

eExam Question Bank

Coursecode:

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	Question Type	Question	A	B	C
<input type="checkbox"/>	MCQ	Given $f(x) = (7x^4 - 5x^3)$, evaluate $\frac{df(x)}{dx}$	$7x^4 - 5x^3$	$2x^3 - 15x^2$	$28x^2 - 15x^2$
<input type="checkbox"/>	MCQ	Evaluate $\int x^2 e^{3x} dx$	$\frac{e^{3x}}{3} \left(x^2 - \frac{2x}{3} + \frac{2}{9} \right) + c$	$-\frac{e^{3x}}{3} \left(x^2 + \frac{2x}{3} - \frac{2}{9} \right) + c$	$\frac{e^{2x}}{3} \left(x^3 - \frac{x}{4} + \frac{2}{9} \right) + c$
<input type="checkbox"/>	MCQ	Find the volume of a sphere generated by a semicircle $y = \sqrt{(r^2 - x^2)}$ revolving around the x-axis	$-\pi \frac{-r^3}{2}$	$4\pi \frac{r^3}{2}$	$\pi \frac{r^3}{4}$
<input type="checkbox"/>	MCQ	Determine $\int \frac{x^2 + 1}{(x + 2)^3} dx$	$\ln(x + 2) + \frac{4}{x + 2} - \frac{5}{2(x + 3)^2} + c$	$\ln(x + 2) - \frac{4}{x + 2} - \frac{5}{2(x + 3)^2} + c$	$-\ln(x + 2) - \frac{4}{x + 2} - \frac{5}{2(x + 3)^2}$
<input type="checkbox"/>	MCQ	Evaluate $\int \frac{x + 1}{x^2 - 3x + 2} dx$	$3\ln(x + 2) - 2\ln(x + 1) + c$	$3\ln(x - 2) - 2\ln(x - 1) + c$	$-3\ln(x - 2) - 2\ln(x - 1) +$
<input type="checkbox"/>	MCQ	Integrate with respect to x : $\int_1^4 \frac{x + 1}{\sqrt{x}} dx$	$\frac{20}{3}$	20	$\frac{3}{20}$
<input type="checkbox"/>	MCQ	Integrate with respect to x : $\int_{-1}^3 \frac{x}{\sqrt{7 + x^2}} dx$	$2\sqrt{2}$	$4\sqrt{2}$	$4 - 2\sqrt{2}$
<input type="checkbox"/>	MCQ	Integrate with respect to x : $\int_{-1}^2 \frac{x^2}{(x^3 + 4)^2} dx$	12	$\frac{1}{2}$	6

	MCQ	Evaluate $\int_{-1}^2 y^2 + y^{-2} dy$	$\frac{7}{16}$	$\frac{3}{16}$	$\frac{17}{16}$
	MCQ	Find the integral with respect to x $\int \cos x \sin x dx$	$\frac{\sin^2 x}{2} + c$	$\sin 2x + c$	$\frac{\cos^2 x}{2} + c$
	MCQ	Evaluate $\int x^2(3-10x^3)^5 dx$	$\frac{1}{150}(3-10x^3)^6 + c$	$\frac{1}{10}(1-10x^2)^5 + c$	$\frac{1}{15}(3-20x^3)^5 + c$
	MCQ	Evaluate $\int 3e^x + 5\sin x - 10\sec(x) dx$	$3e^x + \cos x - 10\sec x + c$	$3e^x + 5\sin x - 10\sec x + c$	$3e^x + 5\sin x - 10\sec x + c$
	MCQ	Evaluate $\int \cos(6x+4) dx$	$\frac{1}{6}\sin(6x+4) + c$	$\frac{1}{6}\cos(6x+4) + c$	$\frac{1}{6}\tan(6x+4) + c$
	MCQ	Evaluate $\int (3x+2)^7 dx$	$\frac{1}{21}(3x+2)^{12} + c$	$\frac{1}{21}(3x+2)^{12} + c$	$\frac{1}{21}(3x+2)^{12} + c$
	MCQ	Integrate $\int (x^4+3x^2+2x+4) dx$	$\frac{1}{5}x^5 + x^3 + x^2 + 4x + c$	$\frac{1}{5}x^5 + x^3 + x^2 + 4x + c$	$\frac{1}{5}x^5 + x^3 + x^2 + 4x + c$
	MCQ	Differentiate $y=3\sqrt{x^2(2x-x^2)}$ with respect to x	$y=\frac{10}{3}x^{\frac{1}{3}}(2x-x^2)^{\frac{2}{3}}$	$y=\frac{10}{3}x^{\frac{1}{3}}(2x-x^2)^{\frac{2}{3}} + \frac{8}{3}x^{\frac{4}{3}}(2x-x^2)^{-\frac{1}{3}}$	$y=\frac{5}{3}x^{\frac{1}{3}}(2x-x^2)^{\frac{2}{3}} - \frac{4}{3}x^{\frac{4}{3}}(2x-x^2)^{-\frac{1}{3}}$
	MCQ	Differentiate with respect to x: $f(x) = (ax^3 + bx)$	$3ax^2 + b$	$3ax^2 + b$	$3x^2 + 1$
	MCQ	Given $y(x)=x^4 - 4x^3 + 3x^2 - 5x$, evaluate $\frac{dy}{dx}$	30	42	24
	MCQ	Given $\frac{2x^5+x^2-5}{t^2}$, find $\frac{dy}{dx}$ by using the first principle	$c[-t^{-2}+8t^{-3}]$	$[6t+7t^{-3}]$	$[t^2+5t^{-3}]$
	MCQ	Find the derivative $f(x)=2x^2-16x+35$ by using first principle	$ x+16 $	$ 4x-16 $	$ 3x-5 $
	MCQ	Evaluate the limit $\lim_{x \rightarrow \infty} \frac{6e^{4x}-e^{-2x}}{8e^{4x}-e^{2x}+3e^{-x}}$	$\frac{3}{4}$	$\frac{1}{4}$	$\frac{1}{2}$
	MCQ	Evaluate the limit $\lim_{x \rightarrow -\infty} \frac{x^2-5t-9}{2x^4+3x^3}$	4	2	0
	MCQ	Evaluate the limit $\lim_{x \rightarrow \infty} \frac{2x^4-x^2+8x-5x^4+7}{-5x^4+7}$	$ \frac{1}{3} $	$ \frac{2}{3} $	$ \frac{1}{2} $
	MCQ	Evaluate the limit $\lim_{t \rightarrow 4} \frac{-5(t-4)}{t-\sqrt{3t+4}}$	$ -3 $	$ -5 $	$ -1 $

