

UNIVERSITY OF COLOMBO, SRI LANKA

FACULTY OF ARTS

THIRD YEAR EXAMINATION IN ARTS (ONLINE) SEMESTER I - 2020/2021

GYG 3150 - PAST CLIMATE AND CLIMATE CHANGE

**Instructions to Students:**

- The question paper starts on page 2.
- All written assessments must be **handwritten**. Handwriting must be **clear and readable**.
- Answers should be written on an **A4 size paper** (ruled/lined paper/or otherwise), using a **black ball point pen**.
- The **index number must be written on the top right-hand side** of each page of the answer script. Do not write your name anywhere on the answer script.
- **Number the pages** of the answer script using the following format at the **bottom of the page**: E.g., if it consists of 5 pages 1/5, 2/5...etc.
- Use the **common front page** (provided on LMS) as the first page of the answer script. You may print, or hand write the front page which must be the first page of your assessment.
- The **total number of pages** should be indicated on the front page of the answer script.
- **Scan/take photos of the answer script and convert it to a single PDF file** in the order of the page numbers.
- The full page of the answer script must be properly covered in the scanned image, and the scanned image must be clear/readable.
- LMS does not permit individual pages to be uploaded separately.
- **The only acceptable file format is PDF. The PDF file should be named with your index number**, e.g. A 12345
- Uploading answer scripts as JPEG/JPG or any other form will not be permitted.
- Complete and upload the final version of the answer script to LMS **within the stipulated 5 hours**
- Once the answer script has been uploaded to LMS, take **a screen shot of the full page** of the LMS with the word 'submitted', as an acknowledgement and keep it with you.
- **If** there is an **unexpected technical issue** with the uploading of an answer script to LMS, you may send your answer script via email to **exam3@arts.cmb.ac.lk** immediately.

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Duration: **05 hours** for completion and uploading of answer scripts to LMS.

Answer **Three (03)** questions only.

The **maximum word limit and marks for each** question are given.

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1.

- (i) Critically examine **two** terrestrial factors that caused changes in the Earth's climate during the geological past. (600 Words: 10 Marks)
- (ii) Discuss the importance of studying paleoclimatology in the field of climatology. (600 Words: 10 Marks)

2.

- (i) "Human activities are the most responsible factor in enhancing the greenhouse effect of the Earth". Elaborate your idea on this statement using specific examples. (600 Words: 10 Marks)
- (ii) Examine how global warming is being contributed for altering the natural climate processes of the Earth. (600 Words: 10 Marks)

3.

- (i) Explain the contribution of halon source gases on stratospheric ozone depletion. (600 Words: 10 Marks)
- (ii) Discuss why the severity of stratospheric ozone depletion varies with time and space. (600 Words: 10 Marks)

4.

- (i) “Climate is one of the significant factors determining the spatial distribution and severity of the acid rain problem”. Do you agree with this idea? Discuss your answer with suitable examples. (600 Words: 10 Marks)
  
- (ii) Citing specific examples, examine the impact of acid rain on terrestrial ecosystems. (600 Words: 10 Marks)

5.

- (i) Critically examine the “TTAPS” scenario. (600 Words: 10 Marks)
  
- (ii) Do you agree with the view that atmospheric aerosols are a significant factor in changing the Earth’s weather and climate? Discuss your answer. (600 Words: 10 Marks)

6.

- (i) How does climate change affect human health? Elaborate your answer, citing examples from tropical countries. (600 Words: 10 Marks)
  
- (ii) Discuss the challenges that could be faced by tropical countries when taking measures to minimize the adverse effects of climate change. (600 Words: 10 Marks)

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