

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**P.G. DEGREE EXAMINATION – CROSS DISCIPLINARY****SECOND SEMESTER – APRIL 2023****PPH2CD01 – CLIMATE CHANGE AND ENERGY MANAGEMENT**

Date: 12-05-2023

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

SECTION A – K1 (CO1)**Answer ALL the questions****(5 x 1 = 5)****1. MCQ**

a) The planet Earth has warmed _____ °C since the preindustrial era.

(i) 1.0 (ii) 1.1 (iii) 1.2 (iv) 1.2

b) _____ percentage of all human-produced carbon dioxide emissions come from burning fossil fuels.

(i) 67 (ii) 77 (iii) 87 (iv) 97

c) Which sector consumes more electricity globally?

(i) Transport (ii) Commercial (iii) Industry (iv) Residential

d) Which is a renewable energy resource?

(i) Oil (ii) Solar (iii) Coal (iv) Natural Gas

e) IPCC's first assessment report was published in

(i) 1990 (ii) 1992 (iii) 1994 (iv) 1995

SECTION A – K2 (CO1)**Answer ALL the questions****(5 x 1 = 5)****2. Answer the following**

a) Paleoclimatology

b) Keeling curve

c) Urban Island effect

d) Energy conversion

e) IPCC

SECTION B – K3 (CO2)**Answer any THREE of the following****(3 x 10 = 30)**

3. Describe the role of atmospheric variables in Earth's climate.

4. Emphasise the causes and potential threats of more carbon dioxide emission.

5. Compare the working principle of energy conversion and energy storage devices.

6. Evaluate the advantages of renewable energy resources.

7. Highlight the significance of Tamil Nadu action plan on climate change.

SECTION C – K4 (CO3)**Answer any TWO of the following****(2 x 12.5 = 25)**

8. Compare the characteristics of major greenhouse gases released from human activities.

9. How does climate change impact our lives?

10. Explain a few emerging future technologies to attain energy sustainability.

11. Analyse the key elements of Paris Agreement on climate change.

SECTION D – K5 (CO4)

Answer any ONE of the following **(1 x 15 = 15)**

12. Describe the five major components of Earth's climate system with necessary diagrams.

13. Formulate a few novel strategies to adapt and mitigate climate change.

SECTION E – K6 (CO5)

Answer any ONE of the following **(1 x 20 = 20)**

14. Explain the various alternative energy resources available to achieve net-zero.

15. Review the highlights of a few important international agreements on climate change.

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