<input type="checkbox"/>	MCQ	Evaluate the limit $\lim_{h \rightarrow 0} \frac{2(-3+h)^2 - 18}{h}$	12	8	14
<input type="checkbox"/>	MCQ	Differentiate $y = 3\sqrt{x^2(2x-x^2)}$ with respect to x	$\frac{dy}{dx} = \frac{10x^3(2x-x^2)}{3} + \frac{8x^2(5x^2-3)}{3}$	$\frac{dy}{dx} = \frac{5x^3(2x-x^2)}{3} + \frac{4x^2(5x^2-3)}{3}$	
<input type="checkbox"/>	MCQ	Differentiate with respect to x: $f(x) = (ax^3 + bx)$	$\$3a - b\$$	$\$ax^2 + b\$$	$\$3x^2 + 1\$$
<input type="checkbox"/>	MCQ	Given $y(x) = x^4 - 4x^3 + 3x^2 - 5x$, evaluate $\frac{dy}{dx}$	30	42	24
<input type="checkbox"/>	MCQ	Given $\frac{dy}{dx} = \frac{t^2+7t^{-3}}{t^2+5t^{-3}}$, find $\frac{dy}{dx}$ by using the first principle	$c[-t^2+8t^{-3}]$	$[6t+7t^{-3}]$	$[t^2+5t^{-3}]$
<input type="checkbox"/>	MCQ	Find the derivative $f(x) = 2x^2 - 16x + 35$ by using first principle	$[x+16]$	$[4x-16]$	$[3x-5]$
<input type="checkbox"/>	MCQ	Evaluate the limit $\lim_{x \rightarrow \infty} \frac{6e^{4x} - e^{-2x}}{(8e^{4x} - e^{2x}) + 3e^{-x}}$	$[\frac{3}{4}]$	$[\frac{1}{4}]$	$[\frac{1}{2}]$
<input type="checkbox"/>	MCQ	Evaluate the limit $\lim_{t \rightarrow -\infty} \frac{x^2 - 5t - 9}{(2x^4 + 3x^3)}$	4	2	0
<input type="checkbox"/>	MCQ	Evaluate the limit $\lim_{x \rightarrow \infty} \frac{2x^4 - x^2 + 8x - 5x^4 + 7}{x^2}$	$[\frac{1}{3}]$	$[\frac{2}{3}]$	$[\frac{1}{2}]$
<input type="checkbox"/>	MCQ	Evaluate the limit $\lim_{t \rightarrow 4} \frac{-5}{t - \sqrt{3+t}}$	$[\frac{-3}{8}]$	$[\frac{-5}{8}]$	$[\frac{-1}{8}]$
<input type="checkbox"/>	MCQ	Evaluate the limit $\lim_{h \rightarrow 0} \frac{2(-3+h)^2 - 18}{h}$	12	8	14

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