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

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

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|  |  |  |  |  |
| **Code** | **13MA201** |  | **Duration :** | **3hrs** |
| **Sub. Name** | **BASIC MATHEMATICS TO 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. | Resolve into partial fractions. | CO1 | 10 |
| b. | Expandusing binomial theorem. | CO | 10 |
| (OR) | | | | |
| 2. | a. | Prove the identity | CO1 | 10 |
| b. | Find the angle between two straight lines and | CO1 | 10 |
|  |  |  |  |  |
| 3. | a. | Find the derivative of . | CO1 | 10 |
| b. | Find the derivative of . | CO1 | 10 |
| (OR) | | | | |
| 4. | a. | Integrate  with respect to x. | CO1 | 10 |
| b. | Evaluate. | CO1 | 10 |
|  |  |  |  |  |
| 5. |  | If , find the value of | CO1 | 20 |
| (OR) | | | | |
| 6. |  | Expandupto third degree using Taylor’s theorem. | CO1 | 20 |
|  |  |  |  |  |
| 7. | a. | Find the distance between the points A and B whose position vectors are and | CO1 | 10 |
| b. | Find the angle between the vectors and | CO1 | 10 |
| (OR) | | | | |
| 8. |  | Show that the lines  and  are coplanar and hence find the point of intersection. | CO1 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Find the eigen values and eigen vectors of A = | CO1 | 20 |