ELL SUMMER INSTITUTE SECTION

TOEFL iBT® Listening

REQUIREMENTS FOR SAVING AND SUBMITTING DOCUMENTS

1. **Filename**: Save your document with your first and last name plus the ELL Summer Institute section and the year for which you are applying.
   
   Example: Jane Doe TOEFL iBT Listening 20XX.doc

2. **Identifying Info**: Your name should not appear anywhere inside the document. It should only appear in the filename.

3. **Submission Format**: More detailed instructions on how to format materials for submission are provided throughout the document.

OVERVIEW

Understanding class lectures is a crucial aspect of college life; by including lectures in TOEFL iBT, we are testing the candidate’s preparedness to function in an academic environment in an English-medium university. A TOEFL iBT lecture set consists of an aural stimulus and multiple-choice questions. The stimulus presents an excerpt of a lecture that takes place in a university classroom.

Each lecture is heard only once. The content of the lecture must not assume specialized knowledge in the subject area. It should be possible to understand the content of the stimulus based only on what is presented.

Test takers are tested on their understanding of the main ideas, important details, organizational structure, and implications of the lecture as well as the speaker’s purpose and attitude.

The language of the lecture should include features that are typical of oral language in an academic setting, including repetitions, misspeaks, hesitations, sentence fragments, changing one’s mind, etc.

Before starting the tasks, please listen to a sample TOEFL lecture. The sample can be found on the Web site underneath the link to this document. Each of your tasks will be to develop part of a TOEFL lecture, so the lecture you will listen to is longer than the ones you will submit.
For this section you must write portions of two lectures (no visuals needed). You must complete both tasks. Please complete both tasks in a single Word document. Indicate the task number and the page number of the task on every page (i.e., Task 2, page 2).

Also indicate the class in which the lecture takes place by including a line preceding the beginning of each lecture worded as follows: “Listen to part of a lecture in a ________ class.” Fill in the space with the name of the class.

Listening—Task 1
“Heredity: The Garden Pea”

Task: Write a portion of a lecture, no more than 250 words in length, that is based on the source material given and that provides the necessary information for a listener to correctly answer the questions below after a single listening.

The lecture is for an introductory-level biology class and should sound as though it is being given by a university professor who has planned the material but is speaking somewhat extemporaneously and not simply reading aloud a printed version of the talk. The lecture should be monologic: there should be no questions or contributions from students in the class. Use the included source material as the basis for the lecture content.

The first question below—“What does the professor mainly discuss?”—tests the overall gist of the lecture; that is, the answer to this question reflects the instructional goal of the lecture.

For some questions, the word “nonexplicit” appears next to the question number. This means that the answer should not be presented explicitly in a single sentence in the stimulus. Instead, a listener must be able to follow the information presented across several sentences in order to answer the question correctly. For other questions, the answer can be presented in a single sentence, but it can also be presented in information from several sentences. In all cases the information should be presented as part of an integrated whole, not as a list of disconnected discrete points. Since an important listening skill is being able to distinguish important details from less important details, the lecture should include content that is not tested; but tested content should be as salient to a listener, if not more salient, than untested content.

Keep the following in mind.

- The information in the lecture should be
  - accessible to an educated nonspecialist (e.g., a first-year college student),
  - understandable without having specific background knowledge of the topic, and
understandable in a single hearing (i.e., it is not necessary to listen more than once in order to answer the questions).

The information presented needs to be tightly focused around a specific theme/topic. The professor should have a specific instructional objective (e.g., completing an explanation).

Evaluation: The lecture you write will be evaluated on the basis of a number of factors, including the following.

- The naturalness of the speech and achievement of appropriate register (speech should be appropriate for a university professor)
- Whether the information is pitched at an appropriate level of difficulty for first-year college students with no specialized knowledge of biology
- How clearly and cohesively the information is developed
- How well the tested information is integrated into a coherent lecture
- Whether there is sufficient support for a listener to be able to answer the questions after hearing the lecture only once

Questions for Task 1

1. (nonexplicit) What does the professor mainly discuss?
   Answer: Why Mendel used the garden pea in his heredity studies

2. Why did using pea plants for his experiments help Mendel obtain results relatively quickly?
   Answer: Pea plants can produce several generations in one year.

