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Question Paper Code: 99A04

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

Professional Elective

Agricultural Engineering

19UAG904-LANDSCAPE DESIGN AND MANAGEMENT

(Regulations 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Which group of plants in gardens requires slightly less water for their emergence? CO1- U
(a) Regionally adapted plants (b) Turf grasses
(c) Regionally adapted plants (d) Turf grasses
2. The method suitable for irrigation of crops, vineyards, orchards and landscaping is CO1- U
(a) Rotary sprinkler system (b) Spray irrigation system
(c) Flooding (d) Drip irrigation system
3. The most labor-intensive method of irrigation is CO1- U
(a) Furrow irrigation (b) Basin and Border irrigation
(c) Drip irrigation (d) Spray irrigation
4. Which irrigation system involves less water loss? CO - U
(a) Lateral move irrigation system (b) Centre Pivot Irrigation System
(c) Low-pressure sprinkler irrigation system (d) High-pressure sprinkler system
5. Which of the following is the other name of perennial irrigation? CO1- U
(a) Flood irrigation (b) Controlled irrigation
(c) Surface irrigation (d) Subsurface irrigation
6. Space allotted for lawn in landscape designing? CO1- U

- (a) 25-30% (b)20-25% (c)30-35% (d) 35-40%
7. In sprinkler systems gear drive rotor and spray heads needs a minimum filtration about? CO1- U
- (a) 60 mesh (b) 70 mesh (c) 90 mesh (d) 80 mesh
8. Which of the following pipes are most commonly used in landscape irrigation? CO1- U
- (a) PVC pipes (b) Polyethylene
(c) PVC&Poly ethylene (d) All of the mentioned
9. The device used in measurement of moisture holding capacity of the soil is CO1-U
- (a)Hygrometer (b)Potentiometer (c)Tensiometer (d)Barometer
10. The device involved in closed loop control of automated landscape irrigation is CO1-U
- (a) Evaporimeter (b) Barometer (c) Lysimeter (d) Sphygmomanometer

PART – B (5 x 2= 10 Marks)

11. Differentiate drip irrigation and lawn sprinkler irrigation. CO1-U
12. Mention the significance of high-pressure water guns in landscape irrigation. CO1-U
13. What are the components of modern landscape irrigation system? CO1-U
14. List out the types of pipes used in modern irrigation system? CO1-U
15. What is time based automated irrigation system? CO1-U

PART – C (5 x 16= 80 Marks)

16. (a) Discuss the various aspects involved in design and installation of landscape irrigation CO1-U (16)
- Or
- (b) Describe the different techniques used in the landscape irrigation system. CO1-U (16)
17. (a) Discuss the importance of the following methods in landscape irrigation. CO1-U (16)
- (i) Lateral move irrigation (4 marks)
(ii) Sub irrigation (4 marks)
(iii) Center Pivot irrigation (4 marks)
(iv) Micro irrigation (4 marks)
- Or
- (b) Explain the basic principle and methodology involved in pop-up CO1-U (16)

sprinkler system of landscape irrigation

18. (a) Explain the irrigation system in landscapes and give its advantage and disadvantage? CO1-U (16)
- Or
- (b) Describe the water requirement for different landscape irrigation systems? CO1-U (16)
19. (a) i) Explain components of modern irrigation systems?(8mark) CO1-U (16)
ii)Factors to consider when choosing an irrigation system?(8mark)
- Or
- (b) Explain about modern methods of landscape irrigation? CO1-U (16)
20. (a) Explain the detail about working of irrigation controllers and its advantages and disadvantages. CO1-U (16)
- Or
- (b) Describe the various automation equipments used for landscape irrigation and their applications. CO1-U (16)

