**King Saud University Math 111**

**Science and Medical Studies Section for girls 1st Term 1432-1433H**

**College of Science 1st Midterm 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**  **A.**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 |
| **B.** Prove that if  is continuous on  and  is an antiderivative of, then. | | | | | | | |
| **QUESTION II**  **A.** Find the area under the curve  on  using the limit of Riemann sum and right endpoints. | | | | | | | |
| **B.**Without evaluating the integrals, prove that | | | | | | | |
| **QUESTION III**  **A**. Find the value of c that satisfies the conclusion of the Integral Mean Value Theorem**:** | | | | | | | |
| **B**. For, find, then prove that. | | | | | | | |
| **QUESTION IV**  Evaluate the following integrals**:** | | | | | | | |
| i. | | | | | | | |
| ii.. | | | | | | | |
| iii.        GOOD LUCK ☺ | | | | | | | |