Register No : _____

# THE KAVERY ENGINEERING COLLEGE

***(An Autonomous Institution)***

**B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2025**

***Sixth Semester***

**Agricultural Engineering**

**AI3016 – On-Farm Water Management**

***Regulations -2021***

***Duration : 3 Hrs*** ***Maximum : 100 Marks***

***PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)***

| *Q.No* | *Questions* | *BLT* | *CO* | *Marks* |
|---|---|---|---|---|
| 1. | Define Erodible channel. | L1 | 1 | 2 |
| 2. | Write the functions are of cross regulator? | L2 | 1 | 2 |
| 3. | Write note on duty. | L2 | 2 | 2 |
| 4. | Difference between catchment and command area. | L2 | 2 | 2 |
| 5. | What is dependable rainfall? | L2 | 3 | 2 |
| 6. | Recall the term of “conjunctive use”. | L2 | 3 | 2 |
| 7. | What is reliability? | L2 | 4 | 2 |
| 8. | What you meant by water use efficiency? | L2 | 4 | 2 |
| 9. | List out the purpose of land reclamation. | L1 | 5 | 2 |
| 10. | State that darcy’s law. | L1 | 5 | 2 |

***PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)***

| *Q.No* | | | *Questions* | *BLT* | *CO* | *Marks* |
|---|---|---|---|---|---|---|
| 11. | a | | Write the components of diversion head works with neat sketches. | L2 | 1 | 16 |
| | | | **Or** | | | |
| | b | i | Explain in details levelling methods and suitable diagram. | L2 | 1 | 8 |
| | | ii | Differentiate Kennedy’s and Lacey’s theories. | L2 | 1 | 8 |
| 12. | a | | Describe in detail about CADP programme and its important. | L2 | 2 | 16 |
| | | | **Or** | | | |
| | b | | Explain the techniques in on farm water management options for | L2 | 2 | 16 |

increasing irrigation efficiency in command area.

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|---|---|---|---|---|---|---|
| 13. | a | i | Explain in detail factors affecting irrigation demand. | L2 | 3 | 8 |
| | | ii | Explain about rainfall analysis by markov chain method. | L2 | 3 | 8 |
| | | | **Or** | | | |
| | b | | Explain in detail about conjunctive use of surface water and ground water and its advantages. | L2 | 3 | 16 |
| 14. | a | | What are the various performance indicators of appropriateness? Explain in details. | L2 | 4 | 16 |
| | | | **Or** | | | |
| | b | | Explain in detail conjunctive use plan by optimization. | L2 | 4 | 16 |
| 15. | a | | Explain in details hooghoudt's equation and its method. | L2 | 5 | 16 |
| | | | **Or** | | | |
| | b | | Summarize the various classification of agricultural drainage. | L2 | 5 | 16 |