PART - A

1. What is global warming? Agriculture contributes to both global warming and climate change mitigation-justify the statement. Enumerate principal air pollutants emitted from various sources. Give an account of climate resilient agriculture in your own words. (2+8+5+5=20)

2. Explain the concept of remote sensing and its possible uses in Indian agriculture scenario with suitable examples. (20)

3. Differentiate the following: (4×5=20)
   (a) Organic farming and Natural farming
   (b) Marginal value product and Marginal return
   (c) Market information and Market intelligence
   (d) Communication and Diffusion

4. Describe the mechanical, chemical and biological methods of weed control in reference to the North-East India. (20)

PART - B

5. Write short notes on any four of the following (4×5=20)
   (a) Soil acidity
   (b) Cation Exchange Capacity
   (c) 1:1 type minerals in Silicate clays
   (d) Vertisols
   (e) Conservation Agriculture
6. Enumerate components of integrated nutrient management for organic farming for a typical farm of Mizoram. Give an account of scope and practices of organic farming in Mizoram. Write a note on soil health card. Describe various ways and means of enhancing nutrient use efficiency in rice. (2+8+2+8=20)

7. Define agroforestry. Describe role of agroforestry in sustainable hill farming. How do the indigenous people of north-east India obtain their livelihood from forest products? Give an account of need and practices for conserving forest fauna and flora. (2+5+5+8=20)

8. What do you mean by problematic soil? What are the different types of problematic soil? Briefly explain the reclamation measures of acidic soil. (20)

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