RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES

B. Sc. (General) Degree
Third Year - Semester II Examination – September / October 2013

PHY 3105 – PHYSICAL GEOLOGY

Answer two questions only **Time: One hour**

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01. **(a)** Explain how interactions at plate boundaries may result in earthquakes, volcanic activity and new landforms.

(b) What are the epicentre and the focus of an earthquake?

(c) If the focus of a certain earthquake is shallow (close to the surface of the earth), what is the special feature which could be observed in the corresponding seismographs?

(d) Explain in detail why is a minimum of three seismographs from three different seismic stations needed to locate the epicentre of an earthquake.

02. **(a)** It has been reported that certain earthquakes have negative magnitudes. Is this an error? Explain your answer.

(b) Distinguish between *relative age* and *absolute age* of a rock.

(c) What are the relative age principles used to establish relative sequences of geologic events and processes? Explain them in detail. Use diagrams where appropriate.

(d) Explain why the *zircon* ($ZrSiO_4$) is widely used in U/Pb dating.

03. Write **short notes** on the following;

(a) Mass wasting.

(b) San Andreas fault.

(c) Sedimentary rocks.

(d) P - wave and S - wave shadow zones.

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