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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – April/May – 2017**

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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. | Prove that . | CO1 | 10 |
| b. | Find the Laplace Transform of a periodic function of *f(t),*  where | CO1 | 10 |
| 3. | a. | Find . | CO1 | 10 |
|  | b. | Solve given ,  using laplace transform. | CO1 | 10 |
| (OR) | | | | |
| 4. | a. | Using Convolution Theorem, evaluate  . | CO1 | 10 |
|  | b. | Find | CO1 | 10 |
| 5. |  | Find the Fourier sine and cosine transform of . | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Find  and  and hence obtain  and . | CO2 | 20 |
| 7. | a. | Derive  and | CO2 | 12 |
|  | b. | Find | CO2 | 4 |
|  | c. | Find  by deriving | CO2 | 4 |
| (OR) | | | | |
| 8. | a. | Find | CO2 | 7 |
|  | b. | Find | CO2 | 7 |
|  | c. | Find | CO2 | 6 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Solve given , | CO3 | 10 |
|  | b. | Use partial fraction to evaluate | CO3 | 5 |
|  | c. | Use residue method to evaluate | CO3 | 5 |

ALL THE BEST