

UNIVERSITY OF COLOMBO –SRI LANKA

Faculty of Arts

Special Degree/ Study Stream Examination in Arts (Geography) – Part II

First Semester End Examination -2020

GYG 3150- PAST CLIMATE AND CLIMATE CHANGE

Time: Two Hours (02)

Answer **Three (03)** Questions Only

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1. (i) What is meant by “Paleoclimatology” ? (02 Marks)
(ii) Briefly describe one of the extra-terrestrial factors that were put forward for identifying the past climate of the Earth. (04 Marks)
(iii) Explain how mountain building affected the changes in the past climate of the Earth. (06 Marks)
(iv) Do you agree with the view that the process of mountain building contributed to global level climate changes in the geological past of the Earth? Discuss your answer. (08 Marks)

2. (i) What do you mean by a “Deglaciation period”? (02 Marks)
(ii) State **Four** evidence that put forward for studying the past climate of the Earth (04 Marks)
(iii) Selecting **one** of the evidence that you have mentioned in 2(ii), explain how it can be used to identify the past climate of the Earth.

(iv) Examine the constraints that can be arisen when studying the past climate of the Earth.

3. (i) What is meant by “Wet deposition of acid rain”? (02 Marks)
(ii) State the meteorological and climatological factors that contributed for intensifying the acid rain problem. (04 Marks)

(iii) Examine with specific examples, the impact of acid rains on forest cover in the world. (06 Marks)

(iv) Do you agree with the view that internationally, appropriate measures have been taken for minimizing the acid rain problem? Discuss. (08 Marks)

4. (i) Name **Four** most reactive ozone-depleting gases. (02 Marks)

(ii) State the relationship between global warming and ozone depleting. (04 Marks)

(iii) Explain the ozone depleting process without polar stratospheric clouds. (06 Marks)

(iv) Examine the factors of reporting comparatively less ozone-depleting in the tropical region. (08 Marks)

5. (i) Name **Two** global climate models (GCMs). (02 Marks)

(ii) What are the major components that need to be considered when developing climate models? (04 Marks)

(iii) Briefly discuss predicted extreme events in the world. (06 Marks)

(iv) Examine the expected impact of predicted extreme events in the world. (08 Marks)

6. (i) What are the **Three** main factors that contribute to sea-level rise? (02 Marks)

(ii) Briefly explain **One** of the factors that you have mentioned in 6(ii). (04 Marks)

(iii) State the future predictions of the sea level rise. (06 Marks)

(iv) Discuss the future predictions of the impact that can be arisen due to sea-level rise. (08 Marks)