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 – Nov/Dec – 2016**

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|  |  |  |  |
| **Code :** | **13MA202** | **Duration :** | **3hrs** |
| **Sub. Name :** | **CALCULUS AND STATISTICS** | **Max. marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Solve | CO1 | 10 |
| b. | Solve | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | Solve | CO1 | 10 |
| b. | Solve by the method of variation of parameters | CO1 | 10 |
| 3. | a. | Change the order of integration and then evaluate | CO1 | 12 |
|  | b. | Evaluate | CO1 | 8 |
| (OR) | | | | |
| 4. |  | Evaluate  over the positive octant of the sphere | CO1 | 20 |
| 5. |  | Prove that | CO1 | 20 |
| (OR) | | | | |
| 6. |  | Prove that | CO1 | 20 |
| 7. | a. | Solve | CO1 | 10 |
|  | b. | Solve | CO1 | 10 |
| (OR) | | | | |
| 8. | a. | Form the partial differential equation by eliminating f from | CO1 | 10 |
|  | b. | Solve | CO1 | 10 |
|  | | **Compulsory:** |  |  |
| 9. |  | Calculate the correlation coefficient for the following heights (in inches) of fathers (X) and their sons(Y):   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | X | 65 | 66 | 67 | 67 | 68 | 69 | 70 | 72 | | Y | 67 | 68 | 65 | 68 | 72 | 72 | 69 | 71 |   Also obtain the lines of regression. | CO1 | 20 |