INSTRUCTIONS: Answer ALL Questions in Section A and any TWO in Section B

SECTION A: Answer ALL Questions

1) List the total Environmental Factors on which food crop growth depend
2) Explain how climate appear as the dominant component of the plant environment
3) Suggest any two ways by which an agrometeorologist could successfully predict crop yield in advance
4) Classify the uncontrollable elements of the plant environment into 3 major groups
5) What are the factors affecting radiation distribution within the plant canopy?
6) What do you understand by photo periodic induction in plant growth?
7) What do you understand by cardinal temperatures? State the cardinal temperature for cool season and warm season crops
8) What are the climatic parameters for rating plant growth
9) Define thermal diffusivity
10) Distinguish between vernalization and thermo-periodicity

SECTION B: Answer only TWO Questions

11) Write short notes on the following
   (i) Specific distribution on solar radiation
   (ii) Physical properties controlling thermal behaviour of soils

12) (i) Distinguish between Net radiation and Energy balance
   (ii) Explain the influence of moisture on
       (a) Seed germination and vegetative growth
       (b) Carbon dioxide diffusion and photosynthesis

13) (i) With reference to the concept of hydrological cycle, discuss the role of climate in Water Resources Management in Nigeria
    (ii) Examine why radiation utilization by plants is regarded as wasteful