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Question Paper Code: 59G52A

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Interdisciplinary

Mechanical Engineering

15UGM952 - AUTOMATION IN AGRICULTURE

(Common to Information Technology)

(Regulation 2015)

Duration: 1:15 hours

Maximum: 30Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. The application of engineering and technology in agricultural operations to do a better way to improve productivity CO1- R
(a) Custom hiring (b) Farm mechanization
(c) Farm machinery (d) All of the above
2. The thermal efficiency of diesel engine varies between _____ percent. CO1- R
(a) 25 - 32 (b) 32 - 38 (a) 25 - 32 (b) 32 - 38
3. The normal depth of operation (ploughing) in subsoiler is: CO2- R
(a) 15-35 cm (b) 35-65 cm (a) 15-35 cm (b) 35-65 cm
4. The shovel of cultivator is made up of CO2- R
(a) Chilled cast iron (b) Cast iron (c) Mild steel (d) Soft centre
5. What are the two methods of irrigation which conserve water? CO3- R
(a) Drip (b) Sprinkler (a) Drip (b) Sprinkler
6. In which of the following systems, the water falls drop by drop just at the position of the roots CO3- U
(a) Sprinkler system (b) Sip system (c) Drip system (d) All of the above
7. In any solar-power system, the most important device used CO4- U
(a) Solar charge controller (b) Solar battery
(c) Solar converter (d) None of the above

8. The available traditional methods of irrigation CO4- R
 (a) Drip irrigation (b) Ditch irrigation (c) Sprinkler system (d) All of the above
9. Demeter is a type of robot used for CO5- U
 (a) Remove the weed (b) Cutting the crops
 (c) Cut the grass in lawns (d) Tending
10. Which one of the following is used in Vision intelligence for precision agriculture? CO5- R
 (a) Yield estimation (b) Pest infestation
 (c) Fertilizer application (d) Chemical application

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Define farm mechanization? Explain the concept and benefits of farm mechanization. CO1- U (8)
12. What are the different types of disc harrow? Describe the working of off-set disc harrow.. CO2-U (8)
13. Explain the hybrid method of timer/sensor used in automatic irrigation system. CO3- U (8)
14. Enlighten in detail about the automated irrigation system using soil moisture, CO4- U (8)
15. Explain about the Concept of Multiple Robots and Multi Robot Structure. CO5- U (8)