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Question Paper Code: 99A07

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2024

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)

- 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
- The most potent greenhouse gas in terms of efficiency is _____. CO1- R
(a) Nitrous oxide (b) Carbon di oxide (c) ChloroFluro Carbon (d) Methane
- Which of the following is used to measure direct solar radiation..... CO2- R
(a) pyr heliometer (b) actinometer (c) sunshine recorder (d) pyradiometer
- 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
- LST stands for..... CO3- R
(a) land surface temperature (b) local standard time
(c) local solar temperature (d) low surface temperature
- Micro irrigation is otherwise is known as CO3- R
(a) tricle irrigation (b) localized irrigation (c) drip irrigation (d) both a,b,c
- 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 site selection. CO1- U (16)
 Or
 (b) Explain in detail about the scope and importance of greenhouse and list out the advantages and disadvantages. CO1- U (16)
17. (a) Explain the details about the floors, frame and structural components CO2 -U (16)
 Or
 (b) Explain the details about the greenhouse covering materials . its advantage and disadvantage. CO2 -U (16)
18. (a) Explain the details about the steady and unsteady state analysis greenhouse. CO3- U (16)
 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 Sprinkler Systems . CO4 -U (16)

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)