**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 integrals1.
 |
| 1.
 |
| 1. .
 |
| 1. , where $f\left(x\right)=\left\{\begin{array}{c}2x, \&x<1\\4^{x}, \&x\geq 1\end{array}\right.$

 GOOD LUCK ☺ |