes the reaction. The first are what we call **specific phobias**. These are the most common phobias, and their focus is **specific objects**. In fact, the thing feared is often relatively safe, and also the sufferer usually realizes that and knows that their fear is irrational. A very common specific phobia is fear of heights, for example. This fear is very common. No doubt some of you have felt this fear from time to time. Fear of

spiders and insects is another common one. Spiders are not usually harmful. Well, not usually, anyway. But some people break out into a cold sweat and have heart palpitations and become immobile even if they know a spider is on the other side of the room. Some of the less common phobias seem rather bizarre. For example, would you believe some people are afraid of color, say, the color yellow? Another strange one is fear of laughter . . . I guess that's not a laughing matter for the sufferer.

OK. So what causes these specific phobias? Well, we don't know exactly. We do know that they tend to run in families, and they are apparently slightly more common in women. Many of them persist, that is, they don't go away on their own. At least that tends to be the case with phobias that develop in adolescence or adulthood. Specific phobias that develop in childhood are more likely to disappear with time.

Another category of phobia is called social phobia. This fear is really the fear of being embarrassed or humiliated in front of other people. If social phobia is serious enough, it can prevent a person from continuing in school or work, and maybe that person avoids making friends. Now, some social phobics can actually be at ease with other people most of the time except in particular situations. So, for example, a sufferer here may believe that small mistakes they make are more significant than they really are, or feel that everyone is looking at them. They could also be extremely fearful of, for example, using the phone in front of other people, or it may be something really simple and seemingly irrational such as drinking a cup of coffee or even say, buttoning a coat in front of others.

A third category of phobia is known as agoraphobia – do I need to put that on the board? No? OK, fine. OK, so this phobia causes people to suffer anxiety about being in places or situations from which they perceive it might be difficult to escape, or in which it seems help is not available. So agoraphobia might include a fear of traveling alone, being alone in a crowd, or being unable to leave a place easily. People with this condition often develop the disorder after suffering from a panic attack, that is, a feeling of intense terror with symptoms such as sweating and shortness of breath. Such panic attacks may occur randomly and without warning, so this makes it difficult for a sufferer to predict what kind of situation will provoke a panic attack. So then, he or she will try to avoid situations and places where such attacks have happened previously.

OK, to wrap up today . . . well, the good news is that all of these disorders can be treated with some

degree of success through various medications and therapies. Tomorrow we'll look in more detail at the kind of treatments that might prove useful in dealing with some of them.

Now get ready to answer the questions. You may use your notes to help you answer.

1. What is the lecture mainly about?
2. Why does the professor say that many people feel anxious when they visit a dentist?
3. What does the professor say about specific phobias?
4. Listen again to part of the lecture. Then answer the question.

(Woman P) Some of the less common phobias seem rather bizarre. For example, would you believe some people are afraid of color, say, the color yellow? Another strange one is fear of laughter . . . I guess that's not a laughing matter for the sufferer.

Why does the professor say this: I guess that's not a laughing matter for the sufferer.

5. Social phobia might include which of the following fears?
6. What does the professor imply when she says this: . . . do I need to put that on the board?
7. What does the professor imply about treatment of phobias?

### Questions 8–12

Listen to a conversation between a student and a professor.

(Man S) Uh . . . hello, Dr. Grant. Do you have a minute?

(Woman P) As a matter of fact, I do. So what do you need, Ron?

(Man S) Well, you wrote on my questionnaire "Come and see me."

(Woman P) Ah, yes. Ron, there are a few problems with the way you set your questionnaire up. I'm sorry to say that I don't think you've thought out the statements very well. It was a prime example of why so many people complain about filling out questionnaires. You might even alienate your subjects with a questionnaire like this.

(Man S) Oh. I don't want . . . What did I do?

(Woman P) Don't look so discouraged. Several of your classmates have had similar problems. OK. So, what did you do? Well, for one thing, people get really annoyed with "and" statements.

(Man S) "And" statements? Uh, what do you mean by "and" statements?

(Woman P) Well, let's say you get a questionnaire statement like "I like fruit and vegetables" with



the choices of "yes" or "no." Well, if you don't like fruit and vegetables, you check the "no" box and if you do, the "yes" box. No problem. But what do you check if you like fruit, but not vegetables?

(Man S) Oh, I see.

(Woman P) You've several "and" statements in your questionnaire which need to be taken care of.

(Man S) OK. Anything else?

(Woman P) Yes, there was, actually. Can I see your questionnaire to jog my memory?

(Man S) Sure. Here it is.

(Woman P) Thanks. This statement. "Males are better critical thinkers than females." I can tell you now what answers you'll get for that item. Most, if not all males will mark "yes" – and females will mark "no." It's kind of silly to have a statement that you already know how your subjects will answer. And it won't be of much use for collecting data, will it?

(Man S) No, I guess it won't.

(Woman P) Furthermore, women who get this will be really annoyed with the implication that men think more effectively than they do. And, once you've angered your subjects, they won't be very cooperative in answering the rest of the questionnaire. They might sabotage your results by not being truthful or they'll become "critical thinkers" and write their criticism all over your questionnaire. But chances are they'll just dump the questionnaire in the trash.

(Man S) Yeah. I can see that. But, how can I phrase it?

(Woman P) Well, I'm not really sure what you're trying to find out here. Perhaps you want to know if people consider critical thinking to be more prevalent in a particular gender – in which case you could write: "The ability to think critically is gender-based." Is that the information you wanted?

(Man S) Yeah. That's it. Anything else?

(Woman P) Look at this statement, "I'm unable to think critically." That's like saying "I'm stupid." How many people would answer "yes" to that? See?

(Woman P) What I'd like you to do is go through every statement on your questionnaire very critically. Think: what information do I want? How can I phrase my statement to get meaningful results? Maybe you and a classmate could discuss each other's questionnaires.

(Man S) That's a good idea.

(Woman P) Ron, I'd like to look it over once more before you pass it out. OK?

(Man S) OK, Dr. Grant. Thank you for your help.

Now get ready to answer the questions. You may use your notes to help you answer.

8. Why does the student go to see his professor?

9. Why does the professor talk about fruit and vegetables?

10. According to the professor, what should the student avoid in writing his questionnaire?

11. Listen again to part of the conversation. Then answer the question.

(Man S) OK. Anything else?

(Woman P) Yes, there was actually. Can I see your questionnaire to jog my memory?

Why does the professor say this: Can I see your questionnaire to jog my memory?

12. What can be inferred about the questionnaire?

### Questions 13–17

Listen to part of a discussion in a geology class.

(Man P) So we've talked about the ecology of grasslands, areas of the world where rainfall is not enough to sustain thick forests, but enough to prevent desertification – that is, the spread of desert lands. I want to turn now to a discussion of a different kind of biome, or natural community, known as the tundra. OK, so as you know, the tundra is a region of the Arctic, lacking in trees, bushes – and covered, for the most part, in short vegetation well adapted to the inhospitable conditions. In fact, the word tundra comes from a Finnish word meaning treeless plain. I guess you could say that's a pretty accurate description of what you find there – flat land and no trees. Today, I'm going to ignore the region known as the Alpine tundra, which is found at higher elevations in mountainous regions all over the world. This has similar characteristics to the Arctic tundra, but also enough differences that I think we can justify spending a separate lesson on its main features.

So, to understand the life systems that exist in the tundra, you have to understand that below the surface is a permanently frozen layer of soil. This is the layer called the permafrost – perma, from permanent, in other words, permanent frost. Anything that grows there has to be able to adapt first to this impenetrable floor of frozen soil. What do you think could be one adaptation to this situation?

(Man S) Well, plants would have to have shallow, I mean, short root systems because the roots wouldn't be able to penetrate the hard layer.

(Man P) OK. That's right. So what about any rain that falls or water from melted snow in the summer? Where does that go?

(Man S) Well, I guess it can't go anywhere if the ground is too hard to soak it up and too flat for it to drain off.

(Man P) Right. So what you get is a kind of shallow waterlogged top layer of soil which freezes and thaws as the seasons change from winter to summer. So on the surface, marshes form and in low-lying areas and depressions small lakes and ponds are common during the periods when the ice and snow melt. This poorly drained water on the surface provides moisture for plants. In fact, there is relatively little annual rain so this marshy wet ground is important for plant growth. So what about the soil itself? What would you guess is the nutrient value for living things?

(Woman S) Well, since it's very cold most of the year, wouldn't that mean that dead organisms break down slowly? So wouldn't that mean a low level of nutrients for plants to use?

(Man P) That's absolutely correct. Just as with the moorland biomes that we were discussing last week, mineral nutrients are in short supply – because cold waterlogged soil slows down the rate of decay of dead plants and other organisms. So the plants that do exist have to adapt to this special environment – a poor, shallow soil and a bitterly cold climate with strong winds. You mentioned the short root systems. But what other kind of plant characteristics do you think might be useful in a region like this?

(Woman S) Well, given the strong winds that blow, wouldn't it be useful to be short? After all, tall plants with shallow roots would be easily blown over.

(Man P) Uh-huh. True. And to add to that, of course, the short roots can only maintain short plants. So that's another reason why the plants are very short. Another adaptation is that the plants cluster together in groups, often taking advantage of depressions in the ground to avoid the strong winds, and that helps them to resist the cold temperatures. Then, also, the snow itself helps them survive in these conditions – since the snow effectively insulates against the bitter cold. When the snow melts in the spring, of course, the plants have a ready supply of moisture, making up for the low levels of precipitation in the region.

So when the summer finally comes, what you get is a time of compensation, you could say. As you know, the summer sun never sets at these high latitudes, so the plants get sunlight for 24 hours a day. It's as though they work overtime to produce essential sugars and the other substances necessary for plant functioning from this continuous light energy. It's like the sudden arrival of summer – as if

the vegetation as well as the insect and animal life were hurrying to take advantage of the relatively short time before the onset of the next winter.

Now get ready to answer the questions. You may use your notes to help you answer.

13. What is the discussion mainly about?
14. Why does the professor not want to discuss Alpine tundra?
15. According to the professor, what features are typical of tundra regions?
16. According to the professor, why do tundra plants often cluster together in depressions?
17. In the discussion, various facts about plants in the tundra are mentioned. Indicate whether each of the following describes tundra vegetation.

### Questions 18–24

Listen to part of a lecture in a cultural studies class.

(Man P) OK. Let's get started. Now, today I want to continue discussing changes in artistic movements in the late nineteenth and early twentieth centuries. OK, so, now we've seen that in all the arts around that time, there was a strong movement away from what was seen as the restrictions of conventional ideas. Artists of all kinds were searching for more individualistic ways of expressing themselves – trying to break new ground, as it were. Now, this was particularly so in the art form of dance. OK. So remember now that by the late eighteenth century dance as an art form had become somewhat stale. There were few people trying to push the boundaries of inventiveness on the stage.

Now, it was right around this point in time that a new free-moving, free-spirited dancer named Isadora Duncan suddenly became influential. Isadora Duncan is known nowadays as the "mother of modern dance" because of her important contributions to theatrical dance, and what I want to do here is take a look at some of the ways in which she was just so different from her contemporaries.

OK. So there are at least three ways in which she was seen as an innovator, as a new force on the stage. First, we have to consider that at the time in dancing, that is, in particular, ballet dancing, it was mostly the feet and leg movements that were highlighted. In other words dancers of the time focused their skills on highly ritualized and complicated movements of the legs.

What Duncan did was to break away from this tradition, from this convention. She was, I think we can say, frustrated by the constrictions of classical

dance and by what she felt was its lack of emotional impact. So she took to emphasizing the use of the whole body in dance movement. And this use of the body was inspired by natural forces, as well as folk dancing – and it included skipping, running, and jumping, and twirling – a continuous flowing movement done with skillful abandon and great passion. She believed that the movement of the body could express specific emotions, emotions like anger, joy, and grief. Let me take a moment to mention that it is said that she learned these dance movements as a child – by imitating natural phenomena such as the waves on the beaches near her home in California.

All right, so another of her great contributions was her innovative use of costume. Now, again the dance of the period was notable for its stiff shoes and tunics. Duncan just discarded the restrictiveness of these clothes in favor of loose-flowing gowns inspired by classical Greek models. She danced with loose hair and in bare feet, much to the astonishment of her early audiences. Again, I think we can see the influence here of nature and folk dance, things that conventional dance of the period had ignored, or, I think we can even say, scorned.

So, OK, there was also another way we can consider Isadora as revolutionary in her practice. This is in her use of classical music as an integral part of the performance. She insisted that her art deserved to be performed to great music. For example, Beethoven, Bach, and Chopin and other great concert music accompanied her movements on stage. And this use of music was considered daring and original at the time.

Now, you know, I think, looking back, it may be kind of hard to appreciate Isadora Duncan's achievement since so many of her contributions to modern dance are nowadays, in a sense, well, taken for granted. In truth, she, at first, had to face considerable opposition from traditionalists, as happens to many highly original artists. Her, for the time, unconventional techniques, eventually though, were widely acclaimed. Perhaps, all modern dance technique owes something to Duncan's inventiveness and daring, so perhaps because of that, her deep originality may not be as obvious to us today.

Now get ready to answer the questions. You may use your notes to help you answer.

18. What is the lecture mainly about?  
 19. What does the professor imply about other artists of Duncan's time?

20. Which of the following may have been an influence on Duncan's art?  
 21. Which of the following does the professor consider a contribution of Duncan's?  
 22. In the lecture, the professor describes some of the main contributions made by Isadora Duncan to modern dance. Indicate whether each of the following is a contribution made by this dancer.  
 23. What is the professor's attitude toward Isadora Duncan's innovations?  
 24. What does the professor imply about Duncan's current status?

### Questions 25–30

Listen to part of a lecture in an astronomy class.

(Woman P) So, I hope you now have an idea about the most accepted theory of how the sun and the solar system were formed. In fact, many new observations are showing major problems with this traditional view of planetary formation. For example, some scientists are now saying that the time frame is all wrong – that planets may have formed much more quickly than the standard theory suggests. And there are other problems too when it comes to the formation of the outer planets, especially about how and where they formed. Some people are saying we may have to revise or even abandon the standard model. As with many theories in science, it's pretty much open to revision.

But now let's move on to an examination of what happened inside the Earth in its early stages. I know some of you have studied Earth formation in other courses, but I want to fill in the gaps for those who haven't got this background. OK. So, about 4.6 billion years ago, the Earth was pretty much organized into a sphere and had a temperature of around 1,000 degrees. Note also that all the material forming the planet was randomly spread around. But at that point three things were happening which caused the planet to heat up further. So, what kind of things would cause the planet to get hotter?

(Man S) All the impacts from rocks and meteorites and other stuff in space. When that stuff hits the Earth, that impact energy would be converted into heat energy. That would heat it up.

(Woman P) OK. Good. Well, sure, that's one of the three main causes of this heating. Certainly at the upper levels – the crust of the planet. Now what else?

(Woman S) Uh, the sun would have heated it.

(Woman P) Well, yes. But I don't just mean warming the surface. We're talking about heating the planet right down to the core, the center. How did the Earth heat up so that iron, for example, could melt? That's at about 2,000 degrees Celsius.

(Man S) What about radiation?

(Woman P) Yes, that's it. That is probably the most important cause of the heating up. Radioactive elements, such as uranium, within the rocks inside the planet decayed, and as they did so heat was generated. In fact, radioactive decay is still going on but at a slower rate than previously – since, of course, well, there isn't nearly as much radioactive material left – due to this decay over time.

OK. A third cause of the heating process was compression due to gravity. As the size of the planet grew due to impacts from space, the gravity increased and the pressure itself contributed to the heating of the Earth's interior.

So, we have three main causes of the heating up of the planet. Now, just to repeat: impacts from the objects outside the planet, radioactive decay of the elements inside, and heating due to pressure caused by gravity. So over the course of a billion years, all these things eventually pushed up the heat until temperatures were hot enough to melt iron and other rocks. Now, as you know, the Earth is composed of a variety of different types of materials – and so these rocks and minerals have different densities. So, that means that heavier, the denser material, tends to sink over time and lighter material tends to rise and float above the heavier stuff. That is what happens in a liquid or molten environment, of course. So iron in particular, being heavy, sank toward the center – and lighter rocky material rose toward the surface. At the same time, gases escaped from the molten rocks and came out at the surface, allowing an atmosphere and oceans to form. When all this sinking and rising – this reshuffling process – eventually slowed down over time with the gradual cooling of the planet – what we find is a stratified Earth; in other words, a series of layers – with the crust – that is, the part we live on – being the lightest, then further down the mantle, then the outer core – and finally at the center, the inner core. So this process, called differentiation, led to the change in the arrangement of the interior structuring of the planet – and the formation of the atmosphere and the oceans. So, while originally, all material was homogeneous, randomly mixed around the planet, eventually we get a planet divided into different layers. This differentiation has been called “perhaps the single most important event in the history of the Earth.”

Now get ready to answer the questions. You may use your notes to help you answer.

25. What is the main topic of the lecture?
26. Why does the professor say this: As with many theories in science, it's pretty much open to revision.
27. What does the professor imply about the formation of the Earth?
28. According to the professor, how was rock distributed before differentiation?
29. According to the professor, which is probably the main reason for the heating of the Earth?
30. What two points are true according to the lecture?

### Questions 31–35

Listen to part of a conversation between a student and an advisor at the University Learning Center.

