

## MSc Sem.-1 Examination

404

## Climate Change

February-2025

Time : 2-30 Hours]

[Max. Marks : 70

Instructions: All Questions carry equal marks

Attempt all Questions

- Q I Discuss the role of the El Niño-Southern Oscillation (ENSO) in global climate variability. How does ENSO influence weather patterns, and what are the potential socio-economic impacts of an El Niño event? 14
- OR
- Q I A. Discuss the observed sea-level changes over the past century. What are the primary causes of sea level rise, and how is it expected to affect coastal communities in the coming decades? 7
- B. Explain the concept of permafrost and its significance in climate change. What are the potential global impacts of permafrost thawing, particularly concerning the release of greenhouse gases? 7
- Q II Discuss the human activities responsible for climate change. 14
- OR
- Q II A. How does population explosion impact food security negatively? 7
- B. How does climate affect man? 7
- Q III Discuss the significance of the Intergovernmental Panel on Climate Change (IPCC) Assessment Reports in shaping global climate policies. 14
- OR
- Q III A. Compare and contrast the objectives and outcomes of the Kyoto Protocol and the Paris Agreement in terms of global climate action. 7
- B. Examine the role of climate finance in supporting developing countries' efforts to mitigate and adapt to climate change. 7
- Q IV Write a short note on Cryosphere 14
- OR
- Q IV A. Write a brief note on Snow albedo feedback 7
- B. Explain in brief the atmospheric processes and feedbacks 7
- Q V Attempt any 7 out of 12 MCQs/Short question (One- or Two-line answer)/ Fill in the blanks/True or False etc. 22
- 1 **The El Niño-Southern Oscillation (ENSO) is primarily associated with changes in which of the following?**

(P.T.O)

- a) Atlantic Ocean temperatures
  - b) Pacific Ocean temperatures
  - c) Arctic ice extent
  - d) Antarctic ozone levels
- 2 **Which of the following phenomena is most closely related to the increasing frequency of heatwaves?**
- a) Ozone depletion
  - b) Global warming
  - c) Ocean acidification
  - d) Deforestation
- 3 **Which of the following regions is most vulnerable to permafrost thawing?**
- a) Amazon Rainforest
  - b) Sahara Desert
  - c) Siberian Tundra
  - d) Himalayan Mountains
- 4 **The Intergovernmental Panel on Climate Change (IPCC) was established in which year?**
- a) 1988
  - b) 1992
  - c) 1997
  - d) 2001
- 5 **Which of the following is NOT one of the three Working Groups of the IPCC?**
- a) Working Group I: The Physical Science Basis
  - b) Working Group II: Impacts, Adaptation, and Vulnerability
  - c) Working Group III: Mitigation of Climate Change
  - d) Working Group IV: Technological Innovation for Climate Resilience
- 6 **Which country was the first to ratify the Paris Agreement**
- a) Fiji
  - b) France
  - c) United States
  - d) China
- 7 How does landfill lead to GHG emissions?
- 8 Full form of LULUCF.
- 9 What is the meaning of nomad?
- 10 What is AMAP?
- 11 The amount of ice melting in Greenland would give rise to approx. \_\_\_ meters of sea level rise
- 12 Projections of increased forest growth and extent in the Barents region of the Russian Arctic show that by 2080 summer temperatures will have decreased by 1.8°C due to Evaporative cooling. True or False
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