Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov/Dec– 2017**

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|  |  |  |  |
| **Code :** | **15CE2001** | **Duration :** | **3hrs** |
| **Sub. Name :** | **IRRIGATION ENGINEERING** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Explain the factors that govern the necessity of irrigation. | CO1 | 10 |
| b. | What are the methods of improving duty? | CO1 | 10 |
| (OR) | | | | |
| 2. |  | Explain the methods of irrigation in detail with flowchart and sketches. | CO1 | 20 |
|  |  |  |  |  |
| 3. |  | Define runoff. List the factors affecting runoff. What are the methods used to compute runoff. | CO2 | 20 |
| (OR) | | | | |
| 4. |  | What is rain gauge? What are the different rain gauges used? Explain them with sketches. | CO1 | 20 |
|  |  |  |  |  |
| 5. |  | What is canal lining? What are its advantages? Discuss the types of canal lining in detail. | CO3 | 20 |
| (OR) | | | | |
| 6. |  | Define the terms i. Aquifer, ii. Aquiclude iii. Aquifuge iv.Aquitard v. specific yield. | CO2 | 20 |
|  |  |  |  |  |
| 7. |  | Design an irrigation channel to carry 50m3/s of discharge. The channel is to be laid at a slope of 1 in 4000. The critical velocity ratio for the soil is 1.1. Use Kutter'srugorsity Coefficient as 0.023. | CO3 | 20 |
| (OR) | | | | |
| 8. |  | Design a regime channel of or a discharge of 50 cumecs and silt factor 1:1 using Lacey's Theory. | CO2 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Explain water logging, its causes and the effects. | CO3 | 8 |
|  | b. | What is the necessity of river training works? Describe in brief different types of river training works? | CO3 | 12 |

ALL THE BEST