**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 ☺ |