



**SNS College of Technology, Coimbatore-35.**

**(Autonomous)**

**Academic Year 2024-2025 (ODD)**

**Seventh Semester**

**Agriculture Engineering**

**QUESTION BANK**

**COURSE CODE & TITLE: 19AGE401 CLIMATE CHANGE AND ADAPTATION**

**EARTH'S CLIMATE SYSTEM**

**TWO MARKS**

- 1) Define Ozone Layer and locate its region available in the atmosphere.
- 2) What are the Greenhouse gases and State the Consequences of Global warming
- 3) Define Ozone layer depletion
- 4) What are the effects of Green House Gases
- 5) Mention the major greenhouse gases present in the atmosphere
- 6) List out the few Ozone depleting Gases.
- 7) Show the pictorial representation of carbon cycle

**SIXTEEN MARKS**

- 1) Define Global Warming and elucidate their Natural & Human impacts occurring in the earth.
- 2) Define Ozone Layer Depletion. Mention some of the ozone depleting gases and their ill consequences on earth.
- 3) Explain the importance of Source of Carbon Cycle and its releasing agent's movement across the earth.
- 4) Enumerate the detailed category of various ozone depleting substances that occurs in the earth.
- 5) State Greenhouse effects and delineate its Radio-active effect with the influences of its causes
- 6) Define carbon cycle and elucidate its sinks, sources and its effects & consequences

## **ATMOSPHERE AND ITS COMPONENT**

### **TWO MARKS**

- 1) Show the pictorial representation for the structure of atmosphere and mention its layers variations in atmosphere.
- 2) List out the compositions of earth's atmosphere and also delineates their source of origin.
- 3) Illustrate the principles of Atmospheric Stability by relating its inversion characteristics
- 4) What are the salient features of Atmosphere?
- 5) What are the Physical, Chemical characteristics of atmosphere?
- 6) Define lapse rate
- 7) What is temperature inversion?
- 8) Mention the types of temperature inversion
- 9) What are the effects of temperature inversion?
- 10) Define atmospheric stability

### **SIXTEEN MARKS**

- 1) Demonstrate about the Temperature Profile of Heterosphere and Homospheres of the Atmosphere with a clear picture
- 2) Summarize the significance & Physical-Chemical Characteristics of Atmosphere.
- 3) Illustrate about the changes of altitude and its composition matters for the Vertical Structure of the Atmosphere.
- 4) Explain the types of temperature inversion
- 5) Explain the concept of Atmospheric Stability

## **IMPACTS OF CLIMATE CHANGE**

### **TWO MARKS**

- 1) List the few Projected impacts of climate change for different Regions
- 2) What is Irreversible Change and state the risk of Irreversible Climatic Changes
- 3) What are the causes of climate change?
- 4) What are the temperature factors affects the environment profile?
- 5) What are the uncertainties followed in the projected impacts of climate change?

### **SIXTEEN MARKS**

- 1) Explain the Climate Change on Various sectors such as Agriculture, Forestry and Ecosystem, Water Resources, Human Health.
- 2) Relate the impacts of Climate Change on Industry, Settlement & Society and brief its Methods & Scenarios.
- 3) Explain the uncertainties and risk of irreversible changes allowed in the climate change
- 4) Explain the projects impacts ratio in different parts of the world
- 5) How the industrial settlement involves in the reversible changes of climate change

## **OBSERVED CHANGES AND ITS CAUSES**

### **TWO MARKS**

- 1) Define CDM and elucidate the initiatives of CDM in India
- 2) Outline the concepts of Carbon Credits with an interpretation of Climate Sensitivity and its Feedbacks.
- 3) Define the terms UNFCCC & IPCC and also enumerate the involvement of India in these two treaties.
- 4) Who are the concerns for Intergovernmental Panel?
- 5) What is climate sensitivity
- 6) State the feedbacks response to the climate change sensitivity
- 7) State the objectives of Montreal protocol
- 8) State the objectives of Kyoto Prot

### **SIXTEEN MARKS**

- 1) Summarize the importance & invention of Kyoto Protocol across the world and also delineates its inception in India
- 2) Elaborate the initiation and Progression of Clean Development Mechanism and also extend with an elaboration of Intergovernmental Panel on Climate changes.
- 3) Explain the concepts of Climate sensitivity and feedback analysis
- 4) Explain with the principle of Montreal and Kyoto Protocols
- 5) Explain with a case study for the evidences of climate change in global level as well as in India level

## **CLIMATE CHANGE AND MITIGATION MEASURES**

### **TWO MARKS**

- 1) Expand CDM and state CDM
- 2) State the Principles of Carbon Trading
- 3) What are the countries involved in the carbon trading
- 4) Define bio-diesel and mention its application
- 5) What is Natural Compost?
- 6) What are the factors involved while selecting the Mitigation efforts for Climate change restriction

### **SIXTEEN MARKS**

- 1) Discuss the significance of Mitigation Efforts & its adaptation funding in India and also infer the requirements of Key Mitigation Technologies and their Practices.
- 2) Explain about some of the examples of Future Clean Technologies to protect our atmosphere.
- 3) Explain the functions:
  - i) Solar energy

- ii) Bio-fuel
- iii) Hydrogen energy
- iv) Hydroelectric power