**King Saud University Math 106**

**Science and Medical Studies Section for girls 1st Semester 1432**

**College of Science 1stMidterm Exam**

**Department of Mathematics 90 Minutes**

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| **Student’s Name:** | | | | | **Student ID.:** | | | | |
| **Group No.:** | | | | | **Teacher's Name:** | | | | |
|  | | | | | | | | | |
| **Question No.** | **I** | | **II** | **III** | | **IV** | **Total** | |
| **Mark** |  | |  |  | |  |  | |
| **QUESTION I**   1. **Choose the correct answer :** | | | | | | | | | |
| 1. If, then is | | | | | | | | | |
| i. | | ii. | | | iii. | | | iv. | |
| 2. Ifand  then  is equal to: | | | | | | | | | |
| i. 13 | | ii. -7 | | | iii.7 | | | iv. -13 | |
| 3. If  and , then  equals: | | | | | | | | | |
| i. | | ii.0 | | | iii. | | | iv. 1 | |
| 1. Find the value of c that satisfies the Integral Mean Value Theorem for  on | | | | | | | | | |
| **QUESTION II**   1. Without evaluating the integrals, prove that | | | | | | | | | |
| 1. For , find  then prove that .   **QUESTION III**   1. Find the area under the curve  on  using the limit of Riemann sum and right endpoints. | | | | | | | | | |
| 1. Use The Trapezoidal rule with n=4 to approximate the integral | | | | | | | | | |
| **QUESTION IV**Evaluate the following integrals | | | | | | | | | |
|  | | | | | | | | | |
| 1. . | | | | | | | | | |
| 1. , where   GOOD LUCK ☺ | | | | | | | | | |