(Man S) Ah . . . Hi, Mrs. Douglas. I'm Jack. I made an appointment to talk to you about graduate school.

(Woman P) Yeah, come in, Jack. Um, have a seat.

(Man S) Thanks. I've only just started thinking about going to grad school. And I looked at the application – you know, what you have to do to apply here – and I found it a bit overwhelming . . . . You know, writing a personal statement, asking my professors for letters of recommendation, sending transcripts . . . I've already taken the GRE exams.

(Woman P) OK. So you're applying here?

(Man S) Well, no. I just looked at the application here to see what it was like. I'm finishing up my Bachelor's degree in biology, but I'd like to specialize in marine biology. And they don't offer that here.

(Woman P) So, have you looked around for universities that offer a doctorate in marine biology?

(Man S) No. I was hoping, well, that's why I came to see you.

(Woman P) OK, Jack. The first thing we need to do is look in our reference books on university programs to find which universities offer a degree in marine biology – and make a list.

(Man S) A list? Wouldn't it be kind of expensive to apply to a lot of universities?

(Woman P) Well, yeah, if you applied to all of them. But first you'll want to narrow your choices by finding those offering the kind of program you want. And then, you'll want to consider other aspects – tuition costs, their financial-aid programs, their requirements for entrance.

(Man S) Yeah. I guess I hadn't thought about all that other stuff. Just about the program.

Woman P) You might want to go to some of the university home pages and find the Biology Department pages. You could find a list of professors and their specializations. That way, you could see if there's anyone doing research in a particular area. . . . Marine biology is a large field. I assume you have a special interest?

Man S) Yeah, the ecology of the intertidal zone.

Woman P) The intertidal zone. OK. So when you look at universities, see which ones have professors involved in intertidal-zone studies and read some of the articles they've published. You know, having an idea of the kind of research people are doing might give you an idea of which universities to include on your list and who could advise you in your own research.

Man S) Hey, yeah. That's a good idea. I can look at some of the articles that I found really interesting and see what university the writer is affiliated with or where that person studied.

Woman P) Perfect. When you've made your decision, then you can come back for more help if you need it.

Man S) I'll do that.

Woman P) Right. Now let's go check those reference books.

Now get ready to answer the questions. You may use your notes to help you answer.

31. What does the student need from the advisor?
32. Where will the student and the advisor look for the information the student needs on university degree programs?
33. What can be inferred about applying to graduate school?
34. Listen again to part of the conversation. Then answer the question.

Woman P) That way, you could see if there's anyone doing research in a particular area. . . . Marine biology is a large field. I assume you have a special interest?

Why does the advisor say this: I assume you have a special interest?

35. Why does the advisor suggest that the student read some of the published articles about intertidal zones?

## PART 2 BUILDING SKILLS: Speaking

### EXERCISE S1 Concentrating on individual consonant sounds

1. Peter called us **up** and invited us for **supper**.
2. The **robbers** escaped in a stolen **cab** and drove to their hideout, **but** they were eventually caught.
3. The children went on a scavenger hunt, and the victorious team was given a prize.
4. The **dog** followed the **caddy** around the golf course.
5. Schools can do more to encourage students to take on the responsibilities of learning.
6. The big logging companies are gone from the region.
7. If the fish stocks are depleted, it will be the fishermen who suffer.
8. The very first editions of the manuscripts are available for everyone to see.
9. They are **rethinking** the rule of **thumb** that requires people to stay on the path.
10. The mother decided to **bathe** her baby.
11. A lesson in building a house made of **sod** was offered at the outdoor museum.
12. The zoologists use tranquilizers when tagging the deer that enter the park.
13. Careful land **management** has saved the **rim** area from overgrazing.
14. The judges **named** the winner as soon as the race was over.
15. **Singing** a favorite song is a good way to cheer oneself up.
16. The land grant allows for full use of resources.
17. Cooperative games help children to realize their potential in a non-threatening situation.
18. The people in the tower **witnessed** how fast the fire was spreading.
19. The children's **hospital** has perhaps the best doctors to deal with the problem.
20. A layer of yellowish sandstone marks the division between the two geological periods.
21. Since the idea in a demolition derby is to demolish the car, drivers **should** continue until this has been achieved.
22. The genre of art called the collage is a pleasure to work in.
23. By **chance**, a farmer uncovered the **rich** burial site that had survived in nature for several centuries.
24. According to Jim, changing over to the computerized system led to a surge in interest.

**EXERCISE S2 Concentrating on consonant clusters**

(Man P) Snowflakes swirled around the makeshift huts as the drifts, shifted by the howling winds, mounted up against the walls. The drafty huts creaked and groaned in response. Then door hinges squeaked as abominable snowmen stepped across the thresholds into the sparsely furnished rooms. Marge strained her vocal cords as she screamed in an attempt to bring help. Her bloodcurdling screams woke her from the terrible dream.

**EXERCISE S3 Focusing on stress patterns**

(Woman P) Theaters of the Elizabethan period were open-air constructions in which poorer members of the audience, "the groundlings," stood in a space called "the pit" around three sides of a projecting rectangular platform that formed the main stage. Most of the perimeter of the building comprised covered, tiered galleries, and it is here that the wealthier members of the audience sat. A roof supported on two pillars projected from the back wall and covered part of the stage. The main stage was hollow and could be accessed from below through trapdoors set in the floor. The main stage also had a door on either side at the back, which gave access to the dressing rooms. Between these doors was a small recess, usually curtained off, that could be used for extra stage space. Above this recess was a balcony sometimes used by musicians or, when necessary, by actors in a performance.

**EXERCISE S4 Focusing on linking words**

(Man P) It is simply not feasible for every university library in the nation to contain all the books, journals, and resource materials that university students and faculty need for their research. So what have libraries done to meet the needs of their users? Well, several things, in fact. While some money is used for the yearly purchasing of hardbound books and current journals that are recommended by professors, other funds are used to obtain materials that have been put on microfilm and microfiche. These techniques have proved extremely useful for adding informative materials to a library's collection at a low cost and without taking up much space. Another way libraries have increased access has been to invest in computers. Computers are linked to collections in other libraries. Professors and students can perform a computer search to find a library that has the material they need. The material can then be ordered and checked out through the interlibrary loan system, which costs the user a nominal shipping fee.

**EXERCISE S5 Focusing on intonation**

(Man S) Professor Cline?  
 (Woman P) Yes?  
 (Man S) I'm Robert Daley. The work-study office sent me.  
 (Woman P) Oh, I've been waiting for them to send someone. Did you say your name was Robert?  
 (Man S) Yes.  
 (Woman P) What's your major, Robert?  
 (Man S) Zoology.  
 (Woman P) Good. You have some science background then. Let me show you what we're doing in our lab.  
 (Man S) Will I be working in the biology lab?  
 (Woman P) Yes. We're studying the speed of reproduction of paramecia. Uh, paramecia are the most complex single-celled organisms.  
 (Man S) Oh, that sounds interesting.  
 (Woman P) Well, what we need you to do is probably not so interesting.  
 (Man S) And what is that?  
 (Woman P) We'll need you to come in every day at the same time and count the paramecia.  
 (Man S) Count paramecia?  
 (Woman P) Yes. It's very important to keep an accurate count and fill the numbers in on a form. I'll show you where the forms are and explain how to complete it later. After you have completed the form, you need to give it to Nancy. She is the woman that you met in the lab office. She'll feed your numbers into the computer for our statistical analysis. Right now, though, I want to introduce you to the other members of our team so that we can arrange a convenient time for you to come in.

**EXERCISE S6 Putting it all together**

(Man P) Treasured since ancient times, saffron is obtained from the autumn-flowering *Crocus sativus*. It is the dried flower stigmas – the three slender threads in the center of each flower – that are the source of saffron. This "king of spices" is one of the world's most prized and expensive foodstuffs. The finest variety is grown in La Mancha in the central plateau of Spain. Spain is by far the biggest producer. It contributes 70 percent of the world's output, with India and Iran the only other producers of note. The cultivation of saffron in Spain goes back to the Moorish invasion of the eighth century, when the crocuses were first introduced from the Middle East. Not only is Spain the largest producer of saffron, but it is also the

largest consumer. Up to one-third of the crop is bought in Spain, and the remainder is exported. The biggest buyers are Middle Eastern countries, followed by the United States, Italy, and France.

**EXERCISE S15** *Restating the task and defining your choice*

1. Name a teacher who has influenced you and explain why that teacher was important. Include details and examples to support your explanation.
2. Describe a class you have taken and explain why that class was important to you. Include details and examples to support your explanation.

**EXERCISE S18** *Putting it all together*

1. Name a skill you have learned and explain why it is important to you. Include details and examples to support your explanation.
2. Name a hobby you have and explain why it is important to you. Include details and examples to support your explanation.
3. Name a person who has influenced you and explain why that influence was important. Include details and examples to support your explanation.
4. Describe a class you have taken and explain why that class was important to you. Include details and examples to support your explanation.

**EXERCISE S21** *Restating the task and stating your position*

Some students would like to have a long vacation during the academic year. Other students would like to have several shorter vacations during the academic year. What is your preference and why? Include details and examples in your explanation.

**EXERCISE S24** *Putting it all together*

1. Some students prefer to do group projects. Other students prefer to do individual projects. Which kind of projects do you think produce more learning and why?
2. Some people believe that students should immediately go on to college after completing high school. Others believe that students should take a year off between high school completion and starting college. Which approach do you think is better for students interested in getting a college degree? Include details and examples in your explanation.
3. Some students would like to have a long vacation during the academic year. Other students would like to have several shorter vacations during the academic year. What is your preference and why? Include details and examples in your explanation.

**EXERCISE S26** *Practice responding to independent speaking tasks*

1. Name an academic subject that you like and explain why it attracts you. Include details and examples to support your explanation.
2. Describe a personal possession that is special to you and explain why it is important. Include details and examples to support your explanation.
3. Describe a feature of your city that you consider interesting and explain why you think it is interesting. Include details and examples to support your explanation.
4. Some people prefer television programs that present serious issues. Other people prefer those that are for entertainment only. Which kind of program do you consider the most important for people to watch and why?
5. Some people prefer to focus their energy to excel in one activity. Other people prefer to participate in many different activities. Which method do you think is better for the development of a person's intellect and why?
6. Some people believe that children should begin their formal education at an early age (three to five years old). Other people believe that children should begin their formal education later (six to seven years old). Which age do you think is best for a child to begin a formal education and why?

**EXERCISE S27** *Identifying important points in a reading passage*

An announcement about a change in one of the University of the Rockies courses is posted on the classroom door. You have 45 seconds to read the announcement. Begin reading now.

**EXERCISE S28** *Identifying important points in a conversation*

Now listen to two students as they discuss the announcement.

(Man S) That's a disappointment. I was looking forward to that class.

(Woman S) Me, too. Well, I guess we should hurry on over to the registrar so we can pick up a different course.

(Man S) Oh. Aren't you interested in taking the Literature of Minority Groups? I've heard it's a really good course.

(Woman S) Well, actually it focuses a lot on Hispanic literature and, being Hispanic, I've already done most of the required reading.

(Man S) That would make it an easy option then. Come on. Let's go before we're late.

(Woman S) Sorry. I'd like the challenge of another course. Besides, with the extra students from the survey course, it's going to be a really large class. I prefer smaller groups. I just feel more comfortable discussing ideas when there aren't so many students.

**EXERCISE S29** *Analyzing the task that relates to the conversation*

The woman expresses her opinion about the course replacement. State her opinion and explain the reasons she gives for that opinion.

**EXERCISE S32** *Identifying important points in a reading passage*

Now read a passage about an incident leading up to the American War of Independence. You have 45 seconds to read the passage. Begin reading now.

**EXERCISE S33** *Identifying important points in a lecture*

Now listen to part of a lecture on the background to the American War of Independence.

(Man P) I'd like to address the questions of why the American colonists chose to dress as Indians and why they chose tea to dump overboard. Well, let's go back to why the British had imposed taxes on their colonies. Governments impose taxes to meet expenses. The French and Indian War was over after having doubled the British national debt and leaving the colonists in an economic crisis. Now remember that the French and Indian War consisted of the French and Indians fighting the British and British colonists. To replenish the treasury, a scheme was passed in the British Parliament in which all goods had to be stamped; a stamp that had to be paid for. This was taxation without representation, and the British colonists wouldn't pay it. After a series of different imposed taxes were met by protests, riots, and boycotts, all taxes were eventually revoked except for one on tea. Now I think you can see the significance of dressing as Indians since the taxes stemmed from the French/Indian War, but also why it was tea that was thrown overboard.

**EXERCISE S34** *Analyzing the task that relates to the lecture*

The professor gives the background information about the incident that was the prelude to the American War of Independence. Explain how the events were related to the colonists' behavior.

**EXERCISE S38** *Responding to the integrated reading/listening/speaking tasks*

1. The University of the Rockies is planning to tear down a building on campus. Read the announcement

about the demolition of the building. You have 45 seconds to read the announcement. Begin reading now.

Now listen to two students as they discuss the announcement.

(Man S) Are you gonna join our protest to stop their tearing down Old Main?

(Woman S) You aren't marching about *that*, are you? We need a fine arts complex.

(Man S) I don't disagree with that, but the empty lot behind the sports arena could be used.

(Woman S) Well, that's true, but it's a long distance to walk. So, what's so special about Old Main anyway?

(Man S) Well, Old Main was the first building – actually the only building – on campus in the early days, so it has historical value. We should try to preserve our heritage. You know that it was built in the mid-1800s of stone, so built to last.

(Woman S) I didn't know it was that old. But it doesn't have space for classrooms, and I imagine it's a huge expense to heat in winter.

(Man S) Well, in fact, those heavy walls keep heat in, so it isn't expensive. They could use it for offices. There's a shortage of offices for graduate students who have teaching assistantships.

The man expresses his opinion of the plans being made by the University Board of Trustees. State his opinion and explain the reasons he gives for holding that opinion.

2. The Medical Faculty has announced that a guest speaker will be giving a talk. Read the announcement about the talk. You have 45 seconds to read the announcement. Begin reading now.

Now listen to two students as they discuss the announcement.

(Man S) Hey, Sue. Wanna go for a coffee?

(Woman S) No, thanks. I'm going to the talk about Restless Leg Syndrome. Why don't you join me?

(Man S) Never heard of it. So, what's your interest?

(Woman S) Well, my mom's suffered from it since she was a teenager. At that time, it was diagnosed as growing pains, later as a strained muscle, then, when she began teaching, she was told it was because she was on her feet all day. After she was told it was all in her head, she quit asking and just went on suffering.

(Man S) That sounds awful. So, uh, so why were the doctors so wrong?

(Woman S) Well, she's always described the pain as thousands of microscopic creatures eating away her calf muscles.

(Man S) That's weird. So how did she finally find out what it was?



(Woman S) Oh, a cousin mentioned in passing the medicine that she was taking for Restless Leg Syndrome and went on to describe what Mom had been suffering for over 30 years.

(Man S) Wow.

(Woman S) Yeah. She's on medication now, but I wanna know more about it. It runs in families.

(Man S) So you might get it.

(Woman S) Maybe, but I haven't had any problems yet.

The woman explains her interest in listening to the guest lecturer. State her interest and explain the problems surrounding the syndrome.

3. The University of the Rockies is planning to make a change in the number of required courses in physical education. Read the president's quote, taken from his interview with a reporter from the student newspaper. Begin reading now.

Now listen to two students as they discuss the quote.

(Man S) What do you think about the university dropping its physical education requirement?

(Woman S) I'm torn about it, really. In one way, it's true that students should take the responsibility of keeping fit. But how can we, if money isn't put into the facilities?

(Man S) But, the president didn't say anything about not putting money into the facilities. He said that the money that's saved from courses that will no longer be taught would be put elsewhere.

(Woman S) True, but I can't help but think some of our sports programs are going to be affected.

(Man S) This will only be the loss of some courses. So, what are the programs, what programs are you concerned about?

(Woman S) Well, the women's varsity soccer team, for one. They've worked hard to get any university support at all and are just getting the recognition they deserve.

(Man S) I hardly think that they'll be affected.

(Woman S) Don't be so sure. Fewer classes will result in a cut in the number of instructors, and that can't help but affect the different programs that are run by those particular instructors.

The woman expresses her opinion of what the president was quoted to have said to the reporter. State her opinion and explain the reasons she gives for holding that opinion.

4. The Maintenance Department has announced that the main classroom building will be undergoing some changes. Read the announcement about the renovation. You have 45 seconds to read the announcement. Begin reading now.

Now listen to two students as they discuss the announcement.

(Man S) That'll be really great, won't it? All the classrooms will be high-tech.

(Woman S) Oh, I don't know. Maybe.

(Man S) Maybe? I really like a professor to give a lecture with all sorts of neat computer slides to project on the screen, don't you?

(Woman S) Well, yeah, when it works. But how often have you been excited about doing something special in a lab and the technology failed?

(Man S) Not that often. It does have to be maintained, though.

(Woman S) And upgraded. Technology becomes obsolete very quickly.

(Man S) True.

(Woman S) I've also seen a lot of student presentations using technology that were all showy with animation but no content. It's a big expense, you know, for something that won't be used all that much.

(Man S) Why don't you think it'll be used?

(Woman S) Well, first, lots of professors aren't high-tech minded and won't bother with learning how to use it. Besides it's very time consuming to make a good computer presentation. The best professor I've had here, Dr. Rosa, doesn't even use an overhead projector.

