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



**End Semester Examination – Nov / Dec – 2019**

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|  |  |  |  |
| **Code :** | **14MA2003** | **Duration :** | **3hrs** |
| **Sub. Name :** | **MATHEMATICAL TRANSFORMS** | **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. | Find. | CO1 | 10 |
| b. | Find . | CO1 | 10 |
| **(OR)** | | | | |
| 2. | a. | Find . | CO1 | 10 |
| b. | Evaluate by using Laplace transform. | CO1 | 10 |
|  |  |  |  |  |
| 3. | a. | Find . | CO1 | 10 |
| b. | Find . | CO1 | 10 |
| **(OR)** | | | | |
| 4. | a. | Find . | CO1 | 10 |
| b. | Solve  given,  using Laplace transform. | CO1 | 10 |
|  |  |  |  |  |
| 5. | a. | Find the Fourier transform of  and hence find . | CO2 | 10 |
| b. | Using Parseval’s identity, prove that . | CO2 | 10 |
| **(OR)** | | | | |
| 6. | a. | Find the finite Fourier Cosine and Sine Transform of and hence evaluate the Fourier Sine Transform of . | CO2 | 10 |
| b. | Find the Fourier transform ofHence find  . | CO2 | 10 |
|  |  |  |  |  |
| 7. | a. | Find . | CO3 | 10 |
| b. | Find . | CO3 | 10 |
| **(OR)** | | | | |
| 8. | a. | Find (i)  (ii) . | CO3 | 10 |
| b. | Find . | CO3 | 10 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Solve, given and . | CO3 | 10 |
| b. | Find the inverse Z-transform of using Residue method. | CO3 | 10 |