Test 2 Version C (12:10 pm – 2:00 pm) – SOLUTIONS

A1. [**2 marks**] Write a possible value of b for which the following integral will be an **improper integral**. If there is no such value, write "Not possible".

$$\int_2^4 \frac{1}{x-b}dx$$

Solution: b can be any number between 2 and 4, including but not limited to 2, 1.1, 3, 3.5, and 4.

A2. [**2 marks**] If it converges, evaluate $\int_1^\infty 3xe^{-x^2}dx$ and write its value in the box below. If the integral does not converge, write "does not converge".