(Man S) Yeah. Well, she is kind of exceptional.

The woman expresses her opinion of the announcement made by the University's Maintenance Department. State her opinion and explain the reasons she gives for holding that opinion.

5. Now read the passage about marine organisms known as phytoplankton. You will have 45 seconds to read the passage. Begin reading now.

Now listen to part of a lecture on ocean plants in a marine biology class.

(Woman P) I'd like to discuss an interesting study being done on phytoplankton. I think we all know that phytoplankton is an important nutrient in the ocean's food chain as well as understand its importance in producing oxygen. This study, the study I want to present, was based on the observation that in some areas of the ocean, there's plenty of sunlight and nitrogen compounds for successful photosynthesis. However, there's only a small amount of phytoplankton. So, an analysis was done on the water, and this analysis indicated a lack of iron. We know that iron is a trace mineral that even humans need. It was hypothesized that phytoplankton also need iron. I won't go into full

detail, but a small section of one area in the ocean was seeded with iron sulfate. The resulting increase of phytoplankton provided convincing evidence for the hypothesis. Now, this finding opens up several possibilities. Since phytoplankton take carbon dioxide out of the atmosphere, an increase of the plants could remove a significant amount of human-produced carbon dioxide from the atmosphere faster and more effectively than other alternatives. An increase in the plants could also be followed by an increase of marine life along the food chain that ultimately comes to feed people. However, there are unanswered environmental questions that would need to be addressed before phytoplankton farms could be considered.

The professor describes an experiment done on phytoplankton. Explain how the implications of this experiment relate to phytoplankton.

6. Now read the passage about road management. You will have 45 seconds to read the passage. Begin reading now.

Now listen to part of a lecture in a civil engineering class.

(Man P) OK, so we're all familiar with the road markings, signs, and signals cluttering up our cities. They are supposed to reduce accidents – make towns safer for all of us. Accidents still happen, but all these signs surely make accidents fewer. They tell road users where it's safe to be and when. Well, um, experiments have shown something very different. A Dutch traffic engineer named, uh, Hans Monderman has turned this thinking on its head. Monderman removed the traffic signs, markings, and signals from a Dutch town and, uh, guess what! The number of traffic accidents has dropped significantly. In this town there are no center lines separating lanes, no speed limit signs, no stop signs, and even speed bumps have been removed. The thinking behind this radical change is that when drivers have no signs to guide them, they start looking at people and then they drive more carefully, more courteously. This public space makes drivers instinctively understand that cars and pedestrians are equal and drive with this in mind. Supporters of this scheme explain its success by arguing that road regulations give a false sense of security. Regulations also treat road users as irresponsible by continually controlling their behavior, telling them what they can and can't do. When the props supporting this regulation are removed, drivers are given back the responsibility for driving with consideration for other drivers and pedestrians, and then act accordingly.

The professor describes an experimental system of road management. Explain how this experiment is related to road users' behavior.

7. Now read the passage about cultural perceptions of time. You will have 45 seconds to read the passage. Begin reading now.

Now listen to part of a lecture in a cultural studies class.

(Woman P) We were talking about monochronic and polychronic cultures last week, and I wanted to repeat some of the things we discussed. Remember that these are the extremes and most cultures lie somewhere in between. We also discussed that there are monochronic individuals within polychronic cultures and vice versa, polychronic ones within monochronic cultures. Now, one might think that a monochronic society is more efficient because monochronic individuals can make a linear plan, predict how long it will take, and follow through on it. They arrive on time, set deadlines that they meet, and can be depended on to get the work done on time. But how often have you read in job advertisements that they are looking for someone who can multitask? So what does that mean? Someone who can do several things at once, right? And who can do that? A polychronic person. In essence, they are people who can step in and be moved around within a company. These are the people who become irreplaceable on the job because of their ability to juggle several tasks at the same time. Interestingly, while efficient polychronic people are appreciated at the workplace, they frequently don't move up the promotional ladder. Why? Because it isn't easy to replace a person who can multitask effectively.

The professor describes the behavior of monochronic and polychronic people. Explain how their behavior is related to their suitability in the workplace.

8. Now read the passage about weathering. You have 45 seconds to read the passage. Begin reading now.

Now listen to part of a lecture on weathering in a geology class.

(Man P) When we examine rocks in terms of the weathering process, it's obvious that the climatic environments must also be taken into account. Think about the weather conditions in arid areas. In those areas, the frost at night expands along cracks in the rocks, and in the day, the rocks expand in the heat. This mechanical process of weathering due to the fluctuation between frost action and heat expansion is common. Now, in the tropical areas where rainfall is heavy, the chemical process is common. There's less mechanical weathering since the temperature remains high. In temperate climates – where we can see a warm summer with rainfall and a colder winter with frost – both chemical and mechanical weathering are common. What about the polar regions? Well,

we're not going to see much weathering in terms of chemical processes since there's little rainfall. Neither will we see many mechanical or biological processes. The arctic conditions allow very little weathering, in fact. Now, what about biological processes: the weathering caused by tree and plant roots wedging into the rocks, animals burrowing into the ground, or, um, the decay of dead organisms causing destructive acids? Well, plants and animals live in all areas, but again, because we see fewer plants and animals in areas of extreme climates, we see less biological weathering there.

The professor describes climatic conditions. Explain how these conditions relate to different weathering processes.

**EXERCISE S39** *Identifying important points in a conversation*

Now listen to a conversation between two students.

(Man S) The tickets for the best seats in the concert hall cost \$60.

(Woman S) Oh, that's much more than I meant to pay. Don't we get a student discount for these kinds of functions?

(Man S) Not for a concert like this. Look, the least expensive ones are \$15.

(Woman S) Where are the \$15 seats located?

(Man S) In the top balcony.

(Woman S) That's too far away. We wouldn't be able to see anything on the stage.

(Man S) The middle balcony costs \$40.

(Woman S) Well, the \$40 seats are still expensive, but I guess if we really want to enjoy the concert, we'd better get them. What do you think?

(Man S) I'm not sure.

**EXERCISE S40** *Analyzing the task that relates to the conversation*

The students are discussing the possible choices in a decision they must make. State their problem. Then explain which decision you prefer and why.

**EXERCISE S43** *Identifying important points in a lecture*

Now listen to part of a lecture in a cultural geography class.

(Woman P) The problem of aging is taking on new dimensions in many countries. The societies that are faced with this problem are the ones with a large aging population and a low birthrate. They are finding that social security expenditure has become an excessive percentage of the national income. People are living longer and, therefore, are getting benefits for a longer period of time. The aging

populations need more medical attention at a time when those costs are skyrocketing. Furthermore, many elderly people can no longer look after themselves and need to be cared for. Frequently, neither they nor their families can pay for this intensive care. Thus, the financial burden falls on the state. Those countries where the problems associated with an aging population are most acute are actively seeking long-term solutions.

**EXERCISE S44** *Analyzing the task that relates to the lecture*

Using points and examples from the lecture, explain how the population age distribution is contributing to financial problems for governments.

**EXERCISE S48** *Responding to the integrated listening/ speaking tasks*

1. Listen to a conversation between two students.

(Man S) Have you signed up for the GRE tests yet?

(Woman S) Yeah. Have to if I wanna get into graduate school.

(Man S) You sound upset.

(Woman S) I am. I don't understand why we've gotta take that test. I mean, the university can tell whether we're up to graduate work by looking at our grade-point average and letters of recommendations.

(Man S) You're just suffering from test anxiety.

(Woman S) Yes, I am. Don't you know those tests are gender biased? Did you know that the average mean scores for women are about 60 points lower than men's on standardized tests, whereas women's grade-point averages are higher?

(Man S) Really? No, I didn't know that. So, uh, what's the deal?

(Woman S) Well, test anxiety may count. Women tend to suffer anxiety levels that negatively affect their scores. You know, there was a study not long ago in which a control group and an experimental group, both with an equal number of men and women, were given a standardized test. The people in the control group were just given the test, and those in the experimental group were told that the researchers were looking at gender differences. The women in the experimental group scored even lower than the women in the control group.

(Man S) And they think the women in the experimental group were more anxious?

(Woman S) Well, that's probably a part of it, but other studies show that men and women approach the tasks differently.

(Man S) So what do we, us guys, do differently?

(Woman S) Uh, for one thing, you guys take risks. We're more cautious and try to analyze the items and check our answers. So we work slower, and that's a disadvantage on a timed test.

(Man S) I can see that. What else?

(Woman S) Men seem to enjoy trick questions, whereas women find them distracting.

(Man S) Well, I guess I can understand your feelings. But don't you think a university takes these differences into account?

(Woman S) I'd hope so. You know, it isn't just women, but ethnic groups and even nonnative English speakers have been shown to do better on open-ended tasks like essay tests.

The students discuss the problem with standardized testing. Describe the woman's concerns. Then state what you think of the woman's concerns and explain why.

## 2. Listen to a conversation between two students.

(Man S) Hey, Becky, You look kind of . . . uh . . . down.

(Woman S) Yeah, I just discovered that I can't sign up for Research Methodology because I didn't take the prerequisite, Research Writing Skills. Can you believe that Research Methodology is only offered in the fall term? So if I can't take it next fall, it'll be another year before I can take it.

(Man S) I see you have a summer catalog. Is it being offered this summer?

(Woman S) Yeah. But I really need to go home and work this summer.

(Man S) Summer courses aren't so bad. I kind of prefer them. They're so intensive that they're over before you know it. Have you ever done a summer term?

(Woman S) No. But I'll have to this summer if I'm going to graduate in time.

(Man S) Did you know that course is offered as an Internet course? You could go home, hold down a job, and study online after you get off work.

(Woman S) Really? No, I didn't know that. You've signed up for online courses, right?

(Man S) Yeah, once. In fact, it was the Research Writing Skills course.

(Woman S) How was it?

(Man S) I failed.

(Woman S) What? But how is that possible? You're the one that always gets the best grades in class. It must've been really difficult.

(Man S) No, it wasn't. I discovered that when I don't attend a class regularly, I put off doing the assignments. I kept putting them off until it was too late to finish.

(Woman S) I never thought of you as a procrastinator.

(Man S) You know, I think it had a lot to do with not knowing the professor. I couldn't possibly walk into a classroom unprepared and face a professor. But I never met the online professor and didn't feel the embarrassment of not having my assignments ready. But I think you could manage it 'cause you're motivated. I mean, so you can take that other course next fall.

The students discuss two possible solutions to the woman's problem. Describe the problem. Then state which of the two solutions you prefer and explain why.

## 3. Listen to a conversation between two students.

(Woman S) I think we should meet early next week to finalize our presentation. Whadya think?

(Man S) Yeah. I think you're right. I'm free on Monday at 2:00.

(Woman S) Yeah. That's good for me.

(Man S) D'you want me to book a study room at the library again?

(Woman S) Hmmm. I don't know. It's a nice, quiet place to get work done, but I kind of like to drink coffee while we work. Since they don't allow drinks in the study rooms, whadya think of just meeting at the Student Union?

(Man S) Um, I think there's something going on at the union Monday afternoon. What was it?

(Woman S) Ah, you're right. They're having some sort of book fair.

(Man S) Yeah, that's it. Lots of publishers are going to be setting up displays and everything. I'd really like to go to that.

(Woman S) Me too. But what about our project? Monday is really the last day we can work on it before we have to do the presentation.

(Man S) Well, why don't we meet at the book fair and then go to the cafeteria and make the final preparations over a coffee?

(Woman S) Don't you think it might be pretty noisy?

(Man S) No. I get a lot of studying done in the cafeteria.

(Woman S) Yeah, but with the book fair, there'll be lots of extra people milling around. It could be really chaotic. Just getting a coffee might mean spending half our time waiting for the cafeteria lines.

(Man S) I hadn't thought about that. Maybe we should meet in the library.

(Woman S) D'you know how much ahead of time we have to reserve a study room?

(Man S) I don't think it matters. You can just walk in and if one is available at that moment, you can book it right then and there.

(Woman S) Well, should we take a risk and not reserve a study room? We could meet in the Student Union and if it is too noisy to work in the cafeteria, we could walk over to the library.

(Man S) Sounds good to me.

The students are discussing two possible places to meet to finalize their presentation plans. Describe their problem. Then state which of the two solutions you prefer and explain why.

4. Listen to a conversation between two students.

(Woman S) I hope they drop the physical education course requirements soon so that I don't have to take any of those classes.

(Man S) Do you? Personally, I think the decision is a mistake.

(Woman S) Really? Why? I mean—

(Man S) Well, I guess the president is right about some students not wanting to take them, but lots of different studies have shown that being physically fit helps people to concentrate better.

(Woman S) But, really. Students should take on responsibility for their own health. Don't you think? I mean, they don't need an authority to force them.

(Man S) They should, but they don't. Students frequently get wrapped up in their studies to the detriment of their physical health. Many I've talked to say that they resent having to sign up for the courses, but when they're in the class, they find it stimulating and a good mental break from sitting in the library.

(Woman S) Well, they are probably sports-minded. A lot of students, like me, for instance, I've never been very good at sports. I absolutely dreaded going to my high school gym class and playing basketball.

(Man S) Well, that's a good point in favor of keeping the physical education courses. Currently, the department is able to offer classes in lots of different sports. The variety of classes offers something for everyone. If the requirements are dropped, those classes will be cut, and that hurts people like you who aren't good at competitive sports like basketball, but who could benefit from something noncompetitive like aerobics.

(Woman S) I must admit that I am out of shape, but I still don't think it's the university's job to make me fit.

(Man S) But you probably won't take on the responsibility of getting into shape. And think of all the money that has already been spent on sports equipment and facilities. The equipment will go to waste or break and not get replaced. I think this is a very sad commentary on our university's priorities.

(Woman S) There's nothing wrong with putting library facilities and labs at the top of the priority list.

(Man S) Well, that's true, but I'm still disappointed in this decision.

The man expresses his opinion about the changes in the physical education requirements for students. State his opinion, and explain the reasons he gives for that opinion.

5. Listen to part of a lecture in an agriculture class.

(Man P) Since goats can survive on kinds of vegetation, such as bushes and desert scrub, which are unsuitable for other domesticated herd animals, they're a logical means of subsistence for millions of rural inhabitants the world over. They're a valuable resource for milk and meat and can survive where other animals would starve.

However, goats have also done considerable damage to delicate ecosystems, particularly those areas in danger of turning into deserts. The owners of goats have not kept a balance between goat numbers and the available vegetation, and because of that, overgrazing by goats has destroyed areas of bushes, desert scrub, and herbs as well as woodland in sensitive environments. This animal does not discriminate about where it gets its nourishment and often will eat newly germinated plants, thus preventing the establishment of new vegetation. Also, goats destroy woody plants – in other words, the kind of vegetation whose roots are important for stabilizing the soil. Plants need soil to anchor their roots and to provide them with water and nutrients, and the soil needs plants to provide the biological material from which new soil is created. Plants also hold the soil together, stopping it from being driven away by wind and rain.

We can say that overgrazing by goats is one of the prime causes of the spread of deserts. Of course, it's not the goat itself that is to blame for the spread of desertification; it's the poor management of the animals that's responsible. What is needed is a large-scale educational program on the importance of soil conservation and the spread of techniques for properly managing grazing animals.

Using points and examples from the lecture, explain how goats are related to the spread of desertification.

6. Listen to part of a lecture in a criminal law class.

(Woman P) As you know, the basic principle of the American juvenile justice system is that children are different from adults. And, it follows that the way the justice system deals with children should reflect these differences. When the principle was established, it provided for the individualizing of treatment and services to vulnerable children.

However, this system is under threat. Critics say it's not tough enough. And also it fails to rehabilitate children. And some of you may agree. After all, criminal statistics point to a steadily increasing problem of youngsters committing crimes. But my concern is that young offenders may start to be treated as adults. Before any reforms are made, a rational examination of the whole system needs to be undertaken. As I see it, there are three key areas of research:

The first is accountability. OK, so in other words, how are juveniles different from adults in their understanding of criminal behavior? How do we assess their responsibility?

Secondly, we need to evaluate risk. Risk evaluation. So, this means, how can we determine the chances of a given youth committing a crime and how can we use this information to prevent the crime in the first place?

The third area of research is susceptibility. We need to know how susceptible young people are to change. Can we assess a child's or a young person's likelihood of changing behavior or of responding to treatment?

So, to repeat, accountability, risk evaluation, and uh, susceptibility to change. These three key areas of research should be based on a thorough understanding of child and adolescent development. We need experts from all relevant fields, as well as input from the general public. More needs to be learned about the origins, development, prevention, and treatment of juvenile crime, and that knowledge has to be spread among professionals and the community. In this way, eventual reforms of the system may really be able to tackle the growing problem.

Using specific information from the lecture, explain the professor's concern about changing the justice system and what needs to be done before reforms are made.

7. Listen to part of a lecture in an ecology class.

(Man P) OK. Today I wanted to talk about intermediate technology, which refers to technology individuals can build using the materials at hand. Let me give you an example of the importance of this technology. In parts of the world, collecting fuel for home use, uh, fuel, such as firewood, dung cake, or agricultural waste, is not only time-consuming, but the typical patterns of collection lead to problems like deforestation, soil erosion, and ecological imbalances. Experts predict that even if food supplies are adequate for rural populations, fuel supplies for domestic consumption may not be.