3. What is a true-breeding variety of a plant?
   Answer: A variety that is uniform from one generation to the next

4. (nonexplicit) What feature distinguishes pea plants from most other flowering plants?
   Answer: Pea plants can produce offspring by self-fertilization.

5. How did Mendel’s experiments differ from earlier experiments in heredity?
   Answer: Mendel applied scientific methods to his experiments.
Listening—Task 1 “Heredity: The Garden Pea”

Source Material for Task 1

Over the next hundred years, Koelreuter’s work was elaborated on by other investigators. Prominent among them were English gentleman farmers who were trying to improve varieties of agricultural plants. In one such series of experiments, carried out in the 1790s, T. A. Knight crossed two true-breeding varieties (varieties that are uniform from one generation to the next) of the garden pea, Pisum sativum. One of these varieties had purple flowers, and the other had white flowers. All of the progeny of the cross had purple flowers. Among the offspring of these hybrids, however, were some plants with purple flowers and others, less common, with white flowers. Just as in Koelreuter’s earlier studies, a trait from one of the parents was hidden in one generation, only to reappear in the next.

Early geneticists demonstrated that some forms of an inherited trait (1) can be masked in some generations but may subsequently reappear unchanged in future generations; (2) segregate among the offspring of a cross; and (3) are more likely to be represented than their alternatives.

In these deceptively simple results were the makings of a scientific revolution. Nevertheless, another century passed before the process of gene segregation was appreciated properly. Why did it take so long? One reason was that early workers did not quantify their results. A numerical record of results proved to be crucial to understanding the process. Knight and later experimenters who carried out other crosses with pea plants noted that some traits had a “stronger tendency” to appear than others, but they did not record the numbers of the different classes of progeny. Science was young then, and it was not obvious that the numbers were important.

Mendel and the Garden Pea

The first quantitative studies of inheritance were carried out by Gregor Mendel, an Austrian monk. Born in 1822 to peasant parents, Mendel was educated in a monastery and went on to study science and mathematics at the University of Vienna, where he failed his examinations for a teaching certificate. He returned to the monastery and spent the rest of his life there, eventually becoming abbot. In the garden of the monastery, Mendel initiated a series of experiments on plant hybridization. The results of these experiments would ultimately change our views of heredity irrevocably.

For his experiments, Mendel chose the garden pea, the same plant that Knight and many others had studied earlier. The choice was a good one for several reasons. First, many earlier investigators had produced hybrid peas by crossing different varieties. Mendel knew that he could expect to observe segregation among the offspring. Second, a large number of true-breeding varieties of peas were available. Mendel initially examined 32. Then, for further study,
he selected lines that differed with respect to seven easily distinguishable traits, such as smoother versus shriveled seeds and purple versus white flowers, a characteristic Knight had studied. Third, pea plants are small and easy to grow, and they have a short generation time. Thus, one can conduct experiments involving numerous plants, grow several generations in a single year, and obtain results relatively quickly.

A fourth advantage of studying peas is that the sexual organs of the pea are enclosed within the flower (see note below). The flowers of peas, like those of most flowering plants, contain both male and female sex organs. Furthermore, the gametes produced by the male and female parts of the same flower, unlike those of many flowering plants, can fuse to form viable offspring. Fertilization takes place automatically within an individual flower if it is not disturbed, resulting in offspring that are the progeny of a single individual. Therefore, one can either let self-fertilization take place within an individual flower, or remove the flower’s male parts before fertilization and introduce pollen from a strain with alternative characteristics, thus performing cross-fertilization.

