KFUPM | Term 172 | Date: 26/3/2018

Mathematics & Statistics | MATH 102 | Duration: 40 minutes

Class Test 2

Name: | ID #: | Section: 37 | Serial #:

1. Evaluate (if possible) $\int e^{ax} \sin bx \; dx$.

2. Find the average value of the function $f(x) = \coth^2 x$ where $0 \leq x \leq \ln 2$.

3. Evaluate (if possible) $\int \frac{3x^2+13x+12}{(x+1)(x^2+4x+5)} \; dx$.

P.T.O. ➔

4. If $F(x) = \int_0^x e^{e^t}\, dt$ is a continuous function then evaluate $\int_1^2 \frac{e^x}{x}\, dx$ interms of $F(x)$.

5. Evaluate (if possible) $\int x^5 e^{-4x^3}\, dx$.

*With My Best Wishes*

KFUPM | Term 172 | Date: 28/3/2018

Mathematics & Statistics | MATH 102 | Duration: 40 minutes

Class Test 2

Name: | ID #: | Section: 8 | Serial #:

1. Evaluate (if possible) $\int \ln^2 x \ dx$.

2. Compute (if possible) $\int_1^{\infty} \frac{dx}{x\sqrt{x^2-1}}$.

3. Find the volume of the solid generated from revolving the region, bounded by $y = \ln(x)$, $y = 2$, and $x = 0$, about $y = -1$.

P.T.O. ➔

4. Find the average value of the function $f(x) = \sin(\ln x)$ where $1 \leq x \leq e$.

5. Evaluate (if possible) $\int \cos^5 x \csc x \ dx$

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Class Test 2

Name: | ID #: | Section: 34 | Serial #:

1. Compute $\int_0^{\sqrt{3}} \frac{x^5}{\sqrt{x^2+1}}\, dx$.

2. Find the average value of the function $f(x) = \sin^3 x \cos^3 x$ where $-\pi \leq x \leq \pi$.

3. Evaluate (if possible) $\int \frac{x^3+3x^2+3x+9}{x^4+12x^2+27}\, dx$.

P.T.O. ➔

4. Evaluate (if possible) $\int \sqrt{1+\sqrt{x}}\, dx$.

5. Find the volume of the solid generated from revolving the region bounded by the curve of the function $y = e^{3x}$, $y = 1$, and $x = 1$ about the line $y = -1$.

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Mathematics & Statistics | MATH 102 | Duration: 40 minutes

Class Test 2

Name: | ID #: | Section: 42 | Serial #:

1. Evaluate (if possible) $\int \frac{dx}{\sqrt[4]{16x}-\sqrt[3]{8x}}$.

2. Find the length of the curve of $x = \sqrt{9 - y^2}$ from $y = -2$ to $y = 2$.

3. Evaluate (if possible) $\int \frac{\sqrt{\cot x}\ dx}{\cos^4 x}$.

P.T.O. ➔

4. Using cylindrical shells method, find the volume of the solid obtained by rotating about the $y$–axis the region bounded by $y = \arctan x$ and the line $y = 0$ and $x = 1$.

5. Evaluate (if possible) $\int \frac{dx}{2\sin x + \cos x + 2}$.

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