Considering these problems, aid organizations developed a solar oven. These ovens are cheaply

constructed, easily operated, and extremely energy efficient. The oven consists of an inner and outer metal or cardboard box, a top cover, and two panes of plain glass. The inner box is painted black to absorb solar radiation. The space between the two boxes is filled with an easily available insulating material, such as rice husks, which, because of their high silicon content, neither attract insects nor rot easily. Other usable materials are, uh, ground nutshells or coconut shells. OK? An adjustable mirror is mounted on one side of the oven box, and this mirror reflects the sunlight into the interior of the box. A sufficiently high temperature can be maintained to cook food gradually but thoroughly.

Apart from being cheap and energy efficient, the solar oven has other advantages over traditional fires. First, indoor wood fires produce smoke that causes respiratory and eye diseases. They're also a fire hazard, especially for small children. Also, the combustion of biofuels produces carbon dioxide, methane, and other greenhouse gases that contribute to global warming. OK? So this intermediate technology, the solar oven, has made a significant improvement in the lives of millions of families in rural societies.

Using points and examples from the lecture, explain how the use of intermediate technology is important for rural societies.

8. Listen to part of a lecture in a world history class.

(Woman P) For hundreds of years, the maritime trading city of Venice had controlled the European spice trade with a firm hand. Various spices including nutmeg, pepper, and cinnamon were hauled overland across Asia to the great trading market of Constantinople, where they were bought up by Venetian merchants and then shipped westward across the Mediterranean to Venice. From here, the spices were sold on, at often excessive prices, to traders from northern Europe. Venice had an almost complete monopoly of the trade, yet many of the spices originated in countries and regions which few, if any, in Europe had visited. As spices became increasingly popular in medieval Europe, Venice's merchants managed the supply to ensure that high prices were maintained.

But in the late fourteenth and early fifteenth centuries, hundreds of other maritime nations attempted to get a share of the spice trade. Until that time, European ships rarely ventured too far from coastal waters due to the lack of navigation technology and knowledge. But gradually as new methods of navigation were developed, the Spanish and Portuguese learned how to successfully send ships onto the open sea. Prince Henry of Portugal set out to challenge the Venetians' grip on the spice

trade by sending ships around Africa to India and China, thus avoiding the overland route. The king of Spain sent ships westward across the Atlantic Ocean in the hope of reaching India from the opposite direction. As is well known, the Italian navigator Christopher Columbus eventually reached the American continent by sailing westward but didn't find the spice regions of Asia that had been his goal. Within a few years, the Portuguese explorations paid off when the explorer Vasco da Gama reached the west coast of India and returned to Portugal with spices and jewels as well as the news that the Indians were willing to pursue trade.

Using points and examples from the lecture, explain how maritime nations affected the spice trade in Europe.

## Speaking Section Practice Test

### 1. Please listen carefully.

Some research has indicated that pets are important for a person's mental health. Do you agree or disagree? Explain your point of view. Include details and examples to support your explanation.

You may begin to prepare your response after the beep. [beep]

Please begin speaking after the beep. [beep]

### 2. Please listen carefully.

If you could donate a large amount of money for scientific or medical research, how would you want the money to be used? Describe one important area in need of more research. Explain how your money could make a difference in that field of research.

You may begin to prepare your response after the beep. [beep]

Please begin speaking after the beep. [beep]

### 3. Please listen carefully.

The student newspaper has published an article about different services offered on campus. Read the description of the Legal Aid Project. You will have 45 seconds to read the description. Begin reading now.

Now listen to two students as they discuss the Legal Aid Project.

(Woman S) I didn't know that they had a free legal service for students here. You could get help with your housing problem.

(Man S) Oh, I don't know. That project's just set up to help the law students.

(Woman S) Maybe, but you said that you couldn't afford to see a lawyer, and this service is free. You might be able to get your rent deposit back.

(Man S) I don't really trust a student to advise me. I mean, those guys don't have any experience, do they?

(Woman S) Well, I think they do. You know – law students have to take a practicum where they deal with real legal cases that were dealt with in the past. Anyway, they go through old cases as if they were current ones. And then they see how the experienced lawyers dealt with the problems and analyze the ins and outs of the case.

(Man S) But that's just a classroom exercise.

(Woman S) Maybe. But see, it also says that the project staff assists them. The staff probably steps in and gives advice if the student is going in the wrong direction.

Now get ready to answer the question.

The woman expresses her opinion of the Legal Aid Project. State her opinion and explain her arguments in favor of the service.

You may begin to prepare your response after the beep. [beep]

Please begin speaking after the beep. [beep]

### 4. Please listen carefully.

Read the passage about the transportation of agricultural goods. You have 45 seconds to read the passage. Begin reading now.

Now listen to part of a lecture on this topic in a cultural geography class.

(Woman P) Today I'd like to talk about a German landowner, Johann-Heinrich Von Thünen, who lived in the seventeenth century. After researching ways to make his estate more profitable, Von Thünen developed a model of zones represented by concentric rings to explain market forces. In the center is a city, an imaginary one, to represent the market. As I am talking about these zones, keep in mind that we're talking about the days before refrigeration, electricity, and so on.

OK. So, the first ring around the city represents the zone that includes dairy farming and such crops as fruit and vegetables. Milk and fresh produce tend to spoil and, therefore, have to reach the market quickly. The second ring is the wooded zone, used for growing timber. Logs are heavy to transport but necessary both as a fuel and as a building material. The third ring is the grain zone. Wheat for bread is light and less perishable than fresh produce, so it can be grown further from the market. Next is the livestock zone. People can walk their cows or sheep to market. The livestock zone is the final one. The area beyond that zone is too far from the center to be considered for commercial farming.

Now interestingly, Von Thünen's model is still applicable today in terms of transportation costs and the cost of land.

Now get ready to answer the question.

The professor describes a model of zones relevant for agricultural marketing. Explain how these zones are related to the costs of transportation.

You may begin to prepare your response after the beep.  
[beep]

Please begin speaking after the beep. [beep]

#### 5. Please listen carefully.

Listen to a conversation between two students.

(Woman S) Hey, you've got your arms full, Ted. Would you like a hand?

(Man S) Nah, I can manage. These are all the books I need for my American short-story course. Quite a load, isn't it?

(Woman S) Um, yeah. Well, literature courses always require a lot of books.

(Man S) Yeah, and you know what? I was supposed to buy a lot more books, but I didn't have the money.

(Woman S) Textbooks are expensive. Hey, did you stop off at the library first to see if you could get any of the books there?

(Man S) Yeah, but I couldn't find any of the titles on the list.

(Woman S) OK, but in literature courses, usually you can find the stories you need in different texts.

(Man S) Yeah?

(Woman S) Yeah, let me see your list. Oh, see this book of stories by Edgar Allan Poe. You can probably find all the stories in other books or collections of famous short stories.

(Man S) But how can I be sure?

(Woman S) Did you check the course syllabus? I bet the professor has stated exactly what stories you need to read before the class meeting – and you can look for them in other books. Do you have the course syllabus?

(Man S) Yeah, right here. See?

(Woman S) OK. Well, see you need to read "Chrysanthemums" by John Steinbeck. That definitely should be in the library in a book of short stories. Did you look?

(Man S) Well, no, I didn't look for individual stories.

(Woman S) Well, I suggest you keep the receipts for all of these books – and then search for the exact stories you need in the library. I'm sure you'll find a lot of them there. Then you can take the books you don't need back to the bookstore.

(Man S) Yeah, I could do that. But you know, I like to own my books, highlight passages and scribble notes in the margins, and whatnot.

(Woman S) Oh, well . . . Oh, hey, here's another thing you could do. Those books look new. Did you go to the used bookstore first?

(Man S) Used bookstore?

(Woman S) Yeah, there's a used bookstore on University Avenue. They buy used textbooks at the end of the semester. If that professor has been requiring that the students read the same books every semester, chances are that you'll find them there. And that way you'll have your own copy and you won't be paying so much.

Now get ready to answer the question.

The woman has two suggestions for the man. Describe the man's problem. Then state which of the two suggestions you prefer and explain why.

You may begin to prepare your response after the beep.  
[beep]

Please begin speaking after the beep. [beep]

#### 6. Please listen carefully.

Listen to part of a lecture in a music education class.

(Man P) I'm sure you've heard of the Mozart Effect, a term coined to refer to the results of a neuroscience music/brain experiment. In this experiment, researchers were looking at one specific area of the brain, where the ability to think in terms of space and time – or spatial-temporal reasoning – takes place. This kind of reasoning is important in music, but not all aspects of music . . . and it's important in solving some types of physics and mathematics problems. Some types.

The researchers chose Mozart's music because as a child prodigy he used space/time reasoning at an early age. I'm uncertain of the relationship between a child composer's use of this reasoning to create a masterpiece and an adult listener's use when hearing it. Anyway, the experimental group – college students, not children – were given a pretest just in their spatial-temporal reasoning. Then they were divided into three groups: one heard no music; one, a variety of different kinds of music; and one group only heard Mozart. Afterwards, all the subjects took an intelligence test. The results? Well, the Mozart group had increased scores on the spatial-temporal reasoning section. The increase lasted for 10 minutes. Only 10 minutes. Now, there are several types of intelligence tests that could have been used, but only one type was used in the experiment. One wonders if a different IQ test would have had the same results.



The study was interesting, but I'm concerned about the reaction of the general public. The media interest in the belief that listening to Mozart's music can increase one's intelligence was followed by "help your child be a genius" books, popular magazine articles, and the flourishing market of videos, toys, and music products – all aimed at gullible parents. This is unfortunate because the real importance of music, that of bringing beauty into our lives, is being undermined by parents foolishly attempting to turn their children into rocket scientists.

Now get ready to answer the question.

Using points and examples from the lecture, explain how the experiment does not support the public's belief in the Mozart Effect.

You may begin to prepare your response after the beep.  
[beep]

Please begin speaking after the beep. [beep]

---

## PART 2 BUILDING SKILLS: Writing

### EXERCISE W35 *Writing summaries of listening passages*

1. (Woman P) A feature seen in many cities around the world is the shantytown. This is an illegal settlement built on disused city land. The people living in these settlements usually have immigrated to the city from rural areas in hopes of finding jobs. Arriving without enough money to rent housing, they collect scrap materials to build makeshift shelters. The shantytown often lacks public facilities such as water supplies, drainage systems, and electricity. However, in time, these facilities may be added and homes improved until the shantytown becomes a more permanent settlement.
2. (Man P) Astronomers have observed structures of glowing blue arcs of light nearly 2 million trillion miles in length. These arcs are thought to be optical illusions created by light that has been bent due to the immense gravitational pull of a massive galaxy. The arcs are probably formed when the light from a distant galaxy is bent by the gravitational pull of another, less distant, intervening galaxy. Even though such light-bending galaxies contain billions of stars, they still don't contain enough visible stars to exert the pull needed to bend light in this way. Therefore,

huge amounts of invisible or dark matter must exist within these galaxies.

3. (Woman P) The Henry Ford Museum was founded in 1929 in Dearborn, Michigan, about 12 miles west of downtown Detroit. This museum has redesigned its display of old cars to show the changes brought about by the automobile. One exhibit, which shows the evolution of roadside services, contrasts a 1940s diner with a 1960s fast-food restaurant. The Getting Away From It All exhibit presents an assortment of recreational vehicles dating from a 1916 camper truck to today's mobile home. Changes in roadside objects such as billboards can be seen along the museum's roadway, where 108 cars are lined up as if traveling. For the car enthusiast, this museum should not be overlooked.

### EXERCISE W36 *Revising summaries of listening passages*

1. (Man P) The advantages of herding animals over hunting them are numerous. The most obvious advantage is not having to search for food as the herded animals can provide both milk and meat. Instead of having fresh meat only after the hunt, there's the convenience of keeping the herd animal alive until the meat is needed.
2. (Woman P) Every year game manufacturers introduce many new games to the consuming public. These are designed to entertain millions of fun-seekers who like to roll the dice, pick a card, guess a quote, or buy property depending on the game of their choice. Very popular on the market are the ones that test a player's general knowledge. We shouldn't dismiss these games that puzzle, preoccupy, and, uh, frustrate us as mere entertainment because research is showing that keeping one's mind active is one of the ways to maintain one's thinking capacity into the later years of life.
3. (Man P) One type of structure of the Anasazi people of the southwestern United States that I'd like to discuss today is called a kiva. The kiva is considered to have had a mainly religious and ceremonial purpose. One type of kiva is circular in shape with six stone pillars built into the wall. These pillars were used to support the roof beams. A fire pit in the center of the room has a short wall behind it. The wall served as a deflector for the air intake. Another feature of the kiva is a small round hole in the floor, which was regarded as a symbolic entrance to the underworld.

**EXERCISE W38** *Summarizing listening passages*

1. Now listen to part of a lecture.

(Woman P) During the Depression Era in the United States, President Roosevelt's administration started innovative and often controversial cultural programs to ease unemployment among artists and writers, while at the same time give the general public access to the arts. One scheme funded under the Federal Writers Project employed nearly 7,000 writers at its peak in 1936. The funding provided work for both novice and experienced writers, many of whom went on to acquire literary reputations.

Writers interviewed over 10,000 people from different regions, ethnic groups, and occupations about major areas of their life. The wide diversity was encouraged by the administrators, keen to foster tolerance and promote a sense of national identity during the difficult period of the 1930s. People interviewed included those from all walks of life – business executives to vagrants. Many interviewees told of their upbringing in the nineteenth century and included recollections of historic people or important events. Included among the informants were a large number of former slaves whose memories offer a vivid account of conditions before and after the abolition of slavery.

These vivid and often sad accounts of life histories were originally intended for publication in a series that would form a documentary portrait of everyday life in America. Unfortunately, the project was never fully realized, partially due to the redirection of national priorities with the United States entering World War II. However, the raw material collected remains a valuable resource for historians and provides insight into the lives of ordinary people of a bygone era. Furthermore, several of the project writers found that the knowledge and experiences they had gathered from their research was an invaluable source for their own literary creations.

2. Now listen to part of a lecture.

(Man P) You may be interested to know that the first test-scoring machines were developed in the 1930s. The earliest prototype was created by Reynold B. Johnson, a high school teacher from Michigan. His invention was based on the fact that graphite conducts electricity. His inspiration to use graphite came to him when he was recalling one of the boyhood tricks that he played on his sisters' friends. He would scratch pencil marks on the spark plugs of their parked cars. Then, when the drivers tried to start their cars, the graphite in the pencil marks

would draw the sparks away from the spark plugs and the engines wouldn't start. Thinking about this prank, Johnson realized that a machine could electrically sense pencil marks made on a sheet of paper and then indicate if these marks were in the right places.

By 1933, Johnson had made a working model of a test-scoring machine. One day he received a telegram from an executive at the IBM Company. Their company had been trying to produce a test-scoring machine for several years and wanted to purchase Johnson's invention. After a few setbacks and interventions within the IBM management, Johnson's machine finally met approval and was improved over the next few years. This machine allowed a large number of exams to be scored efficiently and with no human error. This led to the feasibility of widespread standardized testing.

Nowadays, computerized exams are gradually taking over the role of machine-scored standardized exams. It's likely that the scoring machine will remain around for some time to come before completely being replaced by the computer.

**EXERCISE W39** *Linking ideas in reading and listening passages*

1. Now listen to part of a lecture on the topic you just read about.

(Woman P) A lot of evidence seems to underline the need for a more cautious approach to fluoride supplementation. First of all, when we add fluoride to the water supply, we are doing so without the informed consent of the public. Now, you could argue that since the benefits are so obvious to the consumer that no consent is necessary. But several studies have shown that fluoride supplementation may be more hazardous than was once thought. If that's true, then the act of adding fluoride is a kind of large-scale experiment in which the subjects – that is, the general public – have not given their consent to be treated as guinea pigs. Think about it. Would you allow doctors to test medications on you without your knowledge and consent? In fact, at least one large-scale study carried out recently concluded that average decay rates for children in both fluoridated and non-fluoridated areas were almost identical. Besides this, evidence seems to be coming in that, uh, decay rates are going down in most places for other reasons, unconnected with the use of fluoride. Beyond this, some research has called into question the safety of the supplements. Environmentalists, for example, claim that the supplements are not the same as naturally occurring fluoride since it's derived from a hazardous waste and contains toxic pollutants.

Furthermore, several side effects have been reported from the overexposure to fluoride in animal testing. Remember that fluoride is a cumulative poison; only a percentage leaves the body and the remainder accumulates in different tissues. This can lead to unforeseen health problems. All in all, it seems clear that much more public debate and research into the benefits and potential dangers caused by fluoride supplementation needs to be conducted.

2. Now listen to part of a lecture on the topic you just read about.

(Woman P) Well, the belief in the value of using animals as predictors of earthquakes is, in my opinion, based on very weak evidence. The fact is that no serious scientific research has shown that this actually works. I agree of course that animals have been shown to have different, and often superior, sensory capacities. But all the evidence we've collected about animal behavior prior to earthquakes is anecdotal; in other words, based on what people claim to have observed after the event. So, often after any sudden major event, people focus on things they remember happening just before. Amongst other things, they remember things like animals apparently behaving oddly. It may be that animals from time to time behave in unusual ways but if this is not followed by an impressive event such as an earthquake, then people have no reason to remember this behavior. People often remember vividly all kinds of things that happen prior to any surprising or catastrophic event. Some studies have shown some of the animal stories to be fanciful rather than factual. For example, people have often claimed that many dogs and other family pets go missing just before a quake. The hypothesis that this could be caused by the animals' anticipation of an earthquake has in fact been tested in California by scientists who have studied reports of missing animals in conjunction with earthquake activity. This study, at least, showed no connection between pet behavior and quake occurrence over a three-year period. As for the often-heard success of the evacuation of a Chinese city prior to an earthquake, based on animal behavior, it turns out that, in fact, the real warning was given by a series of foreshocks, shocks that sometimes occur before a major quake.

