

Graduate School of Science and Engineering, Shimane University

[For Private-Expense Foreign Student Entering Master Course in October 2014]

[Department of Geoscience]

ENTRANCE EXAMINATION

【 筆記試験 】

Attention:

- 1 Do not open the paper before the start time.
- 2 Examination paper: 4 pages; answer sheet: 7 pages

After the start time, you should confirm that you have a complete set of examination paper and answer sheets. Then, write your examinee number on all of the answer sheets.

- 3 All of your answers should be clearly written on the answer sheets.
- 4 You may take the examination paper away after the examination.

Examination paper for the Master Course of Department of Geoscience

- 1 次の文章を参考にして、火山災害に対するあなたの考えを 20 行以内の英語で書きなさい。また、あなたが英語で書いた内容の要旨を、10 行以内の日本語で書きなさい。

Read the following paragraphs, and write your opinion on volcanic hazard in English within 20 lines. Then summarize them in Japanese within 10 lines. Use Answer sheet 1a and 1b.

(この部分につきましては、著作権の関係により、公開しません。)

Source: Hicks G & Campbell H (eds) (2003) *Awesome Forces*. 159p. (partially modified)

Examination paper for the Master Course of Department of Geoscience

- 2 次の文章を読み、その主な内容の要点および pore-fluid pressure に対するあなたの考えを 25 行以内の英語で書きなさい。また、あなたが英語で書いた内容の要旨を、10 行以内の日本語で書きなさい。

Read the following paragraph, and write a summary of the main points and your opinion on pore-fluid pressure in English within 25 lines. Then summarize them in Japanese within 10 lines. Use Answer sheet 2a and 2b.

(この部分につきましては、著作権の関係により、公開しません。)

Source: Moreno M *et al.* (2014) Locking of the Chile subduction zone controlled by fluid pressure before the 2010 earthquake. *Nature Geoscience*, Vol.7, No.4, pp.292-296.

Examination paper for the Master Course of Department of Geoscience

- 3 次の()にあてはまる最も適当な語または語句を下の語群から選んで答えなさい。

Complete the sentences by selection of the most appropriate answer from the following candidates. Use Answer sheet 3.

- (1) () structures are the main targets of oil and gas exploration. The gravitational separation of water, oil, and gas causes gas to accumulate in the highest part of the porous and permeable reservoir rock, the oil to lie beneath the gas, and the water to occupy the lowest spaces.
[candidate words]: Anticline, Syncline, Fault, Joint
- (2) It is predicted that () mainly caused by increasing CO₂ emission could cause more natural disasters in the future.
[candidate phrases]: Milankovitch cycle, glacial cycle, climate change, tidal wave
- (3) Small crystals of zircon occur in many rocks, and, because its crystal structure remains () over very long periods of geological time, they provide information of the history of the Earth.
[candidate words]: unstable, soluble, stable, variable
- (4) Among various gases discharged during volcanic eruption, () causes the strong effect on the environment and human health.
[candidate phrases]: nitrogen oxide, sulfur dioxide, methane hydrate, hydrogen peroxide
- (5) () is the movement of a mass of rock, debris or earth down a slope. It can be triggered by an external stimulus such as intense rainfall, earthquake shaking, volcanic eruption, storm waves, or rapid stream erosion.
[candidate words]: Tsunami, Earthquake, Landslide, Subsidence

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- 4 あなたのこれまでの研究内容およびこれからの研究計画を 25 行以内の英語で書きなさい。また、それらの内容を 10 行以内の日本語に要約して説明しなさい。

Describe your previous study result and future study plan in English within 25 lines. Then summarize them in Japanese within 10 lines. Use Answer sheet 4a and sheet 4b.