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

Question Paper Code: 59A05

B.E./B.Tech. DEGREE EXAMINATION, NOV 2019

Elective

Agriculture Engineering

15UAG905 - MICRO IRRIGATION

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Turbine pumps, the impeller are surrounding by _____. CO1 R

   (a) Diffuser type (b) Volute casing (c) Cylinder (d) Plunger

2. Solar thermal Pump ,the commonly used pump is _____ CO1- R

   (a) . jet pump (b) . Submersible pump

   (c) . Pistons pump (d) . Centrifugal pump

3. _____Provided at the start of submain to control the flow of water. CO2- R

   (a) Flush valve (b) Control valve (c) Non-return valve (d) Air-release valve

4. _____ a valve allows a medium to flow in only one direction. CO2- R

   (a) Non return valve (b) Butterfly (c) Solenoid (d) Gate valve

5. The first experiment on drip irrigation possibly were started in country CO3- R

   (a) U.S.A (b) U.K (c) Germany (d) Brazil

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

   (a) Emitter (b) Filter (c) End cap (d) None of the above

7. The type of filter will depends upon_____ CO4- R

   (a) Soil type (b) Crop type (c) Water source (d) Source and quality of water

8. The volume of solution that the venturi is capable of injection is called CO4- R

(a) Volume rate (b) Injection rate (c) Velocity rate (d) Application rate

9. The diameter of the area covered by a rotating type permanent overhead type of sprinkler system ranges from CO5- R

(a) 15 to 20 m (b) 20 to 30 m (c) 30 to 45 m (d) 40 to 50 m

10. The flow cross-section of orifice emitter is_____ mm. CO5- R

(a) 0.1-0.3 (b) 0.2-0.4 (c) 0.2-0.6 (d) 0.5-0.7

PART – B (5 x 2= 10 Marks)

11. Define centrifugal pump. CO1- R

12. Explain Automated control valve. CO2- U

13. Explain about Gravity fed micro irrigation. CO3- U

14. Draw a schematic diagram Layout-Components drip irrigation system. CO4- U

15. Merits of Sprinkler irrigation system. CO5- R

PART – C (5 x 16= 80 Marks)

16. (a) Briefly explain water lifting technology traditional methods. CO1- U (16)

Or

(b) Draw a sketch of Jet and Airlift pumps and label its parts. What is the Principle of operation? CO1- U (16)

17. (a) Briefly explain & draw a sketch of Butterfly valve-Solenoid valves. CO2- U (16)

Or

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

18. (a) Briefly explain about Types and components of micro irrigation system. CO3- U (16)

Or

(b) Briefly explain about Maintenance of Micro Irrigation System- Gravity fed micro irrigation. CO3- U (16)

19.	(a)	Layout-Components of drip irrigation system, explain with neat sketches.	CO4- Ana	(16)
		Or		
	(b)	Design and Operation & maintenance of surface and sub-surface drip irrigation.	CO4- Ana	(16)
20.	(a)	Briefly explain about Sprinkler irrigation irrigation.	CO5- U	(16)
		Or		
	(b)	Layout-Components of sprinkler irrigation system, explain with neat sketches.	CO5- U	(16)