**NOTE:**
Structure of the pea flower. In a pea plant flower, the petals enclose the male anther (containing pollen grains, which give rise to haploid sperm) and the female stigma and carpel (containing ovules, which give rise to haploid eggs), ensuring that self-fertilization will take place unless the flower is disturbed. A longitudinal section of a flower is shown in this illustration.
Task: Write a portion of a lecture, no more than 250 words in length, that is based on the source material included below and write four questions (and answers) about the lecture. The questions should test a listener’s understanding of important points in the lecture. One of the questions should ask about the overall content of the lecture (e.g., “What is the lecture mainly about?”; “What does the professor mainly discuss?”; or “What is the main purpose of the lecture?”). The lecture can be for either an introductory-level economics class or an introductory-level psychology class. It should sound as though it is being given by a university professor who has planned the material but is speaking somewhat extemporaneously and not simply reading aloud a printed version of the talk. The lecture should be monologic: there should be no questions or contributions from students in the class.

The information in the lecture should fit together in an integrated whole; information should not be presented as a list of disconnected discrete points. Since an important listening skill is being able to distinguish important details from less important details, the lecture should include content that is not tested in the questions you ask; but tested content should be salient to a listener.

Keep the following in mind:

- The information in the lecture should be accessible to an educated nonspecialist who has only common background knowledge of the topic, and it should be understandable in a single hearing.

- The information presented needs to be tightly focused around a specific theme/topic. The professor should have a specific instructional objective (e.g., completing an explanation).

- The questions you write should test important, salient information in the lecture; that is, they should reflect what the professor might hope that students understand and remember from the lecture.

Evaluation: The lecture you write will be evaluated on the basis of a number of factors, including the following.

- The naturalness of the speech and achievement of appropriate register (speech should be appropriate for a university professor)

- Whether the information is pitched at an appropriate level of difficulty for first-year college students with no specialized knowledge of biology
How clearly and cohesively the information is developed

How well the tested information is integrated into a coherent lecture

Whether there is sufficient support for a listener to be able to answer the questions after hearing the lecture only once

The questions you write will be evaluated on the basis of

the clarity of the wording of the question and of the answer

and

the importance of the point being tested.

Listening—Task 2
“Predictably Irrational: The Cost of Zero Cost”

Source Material for Task 2

The portion of the material highlighted in gray is provided only for context—this material should not be included in the lecture proper.

The cost of zero cost

Zero has had a long history. The Babylonians invented the concept of zero; the ancient Greeks debated it in lofty terms (how could something be nothing?); the ancient Indian scholar Pingala paired zero with the numeral 1 to get double digits; and both the Mayans and the Romans made zero part of their numeral systems. But zero really found its place about AD 498, when the Indian astronomer Aryabhata sat up in bed one morning and exclaimed, “Sthanam sthanam dasa gunam”—which translates, roughly, as “Place to place in 10 times in value.” With that, the idea of decimal-based place-value notation was born. Now zero was on a roll: It spread to the Arab world, there it flourished; crossed the Iberian Peninsula to Europe (thanks to the Spanish Moors); got some tweaking from the Italians; and eventually sailed the Atlantic to the New World, where zero ultimately found plenty of employment (together with the digit 1) in a place called Silicon Valley.

So much for a brief recounting of the history of zero. But the concept of zero applied to money is less clearly understood. In fact, I don’t think it even has a history. Nonetheless, FREE! has huge
implications, extending not only to discount prices and promotions, but also to how FREE! can be used to help us make decisions that would benefit ourselves and society.

If FREE! were a virus or a subatomic particle, I might use an electron microscope to probe the object under the lens, stain it with different compounds to reveal its nature, or somehow slice it apart to reveal its inner composition. In behavioral economics we use a different instrument, however, one that allows us to slow down human behavior and examine it frame by frame, as it unfolds. As you have undoubtedly guessed by now, this procedure is called an experiment. In one experiment, Kristina Shampanier (a PHD student at MIT), Nina Mazar (a professor at the University of Toronto), and I went into the chocolate business. Well, sort of. We set up a table at a large public building and offered two kinds of chocolates—Lindt truffles and Hershey’s Kisses. There was a large sign above our table that read, “One chocolate per customer.” Once the potential customers stepped closer, they could see the two types of chocolate and their prices.¹

For those of you who are not chocolate connoisseurs, Lindt is produced by a Swiss firm that has been blending fine cocoas for 160 years. Lindt’s chocolate truffles are particularly prized—exquisitely creamy and just about irresistible. They cost about 30 cents each when you buy them in bulk. Hershey’s Kisses, on the other hand, are good little chocolates, but let’s face it, they are rather ordinary: Hershey cranks out 80 million Kisses a day. In Hershey, Pennsylvania, even the streetlamps are made in the shape of the ubiquitous Hershey’s Kiss.

