



**UNIVERSITY OF COLOMBO – Sri Lanka  
FACULTY OF TECHNOLOGY**

BBST (Hons) Degree in Environmental Technology  
First Year – Semester II – **End Semester Examination** – February 2019

**ET 1007 Climate Change**

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Answer **only four (04)** questions

Time: Two **(02)** hours

1.

i. Briefly discuss the Ocean's Climate Zones

[Marks 20]

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ii. What is the role of oceans in relation to climate change

[Marks 20]

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iii. Discuss the Natural Causes of Climate Change

[Marks 20]

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iv. Using illustrations describe the Köppen Climate Classification System [Marks 40]

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2) i. Are Weather and Climate the Same? Discuss. [Marks 30]

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ii. Discuss the weather factors [Marks 30]

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3. (a) Global warming has been caused by the enhanced greenhouse effect.

I. Name three greenhouse gases. [Marks 15]

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II. State 3 anthropogenic processes contributing to enhanced greenhouse effect. [Marks 15]

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III. State very briefly, how these anthropogenic processes contribute to enhance greenhouse effect. [Marks 30]

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(b) Over the past decade, Black Carbon has come to be recognized as one of the principal agents of global warming.

I. State 3 emissions sources of Black Carbon

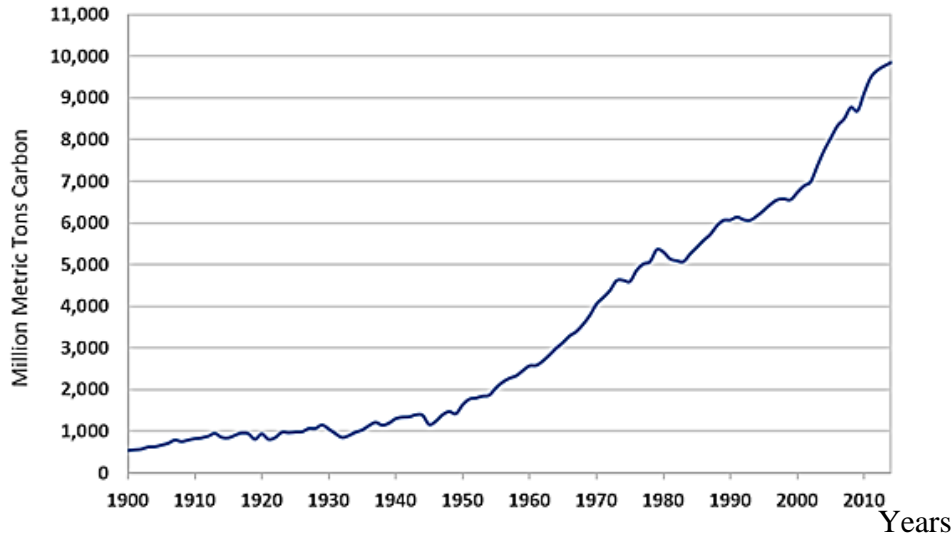
[Marks 15]

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II. State very briefly how black carbon contributes to sea level rising [Marks 25]

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4. The following graph indicates the carbon dioxide emissions to the atmosphere over a period of 114 years (1900-2014).



I. State your opinion very briefly about the general trend of carbon dioxide emissions over the period from 1900-2014? [Marks 10]

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II. (a) Carbon cycle is one of the main biogeochemical cycles found in the environment. Atmosphere is one of the carbon pools that has several fluxes, both adding and removing carbon simultaneously. State 2 ways of carbon dioxide inflow and 2 ways of carbon dioxide outflow to the atmosphere. [Marks 20]

Inflow:

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Outflow:

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(b) Name 3 climate change impacts on the species components of biodiversity [Marks 15]

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5. a) What is meant by “IPCC”? [20 Marks]

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b) What is the International convention signed at the Rio Earth Summit in 1992? [20 Marks]

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c) State 03 main government related institutions which involve in managing the Climate Change related issues in Sri Lanka. [20 Marks]

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d) Discuss the main Purposes of the Kyoto Protocol, adopted universally in 1997. [40 Marks]

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6. a). What are the indicators of the climate change?

[25 marks]

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b). Explain with suitable diagram the triggering factors of the Climate change

[35 marks]

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c). Briefly discuss the main reasons on why Developing countries are highly vulnerable to Climate change than the developed countries.

[40 Marks]

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