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# **EVS-605**

#### **Atmosphere and Climate Change**

M.Sc. Environmental Science (MSCES)

4th Semester Year Examination, 2023 (Dec.)

#### Time : 2 Hours]

#### Max. Marks : 70

Note : This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

#### SECTION-A

### (Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

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- **1.** Define Global Energy Balance. Describe the various sources, transfer and distribution of energy balance of atmosphere.
- 2. Write short notes on any *three* of the following :
  - (a) Development and evolution of atmosphere.
  - (b) Climate change policies.
  - (c) Geological history of earth.
  - (d) Global and regional movements in the atmosphere.
- **3.** Describe the wind stability, turbulence, southern oscillations and cyclones with suitable examples.
- **4.** Describe the natural climate change across the globe with suitable examples.
- **5.** Define ecosystem. Describe the role of forests in carbon sequestration with suitable examples.

## SECTION-B (Short Answer Type Questions)

- **Note :** Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)
- 1. What are the basic properties of atmosphere? Briefly describe with suitable examples.

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- 2. Write short notes on any *two* of the following :
  - (a) Impact of climate change on plants.
  - (b) General circulation patterns of energy.
  - (c) Interspheric linkages.
  - (d) Montreal Protocol.
- **3.** Write the importance of stratospheric ozone. What are the causes of ozone depletion?
- 4. Describe the impact of climate change on animals.
- 5. What is a glacier? Write brief note on glacial ecology.
- **6.** Write brief note on global and regional trends in greenhouse gas emissions.
- 7. What is global warming? Describe the role of greenhouse gases in global warming.
- **8.** What are the international initiatives on climate? Briefly describe them.

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