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

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **17CE3028** | **Duration :** | **3hrs** |
| **Sub. Name :** | **FORENSIC ENGINEERING** | **Max. marks :** | **100** |

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

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| **Q. No.** |  | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Write short notes on the following:   1. Material deficiency in RCC structures. 2. Overloading. 3. Design error. | CO2 | 20 |
| (OR) | | | | |
| 2. |  | Discuss the different causes of distress in structural members with neat sketches. | CO2 | 20 |
|  |  |  |  |  |
| 3. |  | Explain the following:   1. Type of cracks and its pattern. 2. Diagnosis of structural/non structural cracks. | CO1 | 20 |
| (OR) | | | | |
| 4. |  | List the different types of assessment techniques by NDT, also discuss in detail some of the advanced techniques. | CO6 | 20 |
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|  |  |  |  |  |
| 5. |  | Describe in detail the following:   1. Corrosion of steel. 2. Carbonation and chloride attack in concrete. | CO3 | 20 |
| (OR) | | | | |
| 6. |  | Examine the factors affecting the durability characteristics of concrete. | CO3 | 20 |
|  |  |  |  |  |
| 7. |  | Explain the causes and remedies of foundation failures with case studies. | CO2 | 20 |
| (OR) | | | | |
| 8. |  | Write short notes on the following:   1. Soil liquefaction. 2. Lateral instability. | CO3 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Explain the following strengthening techniques.   1. Retrofitting of RC members by fiber sheets. 2. Repair of damaged concrete by polymers and coatings. | CO5 | 20 |