PEAK Sample Interview Questions

These are real example questions taken from PEAK interviews in recent years.

For students applying to Japan in East Asia

Q: Describe an Asia-related issue that has recently interested you in the media. Why did this issue particularly interest you?

For students applying to Environmental Sciences

Q: Describe an environmental issue that is of particular relevance to your home city or country. What are your opinions on this issue?

Questions based on subjects studied at school

History

Q: When different civilizations meet, what happens? Do they tend to create conflict or encourage cultural enrichment? Pick one historical example, and discuss how these civilizations negotiated with each other.

Q: Some people argue history repeats itself. Do you agree or disagree? Pick an example.

Culture and Arts

Q: Please explain what are the strengths and limitations of commercial films depicting historical events?

Sociology

Q: Should old-age pensions be organized publicly [by the state] or privately [by commercial firms]?

Economics

Q: A typical conclusion of standard microeconomic theory is that the economy is led by an “invisible hand”, and thus the role of government should be minimized. Do you think this also applies to environmental policy issues? Why or why not?

Mathematics and Logics

Q: Look at the figure below, which shows two circles inside a square. The radius of the larger circle is twice that of the smaller circle. Find an expression for the fraction of the area of the square occupied by the two circles.

![Diagram of two circles inside a square]
Q: You and your friend take it in turns to toss a coin. The first person to get heads is the winner. You start the game by tossing first. The game continues until one of you wins. What is the probability that you win the game?

**Physics**

Q: The highest mountain on the earth is Mt. Everest (or Qomolangma, Zhumulangma) in the Himalayas and its height is about 9000 meters above sea level. Why can’t mountains become too high, say 100,000 meters above sea level?

Q: You have a 50W light bulb and a 100W light bulb and a 100V power line.

   a. You connect the bulbs to the power line in parallel. Which bulb glows brighter?
   b. You connect the bulbs to the power line in series. Which bulb glows brighter?

**Chemistry**

Q: From a chemical point of view, tell us as much as you can about water.

Q: Applying a flame to a balloon filled with hydrogen and oxygen results in an explosion and the production of water, but water never spontaneously separates into hydrogen and oxygen. Why is this the case?

**Biology**

Q: Explain the differences between bacterial cells and animal cells.