#### EXERCISE W44 Practice responding to the integrated writing task

1. Now listen to part of a lecture on the topic you just read about.

(Man P) Being able to communicate using language is one of our human species' most important abilities. Some scientists claim that apes, like humans,

also use languages. There are many studies into ape acquisition of language, some famous, such as the Koko studies. But are these animals really acquiring language? We really haven't done enough research to address the question of how and when humans started using language, but we can compare human and ape communicative abilities to determine whether the claims about ape language are valid.

First, for behavior to be called "language," it must be communicative; in other words, the signers must be able to use language creatively. They should be able to take turns in conversation, must sign spontaneously rather than as a response to drilling or coercion, and must be able to comment on interesting phenomena. If you think about what the apes have accomplished in communicating, these criteria have not been met.

However, according to the proponents of ape communication, the animals do meet these criteria. They maintain that those of us who question the validity of this research have never worked with apes. However, we wonder how much influence their probable emotional attachment to an animal has on the conclusions they reach.

Is there a solution in sight that would put an end to this controversy? Yes, there might be. Studies are being undertaken at the neurophysiological level. Through the use of modern brain-scanning techniques such as MRI, we may be able to get a better picture of the brain activity of a healthy human during communication and an ape while supposedly communicating. A comparison of these scans should give us an insight into whether apes really do communicate.

Summarize the points made in the lecture you just heard, explaining how they cast doubt on the points made in the reading.

2. Now listen to part of a lecture on the topic you just read about.

(Woman P) The question of why the current is so important to the young salmon was asked and I'd like to respond to this. Smolts, uh, the young salmon, hatch from their eggs in fresh water. Before the large-scale construction of dams, the young fish used the strong current from the spring runoff of melting snow to get to the sea in between six and, uh, twenty days. It's necessary for them to reach the sea within this window of time because during these days the smolts' bodies undergo the physiological changes for adaptation to saltwater. The net result of the slow current is that many of the young fish don't survive the trip, which can now take up to 60 days to reach the sea. What happens is their bodies have adapted to

saltwater conditions, but they're still in fresh water. Obviously, with fewer fish surviving the trip to the sea, there are fewer adult salmon to migrate back up the rivers for breeding.

The solutions to the problem that have been presented have not been very successful. Many scientists think that the artificial method of getting the fish to the sea by barge has killed more fish than it saves.

The suggestion some people have made concerning increasing the flow rate temporarily by either releasing water from upstream reservoirs or reducing the water level in all linked reservoirs for the period of smolt migration would be a partial solution to the declining salmon numbers. Unfortunately, both of these proposals have met with criticism from the power companies that manage the dams.

Summarize the points made in the lecture you just heard, explaining how they support the points made in the reading.

3. Now listen to part of a lecture on the topic you just read about.

[Man P] OK, so you all know something about DDT and its apparent environmental risks, but these risks are not necessarily valid. The evidence that DDT led to population declines of various birds of prey – the bald eagle, for instance – has come under criticism. Apparently, the bald eagle populations were in decline well before the widespread use of DDT. On the contrary, in 1960 – that's about 15 years after the introduction of DDT – observers were reporting a rise in bald eagle numbers. Similar results have been found among other high food-chain birds. Brown pelicans, for example, reached their lowest number before the introduction of DDT. The fact is they were hunted to near extinction. I've found studies showing that this bird, as well as the peregrine falcon, actually experienced no difficulty in reproducing during the DDT years.

So, what about the evidence that DDT led to eggshell thinning? Unfortunately, the experiments associating DDT with this phenomenon involved doses massively higher than could ever be encountered in the wild. Even then, the degree of thinning was less than that found in eggs in the wild. In other words, the evidence shows that eggshell thinning and DDT are not correlated. However, other substances are, for example, oil spills, lead and mercury poisoning, and other factors, such as stress from noise, fear, or excitement, may be tied to the eggshell thinning. Even the human cancer scare seems to have been exaggerated. Again, several studies show that there

may be no link between DDT and cancer at all. Research into DDT as a pesticide has indicated that overuse of the pesticide can result in its loss of effectiveness against insect-borne diseases, but responsible use is an effective method of fighting the spread of malaria and its reintroduction should be seriously reconsidered.

Summarize the points made in the lecture you just heard, explaining how they cast doubt on the points made in the reading.

## Writing Section Practice Test

Now listen to part of a lecture on the topic you just read about.

[Woman P] OK, now I want to discuss tidal power since I think it's a good example of an alternative energy source that we should look at critically. OK, now let's think about some of the possible drawbacks to the system. For a start, tidal power can never do more than provide a fraction of our total energy needs since there just aren't enough good locations.

However, tidal power could still make some contribution at a regional level. But what about the environmental impact? First of all, the quality of the water in the estuary area will be changed, and this will have an effect, of course, on the local wildlife. Both the increase in salinity, when seawater is mixed with estuary water, and also the amount of mud and sediments churned up in the water will affect the birds and the fish. These conditions could stimulate the growth of the red tide organism, which causes paralysis in shellfish and affects many aquatic creatures. And much of the inter-tidal habitat could be destroyed, and this would have a devastating effect on birds and vegetation types adapted to these conditions.

And what about the fish that naturally migrate between river and sea? Their ability to migrate will be hampered since they won't be able to pass the barrage. Now, it could be possible to make some kind of provision for them to move freely between salt and freshwater environments, but this would lead to expensive design considerations.

Also, there are implications for the people living in the area. For example, fishing boats are normally moored in the estuary for protection from the rougher waters, but they'll no longer be able to navigate between estuary and open sea. In such a case, the economy of the whole area could be affected.

So, all of these things are drawbacks of tidal power and need to be matched against the benefits of alternative energy production.

Summarize the points made in the lecture you just heard, explaining how they cast doubt on the points made in the reading.

## PRACTICE TESTS

### PRACTICE TEST 1: Listening Section

#### Questions 1–6

Listen to part of a lecture in a business studies class.

(Woman P) OK, so we've outlined a number of techniques for effective decision-making. Now, let's focus on one approach to figuring out how to make good business decisions. OK, so one way of deciding whether to go ahead with some new investment project is to perform what's known as CBA, or cost benefit analysis. CBA can estimate and total up the money values of both the benefits and costs to a community, institution, or business to establish whether an investment choice is worthwhile.

So let's assume you've generated solutions to a business problem and have thought really carefully about which way to go. You think you have the best solution available. But before going ahead with any investment decision, what you need to do is add up the value of the benefits as well as the costs of this action.

Now what I mean by costs and benefits here is always expressed in monetary terms. So, we find out what the cost is in money terms and also what the benefits might be, also in money terms. Then we subtract the costs from the benefits and we can choose whether to go ahead or not.

All right, in simple terms, costs tend to be what we spend on something, say, for example, a new piece of machinery; and benefits are what advantages – expressed in money units – we get over the lifetime of that machinery because of having purchased it as opposed to, well, not having it, or having some alternative. In such a case, we can figure out a fairly simple CBA just by looking at expenses and then subtracting them from the savings brought about by improved . . . the improvements of introducing the machinery – that would include things like the savings met by not having to pay salaries to employees who previously did the work of the machine. We could add the fact that the machines make fewer mistakes, we hope, than human employees so there will be fewer rejected products. But, on the other hand, we have to factor in the cost of running the machines, such as maybe the increased electricity bill, the cost of repairs, and, of

course, the cost of training someone to operate the new equipment.

So that much is pretty straightforward. But we also have to think about less tangible, less visible costs and benefits. Cost benefit analysis really only works if we are careful to add in all the costs and benefits. Costs especially are sometimes hidden. For example, in paying for this new stuff, we're taking liquid money and spending it, right? So we're no longer paid interest from having that money in a bank or otherwise invested. OK, so we have to subtract that loss from the benefit side. Then suppose also that the new machines are noisy. That means soundproofing. That's a cost. Or will it take up more space than the replaced workers, and therefore require an addition to the building? These are less obvious costs, but they should be factored in to get an accurate picture.

When we do CBA in a more public domain – say, on the building of a new road – the calculations can become even more tricky, although there's some impressive software nowadays that helps us out, of course. So, how do we measure the benefits here? Does the road improve or worsen people's lives? A new road may, for example, damage some wildlife habitat or some residential community may be inconvenienced by the noise or air pollution. On the other hand, the new road could improve property values by decreasing commuting times. It could also save human lives, since it's safer than the old road.

In practice, CBA tries to put a value on all these things, although a lot of people may not like what it says. What it does is try to find out how people really value these apparently subjective things – by looking at the financial choices they're prepared to make to gain a benefit, or to avoid something on the cost side. In this way, we can put a monetary figure on all benefits and costs. Of course these calculations can be complex, and sometimes controversial, but I want to point out that CBA is a powerful tool – and perhaps the most rational way of choosing whether to go ahead with a complex investment decision.

Now get ready to answer the questions. You may use your notes to help you answer.

1. What is the lecture mainly about?
2. In the lecture, the professor describes some costs and benefits of investing in new machinery. Indicate whether each of the following is a cost or a benefit for a company planning on making an investment decision.
3. Why does the professor mention the introduction of machinery?

4. Why does the professor say this: So that much is pretty straightforward. But we also have to think about less tangible, less visible costs and benefits.
5. Listen again to part of the lecture. Then answer the question.

When we do CBA in a more public domain – say, on the building of a new road – the calculations can become even more tricky, although there’s some impressive software nowadays that helps us out, of course.

Why does the professor say this: . . . say, on the building of a new road . . .

6. According to the professor, how does CBA evaluate subjective things?

### Questions 7–11

Listen to a conversation between a student and a professor.

(Woman S) Hi, Dr. Johnson. I came by to discuss my research paper. I dropped it by on Monday . . . about the nutritional value of chocolate.

(Man P) Oh, yes, Lisa. That’s right.

(Woman S) Have you had a chance to look at it yet?

(Man P) Yeah, I sure have. Let me dig it out of my files . . . Yeah. Here it is. OK, well, Lisa, you’ve done a fine job of citing your sources and writing up your reference page. But, you used a lot of Internet resources for your information.

(Woman S) That’s right. You said we could, didn’t you?

(Man P) Oh, yeah. But I also said to be sure to evaluate the site to make sure that it’s worthwhile before you used it. This one here . . . that I’ve circled, I don’t think this is what I’d call a good source.

(Woman S) But it has the university address of a professor. Isn’t it OK to use sites with the .edu domain in the address?

(Man P) Well, you have to look beyond just the address. Yes, you are correct that this site is that of a professor, a professor at a very prestigious university, in fact. But did you notice this particular set of Web pages were student papers that the professor had uploaded for the class to read and critique? You happened to have used one of the student papers. Well, that particular student may have done a fine job in his or her research, but a student is hardly an expert in the field.

(Woman S) Oh, I hadn’t realized that it was a student’s work. I just noticed that it was on the Web site of a professor and thought . . . well, that it would be his work.

(Man P) You really need to investigate a bit deeper before you use online material. You could have checked the sources that the student had used.

There might have been some useful papers by experts in that student’s reference page.

(Woman S) OK.

(Man P) Now the study here that you’ve cited looks very good. But did you notice that the person who did the study works for a laboratory that’s funded by a major chocolate company?

(Woman S) Oh . . . so it’s biased.

(Man P) Well, perhaps. At least it should be taken with a grain of salt. But it might also be very good research. So with data like that – data which may be biased – you should try to find an independent person who’s run the same kind of experiment. Remember that a good experiment should be . . . you should be able to replicate it. So if a major chocolate company comes out with a study, we should have other people looking at that research with a critical, but open mind.

(Woman S) So, it might be a good source. I don’t have to throw it out.

(Man P) Right, but I think you should try to find more studies to back up the results. OK, so has that been helpful?

(Woman S) Yes, oh, yeah, very, Dr. Johnson. Thank you. I really appreciate your help.

Now get ready to answer the questions. You may use your notes to help you answer.

7. Why does the student go to see her professor?
8. Listen again to part of the conversation. Then answer the question.

(Woman S) But it has the university address of a professor. Isn’t it OK to use sites with the .edu domain in the address?

(Man P) Well, you have to look beyond just the address. Yes, you are correct that this site is that of a professor, a professor at a very prestigious university, in fact.

Why does the professor say this: Well, you have to look beyond just the address.

9. Why does Dr. Johnson criticize the student’s use of a university Web site?
10. Listen again to part of the conversation. Then answer the question.

(Man P) Now the study here that you’ve cited looks very good. But did you notice that the person who did the study works for a laboratory that’s funded by a major chocolate company?

(Woman S) Oh . . . so it’s biased.

(Man P) Well, perhaps. At least it should be taken with a grain of salt.

Why does the professor say this: . . . it should be taken with a grain of salt.

11. What does the professor say about the research sponsored by a company?

### Questions 12–17

Listen to part of a lecture in an architecture class.

(Woman P) So, now I'd like to focus on the Prairie School of Architecture, which developed the most significant architectural style in North America in the first decades of the twentieth century. The main influences on this style came from several places, for example, the philosophy and practice of the architect Louis Sullivan. Now, you may remember that Sullivan liked to say that form follows function. In other words, the shape and structure of a building should follow, should depend on the purpose, the intended use of the building. There was also the English Arts and Crafts movement – that was important around this time, too. That was a second important influence. And I should mention traditional Oriental themes, which also played an important part in the Prairie School ideas. Now the students and followers of Sullivan, the most famous of whom was Frank Lloyd Wright, developed these themes and ideas into a truly American style; a style expressing a belief in the unity of mankind and nature.

Now, when people think of architecture, they often think of large public buildings, but most of the effort of the Prairie School was devoted to domestic buildings, mainly houses for well-to-do private citizens. So, can anyone here describe to me any of the important features of Prairie School houses?

(Man S) Didn't they mostly have long horizontal lines, rather than a vertical appearance?

(Woman P) Yes, they did. That's certainly part of it. We can say that the most visible external features of this architecture were horizontal lines and heavy roofs projecting away from the walls. The shapes were designed to both harmonize with and reflect the broad, flat prairies of the Midwestern United States. But, somewhat ironically, I suppose, most of these houses were actually built in more urban areas, especially in the Chicago suburbs, rather than on the prairies themselves. OK. Now, what about the insides, the interiors?

(Man S2) Didn't they want to do away with small rooms?

(Woman P) Well, in a sense, yes. There was certainly an emphasis on keeping the number of separate rooms to a minimum, opening up living space, and designing internal walls so that the light and view created a sense of unity. The idea was to reduce the

number of interior corners typical of traditional European houses. See, Prairie School architects thought of this traditional home as confining, both physically and also spiritually. So by ridding the inside of houses of so many rooms and corners and walls, they hoped to create a feeling of movement and freedom. Their ideal of beauty was to try to make the living space more compatible with human proportions and living requirements. Often, large fireplaces were built at the center of the overall design rather than attached to an outside wall. And this gave additional structural support to the building, so it further allowed the building to get by with fewer interior walls.

Now, let me add that, in line with their belief in the importance of nature, these architects related the interiors to the surrounding natural landscape by their use of windows that were continuous ribbons of glass. So, in that way, the outside and inside of the houses were more closely related. Other ways they suggested the importance of nature were in designing terraces projecting from the external walls with parapets, walls that were used as planting boxes for flowers and shrubs, and deep roof overhangs that led the eye toward the horizon. Of course, not all Prairie School houses had all these features, but certainly we can say that there was a general tendency among these architects to provide their designs with many of them. OK, so now we've discussed overall structure; now what about ornamentation?

(Man S2) Didn't they reject almost all decorative elements?

(Woman P) Well, not entirely, although, it's true they liked to keep things simple. Again, this was in line with their opposition to what they perceived as the fussiness of more traditional housing styles. We can say that ornamentation was only permitted if it complemented, if it blended in with the overall expression and feeling of the building. So, to this end, the Prairie School architects tended to use simple, unmixed, natural materials, sometimes with geometric or Oriental designs. For example, many of the Prairie houses had a "turned-up" roof edge reminiscent of traditional Japanese houses.

OK. So, finally, I'd like to mention that these architects usually designed all the furniture that went with each house. Each piece of furniture, whether built-in or freestanding, was carefully crafted to fit in with the overall feeling of the house. Again, natural materials were preferred and restful horizontal lines were emphasized.

Now get ready to answer the questions. You may use your notes to help you answer.

12. What is the lecture mainly about?
13. What can be said about the nature of Prairie School architecture?
14. Listen again to part of the lecture. Then answer the question.

(Woman P) The shapes were designed to both harmonize with and reflect the broad, flat prairies of the Midwestern United States. But, somewhat ironically, I suppose, most of these houses were actually built in more urban areas, especially in the Chicago suburbs, rather than on the prairies themselves.

Why does the professor say this: . . . somewhat ironically, I suppose, most of these houses were actually built in more urban areas . . .

