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CALCULUS II

QUIZ 2 B 3RD PARTIAL

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MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question. (12.5 pts each one)

Evaluate the integral.

1) $\int 4xe^x\,dx$ 1) A ✓

A) $4xe^x - 4e^x + C$ B) $xe^x - 4e^x + C$ C) $4e^x - e^x + C$ D) $4e^x - 4xe^x + C$

2) $\int e^{5x}\cos 4x\,dx$ 2) ____ Anidada ✓

A) $\frac{e^{5x}}{2}[\sin 4x + \cos 4x] + C$ B) $\frac{1}{41}[4e^{5x}\sin 4x + 5\cos 4x] + C$

C) $\frac{e^{5x}}{41}[4\sin 4x + 5\cos 4x] + C$ D) $\frac{e^{5x}}{41}[4\sin 4x - 5\cos 4x] + C$

3) $\int (2x-1)\ln(24x)\,dx$ 3) A ✓

A) $\left(x^2 - x\right)\ln 24x - \frac{x^2}{2} + x + C$ B) $\left(x^2 - x\right)\ln 24x - \frac{x^2}{2} + 2x + C$

C) $\left(\frac{x^2}{2} - x\right)\ln 24x - \frac{x^2}{4} + x + C$ D) $\left(x^2 - x\right)\ln 24x - x^2 + x + C$

4) $\int 23x\cos\frac{1}{2}x\,dx$ 4) B ✓

A) $23x\sin\left(\frac{1}{2}\right)x - 46\cos\left(\frac{1}{2}\right)x + C$ B) $46x\sin\left(\frac{1}{2}\right)x + 92\cos\left(\frac{1}{2}\right)x + C$

C) $92\sin\left(\frac{1}{2}\right)x - 46x\cos\left(\frac{1}{2}\right)x + C$ D) $23\sin\left(\frac{1}{2}\right)x + 46x\cos\left(\frac{1}{2}\right)x + C$

5) $\int e^{2x}x^2\,dx$ 5) B ✓

A) $(1/2)x^2e^{2x} - (1/4)xe^{2x} + (1/4)e^{2x} + C$ B) $(1/2)x^2e^{2x} - (1/2)xe^{2x} + (1/4)e^{2x} + C$

C) $(1/2)x^2e^{2x} - (1/2)xe^{2x} + C$ D) $(1/2)x^2e^{2x} - xe^{2x} + (1/4)e^{2x} + C$

② Anidada

③ $\ln 24x$ $\frac{24}{24x} = \frac{1}{x}$ $2x-1$ x^2-x $(x^2-x)\ln|24x| - \int$ $x^2-x\ln|24x| - \frac{x^2}{2}$

$4x\,e^x - 4e^x$

4. $+2\ 3x$ -23 0 $\cos\frac{1}{2}x$ $2\sin\left(\frac{1}{2}x\right)$ $-4\cos\left(\frac{1}{2}x\right)$

$46x\sin\left(\frac{x}{2}\right) + 92\cos\left(\frac{x}{2}\right)$