

Test Total

Name _____

Exam 2 Calculus II Dr. Clemons

I. Evaluate the following improper integrals. State whether the integral converges or diverges.

(1) $\int_1^{\infty} \frac{1}{x \ln x} dx$

13 pts

(2) $\int_0^{\pi/2} (\tan x - \sec x)^2 dx$

13 pts

Pg 1 Tot: 26

Name _____

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II. Evaluate the following integrals. Partial Credit will be given only for application of appropriate methods.

(1) $\int \frac{x^2}{\sqrt{4-x^2}} dx$

11 pts

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

11 pts

Pg 2 Tot: 22

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(3) $\int \frac{x^2 + x + 6}{x^3 - 3x^2} dx$

11 pts

(4) $\int e^{-x} \sin(2x) dx$

11 pts

Pg 3 Tot: 22

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(5) $\int \sqrt{1 + e^x} dx$

11 pts

(6) $\int \tan^{-1} x dx$

11 pts

(7) $\int \frac{x+1}{x^2+4} dx$

11 pts

Pg 4 Tot: 33