15. According to the professor, how did the Prairie School architects make living space more compatible with human needs?
16. What does the professor say about the use of ornamentation by Prairie School architects?
17. Why does the professor mention traditional Japanese houses?

### Questions 18–23

Listen to part of a lecture in a psychology class.

(Man P) OK. Now I'd like to present an idea that has recently become much talked about in the fields of biology and psychology, and also in studies of cultural transmission. I should point out that some of what this is is not fully accepted by some academics, but I'm bringing this up today just to, well, hopefully, whet your appetite.

OK. Now, you are all familiar, of course, with the term "gene," and how it's considered as the unit of inheritance. As you know, we inherit our genes from our parents, and then we pass them on to our kids. What genes do is replicate, that is, they make copies of themselves. Some scientists even like to claim that animals and plants and all organisms are just essentially systems for the transmission of genes from one generation to the next. Now, sometimes genes make mistakes and the mutant forms that result may make new life forms, at least if they succeed. If the environment in which they find themselves is suitable, they will succeed and thrive and reproduce. Now, of course, environments differ from place to place, and successful genes, which inhabit various organisms, themselves change the environment. The pressures of the changing environment lead to variation in the organisms, and this eventually creates the vast complexity of life.

All right, so now I want to bring in here something that is kind of like a gene in the way it behaves. This thing is called a *meme*. Now, it's spelled M-E-M-E. The term "meme" was invented by the zoologist Richard Dawkins to refer to a unit of information in our minds which influences events so that copies of itself are passed on to other minds. Some people have described memes as patterns of information that spread just like viruses or bacteria and which alter the behavior – even if in a very subtle, very small, or hardly noticeable way – causing the host to pass on the pattern. In a sense they're parasites, because they use us, or at least our brains, as a springboard for their transmission to other brains. The essential point is that a meme replicates, that is, it's capable of imitation, just like a gene. A meme can be an idea, a song, a joke, a food recipe, or even a way of constructing bridges. "How to make a fire" could be considered another one. What is important here is that memes are imitated and thus passed on from one person to another. Also, they don't even have to be true; they just have to, in some way, make sense to us.

Memes seem to come in all sizes; they can be as small as, say, a new slang term, to very large, that is to say, a whole way of looking at the world, say a political ideology. Some people who write about memes would probably call such a large meme a "meme complex," – a whole set of memes clustered together – for, as it were, mutual protection.

All right. So the useful thing about this idea is that it enables us to explain certain things about behavior and even our physical makeup that are difficult to explain without it. At the most simple level, it helps us to understand why some ideas survive and some just drop out of sight. The memes that are transmitted are the survivors. And just as genes group together, so to speak, to form organisms that can reproduce, so memes may cluster together in human brains and pass on to other brains complex systems of thought such as political ideas or even scientific theories.

Now if we ask why our minds always appear to be active and full of thoughts, we can answer using this meme idea, that it is because memes need to get repeated over and over in our heads. They need to be rehearsed and remembered. If they're not thought about and transferred to another brain, they'll die out, disappear. So from the meme's point of view, it's necessary to be practiced, then passed on to another mind.

According to some theorists in this field, the reason our minds are continually filling up with ideas, is that the memes force us to. One person has even suggested that the human brain, with all its



complexity, was in some way designed by memes in order to promote their own success.

Furthermore, surprisingly, it's claimed that we ourselves are not the ones who benefit from our ideas, it's – you guessed it – the memes themselves. The "self" itself is a meme. In other words, at least some theorists seem to be saying, we are nothing but temporary groupings of memes that have come together in order to be protected and passed on to other minds, in order that they can survive and prosper.

Now get ready to answer the questions. You may use your notes to help you answer.

18. What aspect of a meme's behavior does the professor mainly discuss?
19. Why does the professor say this: I should point out that some of what this is is not fully accepted by some academics. . . .
20. What does the professor say about memes?
21. Listen again to part of the lecture. Then answer the question.  
 (Man P) A meme can be an idea, a song, a joke, a food recipe, or even a way of constructing bridges. "How to make a fire" could be considered another one.  
 Why does the professor say this: "How to make a fire" could be considered another one.
22. What does the professor imply about the importance of memes in our minds?
23. Which of the following is NOT true about memes?

### Questions 24–29

Listen to part of a lecture in an anthropology class.

(Woman P) So we've had a look at the general distribution of Native American peoples throughout the continent and before the arrival of the Spaniards. Today, I wanted to focus on a particular culture, which inhabited the Southwest of what is today the United States. This was a remarkable group of agricultural people generally referred to as the "Anasazi." By the way, I'm going to continue to use that term even though some people are not completely happy with it. It's the best term we've got at the moment, and all the proposed alternative names are less accurate.

OK. So these people arrived in the Southwest area approximately 2,000 years ago and engaged in hunting and gathering. Over time they developed an agricultural economy with corn, squash, and beans as their primary crops. During the earlier periods, they made waterproof basketware, and today these periods are known as the "Basketmaker" cultures. We'll take a more detailed

look at these cultures later on in the course. So, anyway, eventually the Anasazi discovered that pottery was more effective for storing foodstuffs and liquids. So they developed ceramic work often patterned with bold, brightly colored designs. This pottery was good enough to be traded throughout the region. In fact, there is evidence that trade extended into central Mexico.

Now, as well as highly skilled pottery techniques, the Anasazi also developed remarkable building techniques. They also developed a kind of road system. Well, perhaps "system" is the wrong word, since the roads didn't really go anywhere. They were mostly just sections extending out from their larger houses, possibly to emphasize their status. Some authorities have said their purpose was really symbolic, rather than practical. OK. Where was I? Oh, yeah. The buildings. Their dwellings and ceremonial structures were often built in inaccessible locations on cliffs or protected by caves. A well-known example of an Anasazi building is the so-called "Cliff Palace" in Mesa Verde National Park. I'm sure some of you have seen pictures of this site. This large structure – oh, it contains over 200 rooms – was built on a cliff in the 1200s. It consisted of homes made of blocks of rock – varying from simple structures to large, multi-storied buildings. The Cliff Palace has generated the perception of the Anasazi as "cliff dwellers." This extraordinary structure, along with other dwellings in the area, was deserted around AD 1300. Only about 100 years after it was built. Yes, did you have a question?

- (Woman S) Why did the Anasazi build such a large city and then abandon it?
- (Woman P) OK. I was coming to that. The reason for the abandonment has been the source of much debate. Can anyone here think of any reason why an entire population would abandon its city?
- (Man S) Well, the Southwest is a rather dry part of the country. Perhaps there was a drought that led to mass starvation.
- (Woman P) OK. That is a possibility. And, in fact, tree rings from this area have been studied, and, as you know, sections through trees indicate a lot about climate patterns. These tree rings do indicate that there was a drought in the last quarter of that century. Having said that, however, it was no more severe than previous droughts, and those were not bad enough to force the people to leave.
- Some researchers have argued that warfare could have been a factor in the abandonment of the area. And there is evidence that by this time people were crowded into a smaller area, and some villages were moved away from lowland areas up

to higher ground. This might suggest the presence of invaders, but there's not much other evidence to support this theory. Later sites appear to be built for defense, and excavation at other sites in the region indicates some violent struggles. The best we can say here is that warfare was a factor but probably not the underlying factor.

(Woman S) What about a plague? After all, there were diseases in Europe around that time that really wiped out a large part of the population.

(Woman P) That's a possibility. But again, there's no strong evidence to support that theory. Myself, I'm coming around to the idea that there was some kind of environmental disaster which affected the area. We now know that the Anasazi were not living harmoniously with nature. That's a rather naïve viewpoint. They exploited their environment like most human groups. Research has shown, in fact, that the Anasazi destroyed most of the larger animals through over-hunting. So they were forced to hunt for smaller game animals. That would have meant less efficient use of their time. In other words, they would have found less food for the same amount of work. And another thing, they had to collect wood for cooking and for heat, and so the surrounding areas became deforested. Both of these environmental causes must have played a large part in their eventual disappearance from the region. OK. So this is my thinking about this mystery. I'd have to say, though, that the general consensus today appears to be that there was a combination of factors, including environmental ones, that led to the abandonment of the communities in the region, and eventually to the decline of the whole culture.

Now get ready to answer the questions. You may use your notes to help you answer.

24. What is the main topic of the lecture?
25. What does the professor imply about the term *Anasazi*?
26. According to the professor, why did the Anasazi start making pottery?
27. Why does the professor say this: Where was I? Oh, yeah. The buildings.
28. Based on the information in the discussion, indicate whether each of the following is accepted by most scientists.
29. What does the professor imply about the Anasazi's use of their environment?

### Questions 30–34

Listen to part of a conversation between two students.

(Man S) OK, so do you want to review that legal terminology that Dr. Bryant went over in class?

(Woman S) OK. Yeah. But I was going to meet my roommate at the Union. We planned to jog around campus for some exercise. You can come along too if you feel up to it.

(Man S) Great. Thanks. I'd like that. But shouldn't we review the terms first?

(Woman S) OK. We've got a few minutes I guess. So what was the first one?

(Man S) It's *burden of proof*. What do you remember about that?

(Woman S) OK. Well, this one has to do with the fact that in law cases, every person is presumed to be innocent until they're proven guilty, right?

(Man S) Well, yeah. But what else? What's the important thing?

(Woman S) And, it means that the party that brings the case, that's the plaintiff, has to prove the allegations in order to win the case. OK?

(Man S) OK. And the defendant, that's the person who is being accused, has the right, or the opportunity, to disprove the accusation. That is, the defendant can show, or try to show, that the accusation is false and that the evidence used against him or her is weak.

(Woman S) So, that means that the burden of proof is always – always rests on the party, the person making the accusation, because the defendant is presumed innocent and so has to be proven guilty. So in a criminal case it's up to the prosecutor to convince the judge or the jury that the allegations are true. The burden of proof rests with him or her.

(Man S) The prosecutor, that's the government lawyer, right?

(Woman S) Usually, but as far as I can remember anyone can act as a prosecutor except in certain types of cases. Anyway, what was the next term you wanted to review?

(Man S) Well, what exactly is meant by *circumstantial evidence*?

(Woman S) OK. Circumstantial evidence. Lemme think. Yeah, well, that's like *indirect evidence*.

(Man S) Yeah, OK. So it kind of implies someone could have been involved in a crime. It's not – it doesn't in itself directly prove who did it.

(Woman S) So what about evidence from a witness who says they heard or saw a person commit the crime?

(Man S) No, that's not circumstantial. That's called *direct evidence*. It has to be more indirect than that. Just about everything that is not direct is called circumstantial.

(Woman S) Remember Dr. Bryant gave an example. What was it now?

(Man S) Yeah, OK. He gave a couple of examples. One was, suppose a man earns a certain, known salary and then makes some big purchases way beyond what someone on his salary could afford. He might buy a luxury yacht or a new beachfront apartment or something. And this happens around the time he is alleged to have stolen a large sum of money. This is not direct proof, but it is circumstantial. It would help build a case against him.

(Woman S) Right. And it could be used in a court of law, right?

(Man S) Yeah, right. Unless the connection is really weak. Didn't Dr. Bryant say that, in fact, most convictions in court are based on circumstantial evidence?

(Woman S) Yeah, I remember him saying that. Most people have the opposite idea, maybe from watching too many TV dramas. But in real life, circumstantial evidence is considered very persuasive. A strong circumstantial case is often better than an eyewitness description.

Now get ready to answer the questions. You may use your notes to help you answer.

30. What are the students mainly discussing?
31. Why does the woman say this: But I was going to meet my roommate at the Union. We planned to jog around campus for some exercise.
32. According to the conversation, which of the following statements are correct?
33. What can be inferred about the value of circumstantial evidence for prosecutors?
34. According to the conversation, what do most people think about circumstantial evidence?

## PRACTICE TEST 1: Speaking Section

### 1. Please listen carefully.

Describe a skill you have that will be important for your success in the modern world, and explain why this skill is so important. Include details and examples to support your explanation.

You may begin to prepare your response after the beep. [beep]

Please begin speaking after the beep. [beep]

### 2. Please listen carefully.

Some people work for a business, and some people work in their own business. Which would you prefer to do and why? Include details and examples in your explanation.

You may begin to prepare your response after the beep. [beep]

Please begin speaking after the beep. [beep]

### 3. Please listen carefully.

The University of the Rockies Financial Aid Office has posted information about work-study grants. You will have 45 seconds to read the announcement. Begin reading now.

Now listen to two students as they discuss the announcement.

(Woman S) Hey, do you know anything about the work-study program?

(Man S) A bit. You know that guy Jim? In our philosophy class? Well, he got a grant. You have to fill in papers about your financial needs, and then you're allotted an amount of money that you can earn and told how much you get per hour.

(Woman S) Oh, do you know how much he was paid?

(Man S) He was allotted the full amount. You know, Jim's from a big family, so money's tight.

(Woman S) Uh-huh. Hey, I heard there's an opening in the Astronomy Department, . . . that would give me some good job experience. You applying for something?

(Man S) Well, it'd be nice to get some job experience, and be able to work on campus, but I'm not eligible. You have to really need financial aid, and between my summer job and my parents helping me out, well . . .

(Woman S) Oh, you know what, I earned some money last summer. I wonder if I'll qualify.

(Man S) Maybe not for the full amount. Why don't you just go fill out the financial needs assessment form and find out? No harm in trying.

Now get ready to answer the question.

The woman expresses her desire for a work-study job. State the requirements necessary for taking part in the program and explain the advantages discussed.

You may begin to prepare your response after the beep. [beep]

Please begin speaking after the beep. [beep]

### 4. Please listen carefully.

Read the passage about symbiotic relationships. You have 45 seconds to read the passage. Begin reading now. Now listen to part of a lecture on this topic in a biology class.

(Man P) We've been discussing the three symbiotic relationships between species: mutualism, in which both organisms benefit; parasitism, in which one benefits and the other is harmed; and

commensalism, where one benefits while neither benefiting nor harming the other. Now, of course, these relationships are not always clear cut. For example, there is a plant called the bee orchid. Its flowers look like female bees – to the male bee anyway. The bee orchid tricks the male bee into mating with the flower, thus pollinating it. However, we don't know if, in fact, the relationship between this particular plant and the bee is mutualism, parasitism, or commensalism.

Sometimes the relationship actually changes. Let me give you some examples. We have bacteria on our skin, for instance. These colonies of bacteria don't harm us. So we can say that at this point the relationship is commensal. But what happens if we get burned? The bacteria on our skin can take advantage of the burn and cause infections. The bacteria turn into what we call an *opportunistic pathogen*. A pathogen, by the way, is parasitic.

Here's another example. Shrimp and crabs take advantage of colonies of coral, which provide a nice home. They neither harm nor benefit the coral colonies. So the relationship here is also commensal. But sometimes a coral-eating sea star attacks the coral. At that point, the shrimp and crabs defend the coral. Without these creatures to protect it, the coral would be eaten. So in this case the relationship becomes mutual. The coral and its defenders are now in a relationship in which both organisms benefit.

Now get ready to answer the question.

The professor gives two examples of symbiotic relationships that change. Explain both examples in terms of what the original symbiotic relationship was and what symbiotic relationship it became.

You may begin to prepare your response after the beep.  
[beep]

Please begin speaking after the beep. [beep]

#### 5. Please listen carefully.

Listen to a conversation between two students.

(Woman S) Hey, Steve, I heard you've moved out of the dorms.

(Man S) Well, no. I haven't. I'd like to, but . . .

(Woman S) Yeah? What's the problem?

(Man S) Well, the places close to campus are expensive and the ones I can afford are too far to walk. So I've got to figure out what transportation's going to cost me.

(Woman S) Buses and trains aren't that expensive, are they?

(Man S) Nah. The problem is schedules. Sometimes I have to stay on campus late, after things stop running, so I'd have to take a taxi or get a car.

(Woman S) What's wrong with getting a car? Gets you where you want to go at your convenience.

(Man S) A car? In the city? No thanks. Besides, insurance rates are high for my age group and, you know, other costs, maintenance, parking . . .

(Woman S) That's a point for being close to campus. Also, it's easy to get home if you forget something.

(Man S) Yeah, and sometimes I like to take an afternoon nap, 'cause of the late hours I'm in the lab. It'd be nice to be able to do that.

(Woman S) Uh-huh. Can't if you live out in some suburb. Maybe it's best to stay in the dorms, right on campus.

(Man S) Yeah. Well, one of my complaints about the dorms is they're too noisy in the daytime. Can't sleep 'cause everyone's got their music going.

(Woman S) You get your meals and don't have to clean up afterwards.

(Man S) I think I could save a lot, doing my own shopping.

(Woman S) So what's the difference in costs of . . . a dorm, a place near campus, one on the train line or, oh, on the bus route?

(Man S) I don't know.

(Woman S) You don't know? Well, if I were you, I'd get all the figures and make a, you know, hypothetical budget. A budget showing you taking a taxi three times a week, and a budget for the costs of a car . . . And just put all the possibilities on paper. I think you'd make a better decision doing that and also make a list of advantages and disadvantages.

Now get ready to answer the question.

The students discuss the man's options. Describe his problem. Then state which of the options you prefer and explain why.

You may begin to prepare your response after the beep.  
[beep]

Please begin speaking after the beep. [beep]

#### 6. Please listen carefully.

Listen to part of a lecture in a cultural studies class.

