

PART I: LISTENING (20 PTS)

(one lecture with an outline; ±850 words)

LECTURE Click to listen 

Listen to the professor and fill in the following outline. You have 1 minute to scan the outline before listening. After filling in your outline, you will have 8 minutes to answer the related questions. You will listen to the Lecture ONCE. Only your answers to the questions will be graded.

OUTLINE

Topic: ESPERANTO

Some languages become more dominant because:

1. _____
2. _____
3. _____

General and Historical Information:

- _____
- _____
- _____

Dr. Zamenhof's early life:

- _____
- _____

Advantages of Esperanto:

- _____
- _____
- _____

Geography and Population of Esperanto:

- Where: * _____
* _____

- Number of people: * _____
* _____

Sources to learn Esperanto:

- _____
- _____
- _____



Answer the following questions according to the outline that you have filled in. You have 8 minutes to answer the following questions.

1. Which of the following is **NOT** a reason why some languages dominate others? (4 pts)
 - a) People in trade and communication usually prefer dominant languages.
 - b) The world-wide population of dominant languages is greater than other populations.
 - c) Children generally don't want to learn the minor language in many homes.
 - d) After some time, a dominant language is preferred more by bilingual speakers.

2. Which of the following is **NOT TRUE** about Esperanto? (4 pts)
 - a) It is unique with its grammar, vocabulary and pronunciation.
 - b) 1887 was the year when Esperanto was introduced publicly.
 - c) Esperanto is a project language which was artificially created.
 - d) European languages have many influences on Esperanto.

3. We know all of the following about Dr. Zamenhof **EXCEPT** that _____. (3 pts)
 - a) he grew up in a small region in Russia
 - b) he lived in a multi-ethnic region in Russia
 - c) he had difficulty learning languages
 - d) he was exposed to several languages

4. All of the following is an advantage of Esperanto **EXCEPT** that _____. (3 pts)
 - a) it doesn't represent a political view
 - b) when you learn it once, you can't forget it easily
 - c) you can learn it more easily than other languages
 - d) it doesn't aim to take other languages' places

5. Which of the following can be said about Esperanto? (3 pts)
 - a) More than 3,000,000 people speak Esperanto fluently.
 - b) There are about a thousand native speakers of Esperanto.
 - c) It is spoken in a limited number of countries all over the world.
 - d) In Africa and North America, Esperanto is widely spoken.

6. If a person wants to learn Esperanto, s/he can use all of the following sources **EXCEPT** _____. (3 pts)
 - a) internationally broadcasting TVs
 - b) sources on the Internet
 - c) translated and originally written books
 - d) regularly published magazines

PART II: READING (30 PTS) (2 reading texts; ±750-900 words)

SAMPLE TEXT: Read the text and answer the following questions according to the text. (17 pts)

¹ What if you could build a computer that works just like the human brain? Scientists have started to imagine the possibilities: We could invent new forms of industrial machinery, create fully autonomous thinking cars, and devise new kinds of home appliances. A new project in Europe hopes to create a computer brain just that powerful in the next ten years—and it's incredibly well-funded. There's just one catch: computers that fast simply haven't been invented yet.

² On October 7, 2013, at the Swiss Federal Institute of Technology in Lausanne, one of the most ambitious brain research projects in history officially kicked off. The Human Brain Project—backed by 1.2 billion euros and more than 250 researchers—aims to create the first complete computer simulation of the human brain. Over the course of a decade, everything we know about that particular organ's biology will be modeled.

³ The research **hinges on** creating a super-powerful computer that's 1,000 times faster than those in use today. If you're keeping track, that's an *exascale* supercomputer, one fast enough to model a nuclear explosion or the complex, planet wide forces that shape the climate. Just a few years ago, scientists started using *petascale* supercomputers like *Blue Waters* at the National Center for Supercomputing Applications (NCSA) in Illinois that went online last year. "Well-known manufacturers of supercomputers like IBM, Cray, Intel, and Bull, are committed to building the first exascale machines by approximately 2020. So we are confident we will have the machines we need," says Henry Markham, the director of the Human Brain Project.

