**地球科学英語　期末試験**（Reading）　　2011年2月15日　　　試験時間：60分（10:35～11:35）

学籍番号　　　　　　　　　　　　氏名

授業のReading教材、The Geological Society （London）が2004年に刊行したレポート、Super-eruptions: global effects and future threatsを基した、以下の問に答えなさい。

注意：上記の教材、辞書、ノートなどの持ち込みは禁止です。

ただし、上記の教材の内容をまとめたマインドマップ（A3）は持ち込み可です。

**１．英文和訳**

(1) Many super-eruptions have come from volcanoes that are either hard to locate or not very widely known.

(2) Sulphuric acid droplets absorb and reflect sunlight, and absorb heat from the Earth, warming the upper atmosphere and cooling the lower atmosphere.

(3) Pyroclastic flows can travel up to 100 kilometres in super-eruptions, as revealed by the deposits, at speeds up to 100 metres per second (360 kph/250 mph) or even faster.

(4) The Working Group on super-eruptions recommends investment in research to improve our understanding of regional and global impacts of major volcanic eruptions.

(5) The sites of super-eruptions are mostly found where the Earth’s tectonic plates collide or where hot material wells up from the deep Earth’s interior below a continent.

(6) Although at present there is no technical fix for averting super-eruptions, improved monitoring, awareness-raising and research-based planning would reduce the suffering of many millions of people.

(7) Problems such as global warming, impacts by asteroids and comets, rapid use of natural resources, and nuclear waste disposal require world leaders and governments to address issues with very long-term consequences for the global community.

(8) One impact of the Laki gas and aerosols over the UK during 1783 was to increase deaths, possibly due to respiratory disorders.

(9) Events at the smaller-scale end of the super-eruption size spectrum are quite common when compared with the frequency of other naturally occurring devastating phenomena such as asteroid impacts.

(10) The frequency of a volcanic eruption of any size falls by about a factor of 7 for every ten-fold increase in eruption size. For this reason, volcanologists describe the sizes of volcanic eruptions using a logarithmic scale.

**２．和文英訳**（括弧内も訳して下さい。）

(1) 過去において、全地球的な大災害を起こすような大規模な超巨大噴火が、平均すると10万年に一度起こっています。

（２）人類の文明は全地球的な規模の、予期していなかった災害に対し、とても脆い。

（３）火山学者は噴火の規模に2つの指標を使います。それらは噴火の大きさ（噴出したマグマの堆積あるいは質量）と強度（マグマの噴出の速さ）です。

（４）地球上では2つのタイプの超巨大噴火があります。それらは、溶岩の大規模な噴出と、巨大な爆発的噴火です。

（５）噴火の規模と頻度は反比例の関係にあります。