So what happened when the “customers” flocked to our table? When we set the price of a Lindt truffle at 15 cents and a Kiss at one cent, we were not surprised to find that our customers acted with a good deal of rationality: they compared the price and quality of the Kiss with the prices and quality of the truffle, and then made their choice. About 73 percent of them chose the truffle and 27 percent chose the Kiss.

Now we decided to see how FREE! might change the situation. So we offered the Lindt truffle for 14 cents and the Kisses free. Would there be a difference? Should there be? After all, we had merely lowered the price of both kinds of chocolate by one cent.

But what a difference FREE! made. The humble Hershey’s Kiss became a big favorite. Some 69 percent of our customers (up from 27 percent before) chose the FREE! Kiss, giving up the opportunity to get the Lindt truffle for a very good price. Meanwhile, the Lindt truffle took a tumble; customers choosing it decreased from 73 to 31 percent.

What was going on here? First of all, let me say that there are many times when getting FREE! items can make perfect sense. If you find a bin of free athletic socks at a department store, for instance, there’s no downside to grabbing all the socks you can. The critical issue arises when FREE! becomes a struggle between a free item and another item—a struggle in which the presence of FREE! leads us to make a bad decision. For instance, imagine going to a sports store to buy a pair of white socks, the kind with a nicely padded heel and a gold toe. Fifteen minutes later you’re leaving the store, not with the socks you came in for, but with a cheaper pair that you

¹ We posted the prices so that they were visible only when people got close to the table. We did this because we wanted to make sure that we did not attract different types of people in the different conditions—avoiding what is called self-selection.
don’t like at all (without a padded heel and gold toe) but that came in a package with a FREE! second pair. This is a case in which you gave up a better deal and settle for something that was not what you wanted, just because you were lured by the FREE!

To replicate this experience in our chocolate experiment, we told our customers that they could choose only a single sweet—the Kiss or the truffle. It was an either-or decision, like choosing one kind of athletic sock over another. That’s what made the customers’ reaction to the FREE! Kiss so dramatic: Both chocolates were discounted by the same amount of money. The relative price difference between the two was unchanged—and so was the expected pleasure from both.

According to standard economic theory (simple cost-benefit analysis), then, the price reduction should not lead to any change in the behavior of our customers. Before, about 27 percent chose the Kiss and 73 percent chose the truffle. And since nothing had changed in relative terms, the response to the price reduction should have been exactly the same. A passing economist, twirling his cane and espousing conventional economic theory, in fact, would have said that since everything in the situation was the same, our customers should have chosen the truffles by the same margin of preference.²

And yet here we were, with people pressing up to the table to grab our Hershey’s Kisses, not because they had made a reasoned cost-benefit analysis before elbowing their way in, but simply because the Kisses were FREE! How strange (but predictable) we humans are!

This conclusion, incidentally, remained the same in other experiments as well. In one case we priced the Hershey’s Kiss at two cents, one cent, and zero cents, while pricing the truffle correspondingly at 27 cents, 26 cents, and 25 cents. We did this to see if discounting the Kiss from two cents to one cent and the truffle from 27 cents to 26 cents would make a difference in the proportion of buyers for each. It didn’t. But, once again, when we lowered the price of the Kiss to free, the reaction was dramatic. The shoppers overwhelmingly demanded the Kisses.

We decide that perhaps the experiment had been tainted, since shoppers may not feel like searching for change in a purse or backpack, or they may not have any money on them. Such an effect would artificially make the free offer seem more attractive. To address this possibility, we ran other experiments at one of MIT’s cafeterias. In this setup, the chocolates were displayed next to the cashier as one of the cafeteria’s regular promotions and the students who were interested in the chocolates simply added them to the lunch purchase, and paid for them while going through the cashier’s line. What happened? The students still went overwhelmingly for the FREE! option.

² For a more detailed account of how a rational consumer should make decisions in these cases, see the appendix to this chapter.