

## UWC Integrator of the Year Competition 2009

Name:

Campus :

- A. NO CALCULATORS OR NOTES WILL BE ALLOWED
- B. Evaluate the following integrals.
- C. Simplify your answers
- D. Each question will carry 4 points.
- E. Your answers must be accompanied by sufficient work.
- F. Please write your final answer in the box provided.

1.  $\int \frac{1}{e^x+1} dx$

Answer :

$$2. \int \frac{x^4}{\sqrt{4-x^2}} dx$$

Answer :

3.  $\int \frac{1}{x^4-x} dx$

Answer :

4.  $\int \frac{(x^2+x-5)e^x}{(x-1)^2} dx$

Answer :