

# PhD in Climate Change

## PhD Entrance Test Sample Questions:

**Q.** Which of the following statements are correct?

- (1) Carbon dioxide (CO<sub>2</sub>) has a higher global warming potential than methane (CH<sub>4</sub>).
  - (2) Global warming potential is expressed in CO<sub>2</sub> equivalent.
- a) Only 1
  - b) Only 2**
  - c) Both 1 and 2
  - d) Neither 1 nor 2

**Q.** Select the correct statements.

- (1) The Atlantic Meridional Overturning Circulation (AMOC) is a major ocean current system that helps to distribute heat around the globe.
  - (2) The AMOC is a part of a global thermohaline circulation and is an integrated component of surface and deep currents in the Atlantic Ocean.
  - (3) Recent research suggests that the AMOC has been strengthening over the past few decades, likely as a result of climate change.
- (a) Only 1 is true
  - (b) Only 2 is true
  - (c) 1 and 2 are true**
  - (d) 2 and 3 are true

**Q.** Select the correct answer.

- (1) Drought can be caused by natural factors.
  - (2) Drought can be caused by human factors.
- (a) Both statements are false
  - (b) Both statements are true**
  - (c) Statement 1 is true and Statement 2 is false
  - (d) Statement 1 is false and Statement 2 is true

**Q.** Climate vulnerability is commonly defined as a function of:

- a) Exposure, sensitivity, and adaptive capacity**
- b) Income and GDP only
- c) Rainfall variability only
- d) Technology adoption only

**Q.** Which is an example of climate adaptation?

- a) Solar energy expansion
- b) Mangrove restoration for coastal protection**
- c) Carbon capture technology
- d) Electric vehicles

**Q.** Which of the following is not an example of climate change mitigation?

- a) Improving energy efficiency
- b) Transitioning to fossil fuels**
- c) Carbon capture technology
- d) Renewable energy expansion

**Q.** Which component of coal combustion primarily contributes to acid rain?

- a) Carbon dioxide (CO<sub>2</sub>)
- b) Methane (CH<sub>4</sub>)
- c) Sulfur dioxide (SO<sub>2</sub>)**
- d) Nitrogen oxides (NO<sub>x</sub>)

**Q.** Which type of PV cell is made from a single crystal of silicon?

- a) Thin-film solar cells
- b) Polycrystalline silicon cells
- c) Monocrystalline silicon cells**
- d) Perovskite cells

**Q.** What does ETS stand for in climate policy?

- a) Energy Trading Scheme
- b) Emissions Trading System**
- c) Environmental Tax System
- d) Energy Transition Strategy

**Q.** Nationally Determined Contributions (NDCs) are

- a) Mandatory UN laws
- b) Country-specific climate action commitments**
- c) Scientific reports
- d) Carbon taxes

**Q.** Intergovernmental Panel on Climate Change (IPCC) primarily

- a) Implements climate policies
- b) Conducts political negotiations
- c) Assesses scientific literature on climate change**
- d) Provides loans

**Q.** The Paris Agreement aims to limit warming to

- a) Below 5°C
- b) Below 3°C
- c) Well below 2°C**
- d) Below 4°C

**Q.** ESG stands for

- a) Environmental, Social, Governance**
- b) Energy Supply Growth
- c) Economic Sustainability Goals
- d) Environmental Safety Group

**Q.** Which of the following statements are correct?

1) Scope 1 emissions account for indirect GHG emissions from the generation of purchased electricity consumed by the company.

2) A greenhouse gas (GHG) inventory is a list of emission sources, and the associated emissions are quantified using standardised methods.

a) Only 1

**b) Only 2**

c) Both 1 and 2

d) None

**Q.** GIS is primarily used for

a) Writing literature reviews

**b) Spatial data analysis**

c) Climate diplomacy

d) Chemical experiments

**Q.** Qualitative research mainly focuses on

a) Numerical modelling

**b) Human experiences and perceptions**

c) Satellite imagery

d) Engineering design