|  |  |  |
| --- | --- | --- |
| **King Saud University** | KSU logo tiff.tif | **Math 106** |
| **Science and Medical Studies Section for girls** | **First Term 1432-33H** |
| **College of Science**  | **Second Midterm Exam** |
| **Department of Mathematics** | **105 Minutes** |

|  |  |
| --- | --- |
| **Name:** | **Student No.:** |
| **Section No.:** | **Staff member name:** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Question No** | **I** | **II** | **III** | **IV** | **Total** |
| **Mark** |  |  |  |  |  |

|  |
| --- |
| **Question I****Evaluate the following integrals:** |
|  |
|  |
|  |
|  |
|  |

|  |
| --- |
| **Question II**1. **Use the substitution to prove that**

**.**1. **Compute .**
2. **Conclude .**
 |

|  |
| --- |
| **Question III****Use an appropriate trigonometric substitution to show that** **.** |

|  |
| --- |
| **Question IV**1. **Evaluate for .**
2. **Determine whether the improper integral converges or diverges.**
 |

Good Luck