(Woman P) Although the entertainment industry is concerned with telling a good story, it has had a profound effect on people's conceptions and misconceptions of the world around them. Let me give you an example. There are many films and TV programs in which a serious crime takes place and a police detective solves or maybe doesn't solve the crime. It appears that these fictional crimes – added to news reports of real crime – cause viewers' perception of the rate of criminal behavior to outrank, to exaggerate reality. In other words, the actual, let's say, murder rate is probably well below people's perception of the murder rate.

I've just been talking about misconceptions of crime rates, but there are other misconceptions, which may be more harmful. Now, I'm not saying that believing in an exaggerated level of criminality, say a high murder rate, isn't harmful. It could cause a lot of people undue stress, for example, but what I mean is misconceptions about race and gender stereotypes – a person of a different race or a female being typecast into certain roles. Think about, for example, the portrayal of a person in a wheelchair. He or she is either portrayed as overcoming incredible odds to do heroic deeds or, on the other hand, being a helpless victim. Does this promote understanding or misconceptions?

In the movies, doctors perform miracles, lawyers win cases, and crime scene investigators find the evidence. People in these actual professions often get clients with unreasonable expectations. Professional people comment that the reality of their daily routine – their job – is seldom like that portrayed in the media. Students are sometimes disillusioned about their career choice because the job seemed much more interesting in the television program than in reality.

Unfortunately, we make these judgmental mistakes about our own society knowing full well the existence of the fantasy created by the media industry.

Now get ready to answer the question.

Using points and examples from the lecture, explain how the media has contributed to misconceptions about the real world.

You may begin to prepare your response after the beep. [beep]

Please begin speaking after the beep. [beep]

## PRACTICE TEST 1: Writing Section

Now listen to part of a lecture on the topic you just read about.

(Man P) Often in medical research, new evidence makes us take a fresh look at causation. Now, the immediate causes of asthma are not in doubt, but there is some new thinking about the fundamental causes of this condition. It's been said that after an asthma attack, the airways of the sufferer return to normal. But what about in between attacks? Until recently, it was assumed that bronchial function returned to normal until the onset of a new attack.

But it has become clear in some asthmatics that the airways can become permanently narrowed and the walls of the airways thickened. These

abnormalities in asthmatics' airways are due to what is called "remodeling." It used to be thought that remodeling was the result of long-term inflammation, a kind of scarring from repeated episodes over a long period.

But more recently, it has been suggested that remodeling of the tubes is not only a result of this scarring, but also may be the primary cause of the condition. In other words, remodeling may be fundamental to the disease. This idea has gained acceptability recently due to evidence from studies of young children. This research shows that many asthmatic children already have remodeled airways. So, according to this view, remodeling is not just a consequence of asthma, it may also be an underlying cause.

So, what causes the remodeling in the first place? Certainly, genetic factors play a role, but it seems that a combination of genetics and the environment are to blame. In other words, certain individuals may develop remodeled, vulnerable airways due to the environment affecting them even before birth.

Summarize the points made in the lecture you just heard, explaining how they cast doubt on the points made in the reading.

## PRACTICE TEST 2: Listening Section

### Questions 1–6

Listen to part of a lecture in a biology class.

(Man P) OK, so today we're going to continue with a discussion about the aquatic environment. Specifically, I'm interested here in some of the adaptations that make survival possible in estuary conditions. Now, as you know, the thing about the estuarine environment is that because the tide washes in and out twice a day, the salinity, that is, the amount or proportion of salt in the water, varies or can vary considerably throughout any 24-hour period. When the tide is out, the water may be near freshwater levels and when the tide is in, the levels of salt may be more like seawater. When the water is in between seawater and freshwater, it's called "brackish" water. By this term, we mean water that is typically less than 30 parts per thousand of salt. So, plants and animals that live in this environment must be able to adapt to these constant changes in the saltiness of the estuary waters.

So, what are the kinds of adaptations that estuarine organisms have developed? Well, the most important are either physiological and/or

behavioral. Regarding the first, the physiological, the bodily adaptations tend to be associated with maintaining the right balance of salinity within the body. Some organisms, generally known as osmoregulators, control their internal concentrations of water salinity when the external environment changes. This word, of course, refers to osmosis, which . . . you don't need me to define osmosis, do you? Good, OK. Usually this kind of creature is less permeable to water and salt.

Crabs are a very good example. Crabs that live in the estuarine environment keep out both water and salt with their hard shells. But, in addition, they may have internal organs and cell functions, which can regulate salt intake and excretion. Also, certain species of fish, which adjust to differing saline conditions have specialized kidneys, gills, and skin. Specialized kidneys and gills are able to switch between excreting more or less water and also between absorbing more or less salt, as conditions permit. So, the combined properties of gills, kidneys, and an impermeable skin allow them to live in conditions of varying salinity.

Plants as well as animals may use osmoregulation to survive since, in saline habitats, salt levels can reach deadly levels. A common species of grass known as smooth cordgrass has adapted through its complex root system. These roots are able to remove salts from the water they take in. Such plants can also expel salt through their leaves, and in some species, they can also shed leaves that become loaded with excess salt.

OK. So, what about the behavioral factors that help creatures exist in the estuary? Well, a common adaptation, especially among invertebrates, that is, creatures without backbones, is the ability to dig or burrow into the soft mud. Of course, this helps them avoid being eaten by predators such as birds or fish. But it's also an important advantage for species that cannot osmoregulate – cannot control the concentration of salt solution in their bodies. This is because below the surface of the mud the concentration of salt is less than in the open water above – and what's more, the temperature is less variable, which is also beneficial for creatures that don't tolerate changes of temperature. On the other hand, creatures such as oysters and clams don't like to have too low a level of salt. So these organisms simply close their shells tightly when the level of salt becomes too low, during low tides. At this point, they stop feeding and stop breathing through their gills. When the high tide returns and the oxygen and salt levels increase, they open their shells and feed and breathe oxygen again.

Other creatures are more mobile, and this too, by the way, is a behavioral adaptation. They can move

upstream or downstream as conditions require.

Certain crabs live in low salt areas because they can osmoregulate, but their young may not have developed this ability. So during breeding season, such species may move to areas in the sea with higher levels of saline. In the blue crab, for example, the females migrate to water of high salinity to hatch their young. Then the new generation of crabs moves back to fresher water as they develop into adults. So, does that make sense?

Now get ready to answer the questions. You may use your notes to help you answer.

1. What is the lecture mainly about?
2. Listen again to part of the lecture. Then answer the question.

(Man P) Some organisms, generally known as osmoregulators, control their internal concentrations of water salinity when the external environment changes. This word, of course, refers to osmosis, which . . . you don't need me to define osmosis, do you?

What does the professor imply when he says this: This word, of course, refers to osmosis, which . . . you don't need me to define osmosis, do you?

3. What two adaptations are mentioned that allow crabs to survive in the estuary environment?
4. Listen again to part of the lecture. Then answer the question.

(Man P) Certain crabs live in low salt areas because they can osmoregulate, but their young may not have developed this ability. So during breeding season, such species may move to areas in the sea with higher levels of saline. In the blue crab, for example, the females migrate to water of high salinity to hatch their young. Then the new generation of crabs moves back to fresher water as they develop into adults. So, does that make sense?

Why does the professor say this: So, does that make sense?

5. Indicate whether each word or phrase below describes a physiological adaptation or behavioral adaptation.
6. The adaptations of which estuarine creature are NOT discussed in the lecture?

### Questions 7–11

Listen to a conversation between a student and a professor.

(Man S) Professor James?

(Woman P) Yes.

(Man S) I was told that I should talk to you about . . . well, I'm interested in switching majors, and I wanted some advice.

(Woman P) OK. So I assume you're switching to a degree in linguistics. Could you give me some background on your previous studies?

(Man S) Yeah, I was studying speech pathology, specializing in phonological disorders. But I went to Peru last summer, and, well, I ran out of money, and to pay for my expenses, I did some English teaching, and I really enjoyed it.

(Woman P) OK, um, so are you thinking about a degree in applied linguistics?

(Man S) Well, yeah, you know, with my background in phonology, I was able to help people improve their pronunciation, and I thought that perhaps I'd be more interested in that aspect of language.

(Woman P) OK. Well, some of your courses will probably fulfill linguistic requirements, and many of them will be advantageous for you as far as the knowledge is concerned, but not necessarily for course transfer.

(Man S) OK.

(Woman P) Let me find our, oh, here it is. This is an overview of the course requirements. Do you have a copy of your transcripts with you?

(Man S) Uh, yeah. Here you go.

(Woman P) Thank you. OK. Hmm, well, besides the courses you've had in phonology, your Language Development course will transfer . . . Sociolinguistics and Psycholinguistics, and of course, all your general electives.

(Man S) Excuse me. Could you hang on a second? I want to mark the courses that will transfer.

(Woman P) Here's a pen.

(Man S) Oh, thank you. OK . . . Language Development, Sociolinguistics, Psycholinguistics . . . OK.

(Woman P) Now, the Linguistics Department requires two foreign languages. I see you have Spanish. The second language should be one that is not so commonly used.

(Man S) What about the courses I've taken in American Sign Language? We had to be fluent in signing in order to communicate with people who have hearing disabilities.

(Woman P) I'm not sure if we can count your sign language courses, and at this point I'd rather err on the side of caution and tell you that it doesn't fulfill the requirement.

(Man S) That seems reasonable. So Spanish will transfer – and I'll put a question mark beside the American Sign Language courses.

(Woman P) Hmm. Well, just at a glance, I would say that this change of major may only set you back by a semester or two.

(Man S) Are you calculating that based on the average number of classes that students take per term?

(Woman P) Well, yes. Would graduating later be a problem?

(Man S) It might be.

(Woman P) I suppose that if you were to carry a heavier course load, you might be able to finish on schedule. But since some of the higher level courses have prerequisites, your taking on more courses per semester may not necessarily enable you to graduate as soon as you'd like.

(Man S) Well, I need to look into all options. I might be able to get more funding.

(Woman P) OK. Well, why don't you take the overview I gave you and continue crossing out the courses you won't have to take. Then check the courses that you must take and see which ones have prerequisites – and which ones you could take at the same time. Circle the ones you have questions about, and feel free to come back to see me during my office hours.

(Man S) OK. I guess, I'll have to see if I can get another grant or a loan or something as well. Do I need to make an appointment to see you?

(Woman P) No, just show up during my office hours. And in the meantime, I'll try to find out if the American Sign Language course can be used to fulfill your language requirement.

(Man S) OK. Thank you. Oh, here's your pen.

(Woman P) Thank you.

Now get ready to answer the questions. You may use your notes to help you answer.

7. Why does the student go to see the professor?

8. Listen again to part of the conversation. Then answer the question.

(Woman P) OK. So I assume you're switching to a degree in linguistics. Could you give me some background on your previous studies?

What can be inferred about the professor?

9. Why does the student want to change degree programs?

10. Listen again to part of the conversation. Then answer the question.

(Woman P) I'm not sure if we can count your sign language courses, and at this point I'd rather err on the side of caution and tell you that it doesn't fulfill the requirement.

Why does the professor say this: . . . at this point I'd rather err on the side of caution . . .

11. What can be inferred about the student?

### Questions 12–17

Listen to a discussion in an education class.

(Man P) OK, up until now, we've been discussing the questions we as teachers construct for our students in order to encourage their thought process.

But today, I want to look at the issue of asking questions from a different direction. Now, young children are full of questions. But once they're in the school system, the role reverses and the teacher becomes the primary questioner. Now, according to various studies, teachers ask between 300 and 400 questions a day in the average elementary school. Unfortunately, as children get older, they stop asking their own questions. By the time students are in a university . . . Well, last week I walked out of the Elementary Literacy course I teach, feeling kind of discouraged because not one of my students had asked me a question. Did they know it all, and consequently, was I wasting my time and theirs? Were they so lost that they found it impossible to ask questions? Was I such a great lecturer that they understood everything perfectly? What is it that keeps students from asking questions? Anybody? Annie.

(Woman S1) Well, you know, I think it's hard for us to admit in front of our classmates that we don't understand something. I mean, nobody wants to feel stupid.

(Man P) So in other words, you look around at your classmates and think, "Everybody else understands this, so I must be a real idiot"?

(Woman S1) Well, sometimes I think that, even though I know that if I don't understand a concept, well, probably several of my classmates don't understand it either.

(Man P) OK. What Annie is describing is the primary negative pressure that we as teachers need to constantly try to help students overcome. So, let me write that on the board: "negative pressures." And for item number one, I'll write "the fear of appearing stupid." OK. Can you think of other factors that keep students from asking questions?

(Man S) Well, maybe this is another aspect of feeling stupid, but I think class size counts. This is a small class, and we all know each other. I don't feel as intimidated asking a question in front of a small group of people I trust.

(Woman S1) You know, I can see why Tony might think class size is relevant to feeling stupid, but I think there's more to it than that. I mean . . . well, when you ask a question in one of the large lecture halls,

sometimes you have to repeat it several times 'cause the professor can't hear you . . . and, well, that is embarrassing.

(Man S) Yeah, and sometimes a question is asked that the professor heard, but the students in the back of the class couldn't hear and so the professor's answer is meaningless.

(Man P) OK. So, in other words, large class size discourages meaningful dialog, both in terms of the room size and the number of students. I'm going to write this as "large class size pressure." Lisa?

(Woman S2) It's not just large class sizes that make one feel uncomfortable. Sometimes it's more difficult to ask a question, just because everyone knows everyone else. But lost in the crowd, it might, in fact, be easier to talk.

(Man P) OK. I can see that. So let me erase "large." There . . . "class size pressure." Anything more to add?

(Woman S2) Time pressure.

(Man P) "Time pressure"? Can you expand on that?

(Woman S2) Professor Clarkson. [laughter]

(Man P) Professor Clarkson? I seem to have missed the joke.

(Man S) Professor Clarkson is . . . sort of . . . the epitome of time pressure.

(Woman S2) Yeah, he dashes through his lectures like, well as if he were trying to cram the entire field of child development into one class session.

(Woman S1) Yeah, it's like he doesn't even stop to breathe. I feel intimidated about stopping his lecture with a mere question.

(Man P) OK. I think we have two negative pressures going on here. "Time pressure," as Lisa said, and personality. A teacher's personality seems to deter students from asking questions.

(Woman S2) It's not exactly personality. I mean Professor Clarkson is a really nice man and a good lecturer.

(Man P) OK, but isn't it the signal he sends of being in a hurry that keeps you from asking questions?

(Woman S2) Yes, but . . . Well, when someone does get the courage to ask Professor Clarkson a question, he never gives the impression that his time is being wasted. I think the type of teacher personality that keeps students from asking questions is . . . well, sometimes a teacher makes a sarcastic joke at the student's expense.

(Man P) OK. So you do agree that personality may keep students from asking questions, even though you don't think it applies to Professor Clarkson. So "personality." Does anyone have any more to add? No? OK. So now I'd like you to split into groups of



three. In your groups, I'd like you to discuss possible ways teachers can promote question-asking in the classroom. Keep in mind the negative pressures we've discussed, oh, and by the way, there are other pressures that were not mentioned, but I think you'll come up with them in your discussions. I'll ask you to share your thoughts in, say, 20 minutes.

Now get ready to answer the questions. You may use your notes to help you answer.

12. What is the discussion mainly about?
13. Why does the professor say this: . . . Did they know it all, and consequently, was I wasting my time and theirs? Were they so lost that they found it impossible to ask questions? Was I such a great lecturer that they understood everything perfectly?
14. Listen again to part of the discussion. Then answer the question.

[Man S] Well, maybe this is another aspect of feeling stupid, but I think class size counts. This is a small class, and we all know each other. I don't feel as intimidated asking a question in front of a small group of people I trust.

[Woman S1] You know, I can see why Tony might think class size is relevant to feeling stupid, but I think there's more to it than that. I mean . . . well, when you ask a question in one of the large lecture halls, sometimes you have to repeat it several times 'cause the professor can't hear you . . . and, well, that is embarrassing.

What can be inferred about the students?

15. Why does Lisa mention Professor Clarkson?
16. In the discussion, the professor elicits different reasons why students don't ask questions. Indicate whether each of the following is one of the discussed fears.
17. Listen again to part of the discussion. Then answer the question.

[Man P] . . . In your groups, I'd like you to discuss possible ways teachers can promote question-asking in the classroom. Keep in mind the negative pressures we've discussed, oh, and by the way, there are other pressures that were not mentioned, but I think you will come up with them in your discussions.

Why does the professor say this: . . . by the way, there are other pressures that were not mentioned . . .

### Questions 18–23

Listen to a lecture in a history of ideas class.

[Woman P] I want to talk about what was once a very popular way of studying character based on the shape of the skull. This theory, what was known

as "phrenology," was started by a German doctor named Franz Gall around the year 1800. What Gall proposed was that it was possible to determine character by feeling or "reading" the bumps on a person's head. I want to discuss here the basic principles of this theory, what it claimed to be able to do – and then why it became unfashionable and disappeared. Finally, I want to ask whether it contributed anything to our knowledge about the brain.

So, what were some of the important features of phrenology? Gall said that the brain is the organ of the mind; that our talents and mental abilities stem from the brain. Furthermore, he said that the brain is composed of several distinct organs – and that each of the brain's faculties has a separate organ in a separate part of the brain. What's more, the size of any organ is a reflection of its power – and hence importance in the makeup of an individual's character. He also claimed that the overall shape of the brain is determined by the development of the organs which it contains. He argued that the outside skull takes on the shape of the brain which it encloses – and therefore the surface of the skull can be taken as an accurate reflection of the shape of the brain and thus of a person's psychological tendencies and aptitudes.

