A **Reg. No. :** | | | | | | | | | | |

Question Paper Code: 95A03

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2022

Fifth Semester

Agricultural Engineering

19UAG503 - MICRO IRRIGATION SYSTEM

(Regulations 2019)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Solar thermal Pump ,the commonly used pump is _____ CO2- App

   (a) jet pump (b) Submersible pump (c) Pistons pump (d) Centrifugal pump

2. An example of high head water turbine _____ CO1- U

   (a) pelton (b) propeller (c) Kaplan (d) banki

3. _____ Provided at the start of sub main to control the flow of water CO2- App

   (a) flush valve (b) control valve (c) non-return valve (d) air-release valve

4. _____ valve is always required for the positive displacement pump CO1- U

   (a) isolation (b) butterfly (c) gate valve (d) pressure relief

5. _____ Treatment is used to control the salt accumulation inside the drip system CO2- App

   (a) chlorine (b) acid (c) chlorine dioxide (d) chlorine gas

6. _____ is the heart of drip irrigation system CO3-U

   (a) emitter (b) filter (c) end cap (d) filter

7. _____Modern method of Irrigation CO1- R

   (a) Furrow (b)Border (c)Trickle (d) flood

8. _____ is the process of application of water soluble through drip irrigation system CO3- U

   (a) Chemigation (b) Fertigation (c) chlorination (d) acidification

9. The largest crop area covered by drip irrigation in India is under CO1- U

(a) plantation crops (b) orchards (c) vegetable crops (d) fiber crops

10. The J-lock dripper of Jain make is of _____ type emitter CO2 -App

(a) self-flushing (b) pressure compensating

(c) clog resistant (d) non-pressure compensating

PART – B (5 x 2= 10Marks)

11. Explain Vertical Turbine pumps CO1- U

12. Explain about Pressure relief valve CO1- U

13. Analyze Differentiate between Traditional and Micro irrigation methods? CO3- Ana

14. Describe Chemigation? CO4- U

15. List out the Components of Sprinkler irrigation? CO2- App

PART – C (5 x 16= 80Marks)

16. (a) Explain the Principle and working of centrifugal pump Draw a sketch of and label its parts? CO1- U (16)

Or

(b) Briefly explain water lifting technology traditional methods? CO1- U (16)

17. (a) Briefly explain & draw a sketch of Pressure relief valve and Gate valve? CO2 -App (16)

Or

(b) Briefly explain & draw a sketch of Isolated valve and Non return valve? CO2 -U (16)

18. (a) Define Micro irrigation? Comparison between Traditional and Micro irrigation methods? CO1- U (16)

Or

(b) Merits and demerits of micro irrigation system? CO1 -U (16)

19. (a) Explain about Operation and maintenance of Sprinkler irrigation system? CO1 -U (16)

Or

(b) Illustrate Layout-Components of drip irrigation system, explain with neat sketches. CO3 -App (16)

20.	(a)	Briefly explain about Sprinkler selection & spacing and Capacity of sprinkler system and Merits and demerits of sprinkler irrigation system?	CO1- U	(16)
		Or		
	(b)	Considered the area of 1ha square area planted with Flower Crop with spacing of 2mx2m. Design Sprinkler irrigation system?	CO5- C	(16)