A   Reg. No. :

Question Paper Code: 99A07

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2023

Elective

Agricultural Engineering

19UAG907 - Design Of Greenhouse And Construction

(Regulation 2019)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Which green house classification based on covering material_____   CO1- R

   (a) Lean to type   (b) Glass glazing green house

   (c) Active cooling green house   (d) None

2. The most potent greenhouse gas in terms of efficiency is_____.   CO1- R

   (a) Nitrous oxide   (b) Carbon di oxide   (c) ChloroFluro Carbon   (d) Methane

3. Which of the following is used to measure direct solar radiation…..   CO2- R

   (a) pyrheliometer   (b) actinometer   (c) sunshine recorder   (d) pyradiometer

4. Actinometer is primarily used to measure…..and…...radiation.   CO2- R

   (a) infrared and ultraviolet   (b) visible and infrared

   (c) visible and ultraviolet   (d) infrared and UV-A

5. LST stands for………   CO3- R

   (a) land surface temperature   (b) local standard time

   (c) local solar temperature   (d) low surface temperature

6. Micro irrigation is otherwise is known as   CO3- R

   (a) tricle irrigation   (b) localized irrigation   (c) drip irrigation   (d) both a,b,c

7. Irrigation frequency of drip irrigation varies from   CO4- R

   (a) 1- 3days   (b) 1-5 days   (c) 1-7 days   (d) 1-10 day

8. Emission uniformity of emitted varies upto   CO4- R

   (a) 75%   (b) 80%   (c) 90%   (d) 100%

9. The time from sun rise to sun set termed as   CO5- R

   (a) slope   (b) day length   (c) local solar time   (d) solar intensity

10. In which of the following is direct from of renewable energy   CO5 -R

    (a) solar energy   (b) tidal energy   (c) geothermal energy   (d) bio energy

PART – B (5 x 2= 10Marks)

11. Define Greenhouse.   CO1- R

12. List out the greenhouse structural components.   CO2- R

13. Explain the distribution of solar radiation inside a greenhouse.   CO3- R

14. What are the types of irrigation system?   CO4- R

15. What are the components of surface drainage system?   CO5- R

PART – C (5 x 16= 80Marks)

16. (a) Explain in detail about the naturally ventilated greenhouse and its   CO1- U   (16)
         site selection.

                                    Or

    (b) Explain in detail about the scope and importance of greenhouse and   CO1- U   (16)
         list out the advantages and disadvantages.

17. (a) Explain the details about the floors, frame and structural   CO2 -U   (16)
         components

                                    Or

    (b) Explain the details about the greenhouse covering materials . its   CO2 -U   (16)
         advantage and disadvantage.

18. (a) Explain the details about the steady and unsteady state analysis   CO3- U   (16)
         greenhouse.

                                    Or

    (b) Explain the details about the thermal analysis of greenhouse   CO3 -U   (16)

19. (a) Explain the details about the types of irrigation methods.   CO4- U   (16)

                                    Or

    (b) Explain the details about the classification and Components of CO4 -U   (16)
         Sprinkler Systems .

20. (a) Explain the details about the materials for Pipe drainage systems. CO5- U (16)

Or

(b) Explain the details about the subsurface drainage systems. CO5- U (16)