⁴ For scientists, these sorts of projects are all about understanding ourselves. The brain is the least understood organ in the human body. We don't really know how the brain controls our thoughts, our bodily functions, or our behavior. And Markham says the lack of processing power in modern computers is the least of our worries. He says a computer brain will consume gigawatts of power, require new forms of memory, and force scientists to look at cutting edge storage techniques. But the immense technical hurdles will be worth the effort. The first phases will help us understand how the brain functions. In later phases, we'll find out how we learn, how we see and hear, and why the brain sometimes doesn't process information correctly.

⁵ Dr. Gayani DeSilva, a psychiatrist with a private practice in Orange, California, believes a human brain model could also have *unimaginable* implications for medicine, helping us learn how we adapt, heal, and develop. "The more we know about our brains, the more we can utilize our brains to their full potential, and intervene when issues arise," she says. Amina Ann Qutub, a bioengineer at Rice University, adds, "The human brain is immensely complex, and a model reduces this complexity into a controlled system. In a model, scientists can test hypotheses as to how the human brain works, and what occurs in disease in order to understand how to treat neurological conditions." In fact, it's analogous to astronauts training in a flight simulator prior to a shuttle launch. As with any cutting edge science, we don't know yet what we don't know. Qutub says **this** is all unmapped territory: "The total number of cells including the neurons, vascular cells, and glia in a human brain is more than the number of stars in the Milky Way," she says.

⁶ That's enough to give scientists quite the headache.

7. What is the text mainly about? (3 pts)

- a. Why the Human Brain Project is especially important for the fields of health and medicine
- b. What the Human Brain Project requires from all parties involved in the long run
- c. How the Human Brain Project will be realized and what its possible benefits will be
- d. Why the Human Brain Project is run by only Europeans and what its scope will be

8. Which of the following is **NOT** a characteristic of the Human Brain Project? (3 pts)
- It is based in Europe and has a large budget.
 - Though more will join, currently only a handful of scientists are involved.
 - Its purpose is to make a model or a computer simulation of the human brain.
 - It is directed by Henry Markham.
9. Which of the following about exascale supercomputers is **NOT** true? (3 pts)
- They are already in use in places like the National Center for Supercomputing Applications.
 - There are companies in the market that are capable of producing such computers in the near future.
 - They are capable of modeling large-scale events that can lead to understanding atmospheric changes.
 - IBM, Cray, Intel, and Bull haven't manufactured such computers though they have produced supercomputers.
10. What are some of the technical challenges while trying to create a computer brain? (3 pts)
- Understanding the various ways the brain functions and how it processes information
 - Catching up with the cutting edge industrial machinery that is used in autonomous cars
 - Devising advanced forms of storing information and providing huge amounts of power
 - Finding out the processing difficulties that the human brain may encounter
11. The author mentions "astronauts training in a flight simulator" in paragraph 5 in order to explain how _____. (3 pts)
- people can use the brain to its full potential after they know more about its functions and processes
 - neurological conditions may vary between people in different age groups and with different medical backgrounds
 - neuroscientists can reveal the limits of a complex system without changing its neural structure
 - researchers can check their assumptions before they can proceed with the treatment of a disease
12. What does "hinges on" in paragraph 3 mean? (1 pt)
- turns up
 - depends on
 - stands against
 - works out
13. What does "this" in paragraph 5 refer to? (1 pt)
- the plan for research
 - the field of medicine
 - the space study
 - the human brain

PART IV: WRITING: (30 PTS)

PARAGRAPH WRITING

Choose ONE of the topics below and write a paragraph of approximately 200 words. Give details and examples to support your ideas.

- Developed countries have become insensitive towards the problems of developing countries.
- Using technology is /isn't beneficial in learning a foreign language.