So how did it work? Well, a phrenologist would run his fingers over a person's head, examining every bump or indentation. So, for example, a protuberance – a bump, in say, the forehead – would indicate that the person had a pronounced tendency to be benevolent, since the organ of benevolence was supposedly in that location. An indentation somewhere else would mean a weakly developed attribute, say a poor memory.

Now, these things were the basic ideas of phrenology as practiced throughout the early nineteenth century. So widespread was this theory that many people would consult phrenologists before, oh, for example, hiring an employee, or even, say, finding a marriage partner. Proponents also tried to determine a person's predisposition to crime or dishonesty, and unfortunately, at one stage some scientists tried to justify notions such as criminal tendency or racial superiority through skull readings. At the peak of its popularity, phrenology was widely practiced in both North America and Europe. So, you're probably thinking all this is really bizarre, right? Well, so did some people back then! In truth there had always been dissenting voices. The theory was made fun of and criticized by various individuals from its earliest appearance. So what happened to phrenology? Well, educated people lost interest as more academic approaches to psychology became common. It was noticed

by some that phrenologists tended to seek confirmation for their hypotheses – while ignoring counterexamples. Suppose a person was said after a reading to have a marked tendency towards, let's say, honesty, but then exhibited strongly dishonest personality traits; it would be clear that the analysis was not accurate. Phrenologists tended to dogmatically reject or explain away falsifying evidence, such as this example shows.

Have we learned anything from this theory?

Well, I would like to argue that there was some value in it. First of all, it was an important step historically to emphasize that the brain was the organ of the mind, that thinking and feeling were done through the brain. Furthermore, phrenologists were important in arguing that brain functions were localized – that some parts of the brain were specialized for certain abilities. Nowadays, of course, we know that this is only partly true. Some parts of the brain appear to be very much involved with certain functions, whereas many abilities seem to be distributed throughout the brain rather than in one location. So, to sum up, we can say that phrenology was of some scientific value although many, if not most, of its ideas have been superseded.

Now get ready to answer the questions. You may use your notes to help you answer.

18. What is the lecture mainly about?

19. What points does the professor make about Gall's phrenological theory?

20. Listen again to part of the lecture. Then answer the question.

(Man P) At the peak of its popularity, phrenology was widely practiced in both North America and Europe. So, you're probably thinking all this is really bizarre, right?

Why does the professor say this: So, you're probably thinking all this is really bizarre, right?

21. According to the professor, how did phrenologists approach evidence?

22. What does the professor imply about phrenology?

23. According to the professor, which of the following modern beliefs was contributed to by phrenology?

### Questions 24–29

Listen to a discussion in an astronomy class.

(Man P) Today I'd like to discuss an interesting research area for space scientists. So, I think most of you have heard of the term *terraforming*. For those of you who haven't, let me just repeat that terraforming is the name given to the process of transforming a planet from its current conditions

into a planet something like the Earth. That is, changing the temperature and the atmospheric conditions so that it is livable for humans and other life forms found on Earth. I know this sounds a lot like science fiction. But a lot of scientists are beginning to take this idea seriously. So, why would we want to do this, go to such an immense expenditure in terms of money, resources, time . . .

(Man S) Excuse me, Professor, are you serious? What a waste. That's assuming it's possible.

(Woman S) Well, it could be very useful in the future if the population of the world got so out of hand that the resources on Earth couldn't support the number of people here. I think some people would say that we've already reached that point.

(Man P) OK. Yeah. The pressure on resources of a rapidly expanding population has always forced people to migrate in search of new territory. We could say that human migrations have, historically and even prehistorically, occurred when populations have grown too much for the available space. Think of the migrations to the Americas from Europe and elsewhere.

But let's get back to the problem of terraforming. How could this possibly be done? Let's take Mars. This is the planet most scientists think of when talking about terraforming. It's certainly the best candidate, at least in our solar system. The other planets are much less suitable for all kinds of reasons. At least Mars has water in ice form and a solid surface. But, remember, it has a very thin atmosphere, made up largely of carbon dioxide and almost no oxygen, its temperature averages about -60 degrees Celsius, and as far as we can tell, it's completely lifeless.

(Man S) So wait a minute. You're saying we could change this into an Earth-like environment? That's a total waste of resources. What about using that money to improve the Earth? And don't we have to ask ourselves whether we have the right to tamper with unspoiled environments?

(Woman S) I don't agree with you there. I mean, if we can do it, it would be worth it to have so much more living space, and no one actually lives there, on Mars. We wouldn't be spoiling it for any life form. Mars is lifeless. If we could turn it into a habitable planet, I think it's worth a shot.

(Man P) OK. There are certainly ethical considerations. And they are sure to lead to heated debate. But let's just think about the practicalities for now. What kind of technology could make this possible anyway? Several suggestions have been made on how we could raise the temperature. One suggestion is that we put up huge orbital mirrors to reflect sunlight onto the surface. Another one

is that asteroids, containing great amounts of ammonia, could be forced to smash into the planet. Ammonia is a greenhouse gas, so that would also have the effect of raising the temperature. Those are just two of the ideas which have been discussed. Now, once the temperature has been raised, the ice at the poles would melt – and the water could be used to sustain life. At first this could be plant life introduced from Earth. Finally, after perhaps thousands of years, the plants would have given off enough oxygen to transform the atmosphere into one in which animals and eventually humans could survive.

Now get ready to answer the questions. You may use your notes to help you answer.

24. What is the discussion mainly about?
25. Why does the professor say this: I know this sounds a lot like science fiction.
26. Why does the professor mention the migration of Europeans to the Americas?
27. According to the professor, why is Mars the planet that scientists want to terraform?
28. Listen again to part of the discussion. Then answer the question.

(Man P) OK. There are certainly ethical considerations. And they are sure to lead to heated debate. But let's just think about the practicalities for now.

Why does the professor say this: But let's just think about the practicalities for now.

29. Which of the following is NOT mentioned as a method of terraforming Mars?

### Questions 30–34

Listen to part of a conversation between a student and a research coordinator.

(Man) Yes. Can I help you?

(Woman S) Uh, yes, I'm here about that announcement on the bulletin board about your needing participants in an experiment.

(Man) OK. We have several doctoral projects needing participants. Which one in particular are you interested in?

(Woman S) Oh, I didn't realize there was more than one. The one I saw was about a food experiment . . . one about how food affects mood.

(Man) Oh, that's Kenny's experiment. Yeah, can I ask you some questions . . . personal ones . . . to see if you meet the requirements?

(Woman S) Sure, why not.

(Man) First, are you diabetic or do you have any allergies to any common foods or food additives?

(Woman S) No. Not that I know of.

(Man) OK. Are you currently on any type of diet or taking any medication?

(Woman S) No. These are the questions on the notice that's on the bulletin board, aren't they?

(Man) Yeah, but we have to go through all of them with volunteers because some people don't read the notices carefully and really aren't suitable for the experiment. We also need you to sign an agreement of participation stating that you've understood all the requirements and are willing to take part in the study.

(Woman S) OK. That makes sense.

(Man) Are you suffering from any cold, flu, or respiratory problems?

(Woman S) Well, not this week.

(Man) OK, if you do come down with a cold next week while the experiment's going on, we would like you to notify us and drop out.

(Woman S) OK. That sounds reasonable.

(Man) Have you ever been diagnosed with an eating disorder?

(Woman S) No.

(Man) OK. Now, let me explain what we need you to do. You're not supposed to eat anything in the morning before coming into the lab. That's the Pharmacology Lab, on the second floor of the red brick building behind the Student Center. So, every morning all next week you're to come to the lab for breakfast.

(Woman S) Great.

(Man) And you are expected to eat it, whether you like the breakfast or not.

(Woman S) It won't be too strange, will it? Like pickled onions or grasshoppers?

(Man) No, there won't be anything like that. Now, where was I?

(Woman S) Eating all my breakfast whether I like it or not.

(Man) Oh. Right. Breakfast will consist of the normal things, like eggs or cereal – different each day though. After breakfast, you'll be given some tests that look at your responses to certain interactive stimuli on a computer. Then you're free to go, but we need you back about two hours later for a snack. And you're not supposed to have any outside snacks before coming back for our snack. The snacks are yogurt or nuts, candy bars, potato chips . . . typical snacks really, followed by some more interactive tests.

(Woman S) OK. Sounds fun.

(Man) Yeah, I've volunteered for it myself. Now, let's look at the schedule. It's very important that you can make all the sessions.

(Woman S) Does it have to be exactly the same time every morning? That could be a problem for me.

(Man) No. Uh, well, uh . . . yeah. I mean you can have breakfast at a different time every day, but the snack has to be two hours after the breakfast. We've tried to set times so participants could have breakfast before going off to class and get back for the snack.

(Woman S) Oh, OK. Yes, I can fit into your schedule times every day.

(Man) Great. Can you mark the times that you'll be coming on this schedule and, oh, sign this consent form?

(Woman S) Sure.

Now get ready to answer the questions. You may use your notes to help you answer.

30. Why has the student gone to see the research coordinator?

31. Why does the research coordinator ask the student personal questions?

32. Listen again to part of the conversation. Then answer the question.

(Man) Are you suffering from any cold, flu, or respiratory problems?

(Woman S) Well, not this week.

Why does the student say this: Well, not this week.

33. Which of the following topics does the research coordinator NOT ask the student about?

34. What example does the research coordinator give of the breakfast that will be provided?

video game players are wasting their time. Which view do you agree with and why? Include details and examples in your explanation.

You may begin to prepare your response after the beep. [beep]

Please begin speaking after the beep. [beep]

3. Please listen carefully.

The University of the Rockies newspaper has published a letter to the editor concerning a university policy. Read the letter about the hiring of temporary instructors. You will have 45 seconds to read the letter. Begin reading now.

Now listen to two students as they discuss the issue brought up in the letter.

(Woman S) Hmm, I thought university teachers were well paid. I mean they have to have advanced degrees and be experienced to teach here, don't they?

(Man S) Yeah, but I've heard that over 60 percent of our teachers are temporary.

(Woman S) Really? Well, I don't think my education is suffering because of it. Do you?

(Man S) Well, it's kind of hard to know, isn't it? I mean part-timers have to hold down another job, so they can't concentrate on course development.

(Woman S) That's true, but I still think my teachers are pretty well prepared.

(Man S) Yeah, me too. But, there are other drawbacks to having part-time teachers, too. Like, well, I needed to see my literature instructor, but arranging a time was difficult 'cause she also works at the city library, and then our meeting wasn't private 'cause temporary staff members share offices.

(Woman S) Really?

(Man S) Uh-huh. And they don't have a voice in departmental issues or access to university funding.

(Woman S) Wow. I can't imagine they feel any loyalty to the university at all.

Now get ready to answer the question.

The man expresses his opinion on the issue of temporary instructors. State his opinion and explain the reasons he gives for that opinion.

You may begin to prepare your response after the beep. [beep]

Please begin speaking after the beep. [beep]

4. Please listen carefully.

Read the passage about imprinting in baby birds. You have 45 seconds to read the passage. Begin reading now.

Now listen to part of a lecture on this topic in an ecology class.

---

## PRACTICE TEST 2: Speaking Section

1. Please listen carefully.

A good teacher should have some special qualities. What qualities do you think are necessary for a good teacher to have and why? Include details and examples in your explanation.

You may begin to prepare your response after the beep. [beep]

Please begin speaking after the beep. [beep]

2. Please listen carefully.

Some people believe that people who play video games are learning important life skills. Others believe that

(Woman P) So, we've been looking at animal behavior and especially the process of imprinting in young birds. Of course, the first thing a young gosling sees when it hatches is its mother. Now, birds that walk almost immediately after hatching, as opposed to those who are helpless and can't get around for several weeks, have to follow their mother for their own safety, for their survival. It seems that walking birds will follow just about anything that moves and has eyes. In fact, we've seen that they will easily imprint on human beings. But some researchers have gone even further. One set of experiments, for example, has found that young geese will imprint on inanimate objects, such as plastic milk bottles that are attached to a moving object like an electric toy train.

Now, it seems that in some species of birds, and this includes nesting birds, which are helpless after hatching, imprinting can affect later learning and social behavior, for example, territorial behavior. If a human takes on the role of the parent, the bird's social behavior becomes directed at the wrong object or species. A bird that sees a human as one of its own kind – and follows or accompanies a human – will not understand the importance of keeping to its own territory. This is why wildlife specialists tell us not to try to raise young birds that we find outside a nest. If the bird becomes attached to us, it can't learn to associate with its own species and would quickly be rejected.

Now get ready to answer the question.

The professor explains the notion of imprinting in young geese and ducks. Explain how this behavior develops and how it might be important for the birds' survival.

You may begin to prepare your response after the beep.  
[beep]

Please begin speaking after the beep. [beep]

#### 5. Please listen carefully.

Listen to a conversation between two students.

(Man S) I just finished my history project.

(Woman S) That must feel nice. It takes me so long to do Professor Madison's assignments.

(Man S) Really? Well, what do you think the problem is? Do you have trouble understanding the task?

(Woman S) It's not a matter of understanding the material. My problem is technical. You know how he wants us to turn in the projects on disk? Well, I'm just computer illiterate. I write out all my assignments by hand.

(Man S) Wow. Well, you could pay someone to type up your handwritten work. There are always ads on the bulletin board of people willing to do that for a fee.

(Woman S) That's an idea, but it could get too expensive after a while.

(Man S) Yeah, I imagine it would. Oh, why don't you go on over to the Study Skills Center? Maybe they could direct you to some online sites that give typing lessons you can do on your own time. You know, they may even hold some beginning word-processing classes.

(Woman S) Do you think so?

(Man S) Well, I don't know for sure, but it's worth a try. And another thing you should do is sign up for a beginning computer course. You know – the world is getting more technical everyday – and if you really want to fit into the job market, you should learn everything you can about computers while you're here and have all these available resources.

(Woman S) Yeah, I guess you're right.

Now get ready to answer the question.

The students discuss different solutions to the woman's problem. Describe the problem. Then state which of the solutions you prefer and why.

You may begin to prepare your response after the beep.  
[beep]

Please begin speaking after the beep. [beep]

#### 6. Please listen carefully.

Listen to part of a lecture in an architecture class.

(Man P) When planning a structure, engineers must consider the internal and external forces the structure must withstand. These are called *loads*. Broadly speaking there are two types of loads, static and dynamic. Now, static loads concern those forces that don't change, and dynamic loads are those that change abruptly.

First, let's look at static loads, which can be broken down into dead loads and live loads. Dead loads concern the weight distribution that the structure itself must bear. These would include beams, walls, floors, ceilings, and roofs. Calculating dead loads is quite straightforward. Now, live loads are those other weights that a structure must support. Live loads can be people, furniture, or, in the case of a bridge, cars and trucks. You may wonder why live loads like people or cars are considered static – since we move around all the time. Well, we can calculate how many people will fit into this classroom, say, or how many trucks can be on a bridge at the same time. Our comings and goings flow, they do not happen abruptly. Imagine that your family is sitting in different parts of a room and someone says, "Oh, look, northern lights," so everyone rushes to the same window to look outside. The live load changes from the weight being evenly distributed to its being concentrated

at one point. Like dead loads, live-load calculations can be computed.

Now, remember that I said dynamic loads are those in which the forces change suddenly, for example, a gust of wind. Extreme examples of dynamic loads are tidal waves, hurricanes, or earthquakes. Think about earthquake zones. Here the engineer must consider features that allow the building to withstand or, let's say, counteract a sudden change of force, a force that is unpredictable.

Now get ready to answer the question.

Using points and examples from the lecture, explain the kinds of loads an engineer must consider when building a structure.

You may begin to prepare your response after the beep.

[beep]

Please begin speaking after the beep. [beep]

---

## PRACTICE TEST 2: Writing Section

Now listen to a professor's response to the reading passage.

[Woman P] Now, in this course we've focused on the need for judging unusual claims with strong empirical evidence. I want you to take a fresh look at the claims here. Many people will accept dowsing without question, just assuming that, somehow, underground water does or can be detected because it gives off invisible frequencies. Can we accept this? On the face of it this is an

unusual claim since it seems to go against the laws of physics. Now, I've said before, and I'll repeat it here, extraordinary claims require extraordinary evidence.

But first of all, these forces or whatever that are supposed to be given off by objects are . . . are unknown to science. Attempts made with very sensitive instruments have not been able to detect them. Think about it. We have instruments that can detect weak radio signals from distant objects in space, but we can't detect signals from a nearby material that is claimed to exert a strong pull on dowsing tools. Furthermore, there have been numerous attempts to test what we might call the dowsing hypothesis: to test whether under strict scientific conditions it still works. It's been found that, when the experiment is . . . when all the variables are controlled, that dowsing doesn't work. The results it gives are no better than random luck. In other words, if you dig for water anywhere at all, you would have a chance of finding it – the same kind of chance that a dowser would have. So under strict conditions dowsers have about the same chance as anyone with a hunch. Now, when experiments have been performed without strict conditions attached, it seems that dowsing can be successful. I'd like you to think about this and come with your own ideas tomorrow on how this could be possible.

Summarize the points made in the lecture you just heard, explaining how they cast doubt on the points made in the reading.