

**U.G. 3rd Semester Examination-2020****ENVIRONMENTAL SCIENCE****[HONOURS]****Course Code : ENVS-H-CC-L-07****(Atmosphere and Global Climate Change)**

Full Marks : 40

Time : 2½ Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any **five** of the following:  $2 \times 5 = 10$
- Define carbon credit.
  - Give the chemical formula of CFC-13.
  - What is the effect of EI-Nino on Indian monsoon?
  - What is Montreal Protocol?
  - How does the process of spring time ozone depletion occur over Antarctica?
  - What is the difference between DALR and SALR?
  - Why London smog is called reducing smog?
  - What is western disturbance?
2. Write short notes on any **two** of the following:  $5 \times 2 = 10$
- Composition of atmosphere and thermal stratification.

- Photochemical smog: causes and consequences
  - Ozone layer depletion: causes and effects
  - Acid rain : causes and effects
3. Answer any **two** of the following:  $10 \times 2 = 20$
- Write the basic Gaussian Plume equation with the meaning of each term. What are the components of tropical monsoon? Explain the structure of tropical cyclone with illustration.  $3+3+4=10$
  - What is mixing height? How it is related to the atmosphere's dispersive ability? Illustrate different types of plume on the basis of atmospheric stability.  $3+2+5=10$
  - Mention the major drivers of global warming. State the consequences of global warming with respect to earth's weather patterns, sea level rise and agricultural productivity. State the role of hydroxyl radical in the atmosphere.  $2+6+2=10$
  - Explain Milankovitch cycles and their roles on earth's climatic condition with a neat sketch. What is atmospheric window? What is the cause of Asian brown clouds?  $(3+2)+3+2=10$

*[Turn over]*