Department of Mathematics

College of Sciences

King Saud University

Math 111

1st midterm examination

First semester, 1430H

Time: 90 Minutes

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| **Name:**  **ID: Section:** |
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| **Q1. (a).** State and prove the Integral Mean Value Theorem. |
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| **(b).** Find the value of *c* that satisfies the Integral Mean Value Theorem for the function  on . |
|  |
| **(c).** Prove that |
|  |
| **Q2. (a).** Evaluateusing Riemann sum and left end points. |
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| **(b).** If , find . |
|  |
| **(c).** Evaluate the following integrals:  **(i)**.  **(ii).** |
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| **Q3. (a).** Compute Simpson’s rule approximation with n=4, for . |
|  |
| **(b).** Evaluate the following integrals:  **(i).**  **(ii).** |

Good Luck