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

G:\logo and QP Template\logo 3 Feb 2018 final.tif

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

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Code : 14MA2003** |  | **Duration :** | **3hrs** |
| **Sub. Name : MATHEMATICAL TRANSFORMS** |  | **Max. marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Find | CO1 | 10 |
| b. | Find | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | Find by using Laplace transform. | CO1 | 10 |
| b. | Find . | CO1 | 10 |
|  |  |  |  |  |
| 3. | a. | Using convolution theorem, find . | CO1 | 10 |
| b. | Find | CO1 | 10 |
| (OR) | | | | |
| 4. | a. | Solve , given that  and | CO1 | 10 |
| b. | Find (i)  (ii) | CO1 | 10 |
| 5. | a. | Find the Fourier transform of and hence find | CO2 | 10 |
| b. | Find the Fourier sine and cosine transform of . | CO2 | 10 |
| (OR) | | | | |
| 6. | a. | Find the Fourier transform of  and hence find . | CO2 | 10 |
|  | b. | Find the Fourier sine transform of . | CO2 | 10 |
| 7. | a. | Find  and . | CO3 | 8 |
| b. | Derive,  and then using these results find . | CO3 | 12 |
| (OR) | | | | |
| 8. | a. | Derive . | CO3 | 8 |
| b. | Find (i)  (ii) . | CO3 | 12 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Find | CO3 | 10 |
| b. | Solve, given and | CO3 | 10 |