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☐	Question Type ⇅	Question ⇅	A ⇅	B
☐	MCQ	solve $$\frac{d^2A}{dt^2} - 4\frac{dA}{dt} - 5A = 0$$	$A = C_1 e^{5t} + C_2 e^{-t}$	
☐	MCQ	Let $$A = x^2 yzi - 2xz^3 j - xz^2$$ and $$B = 4zi + yj + 4x^2 k$$, find $$\frac{\partial^2}{\partial x \partial y}(A \times B)$$ at (1,0,-2)	$2i - 8j$	
☐	MCQ	If $$A = \sin ui + \cos uj + uk$$, $$B = cosui - sinuj - 3k$$ and $$C = 2i + 3j - k$$, evaluate $$\frac{d}{du}(A \times (B \times C))$$ at u=0	$7i + 6j - 6k$	
☐	MCQ	If $$A = 5t^2 + tj - t^3 k$$ and $$B = \sin ti - \cos tj$$. evaluate $$\frac{d}{dt}(A \cdot A)$$	$112t^3 + 7t + 8t^5$	

☐				
☐	MCQ	If $$A = 5t^2 + tj - t^3 k$$ and $$B = \sin t\, i - \cos t\, j$$. evaluate $$\frac{d}{dt}(A \times B)$$	$(t^3 \sin t - 3t^2 \cos t)i - (t^3 \cos t - 3t^2 \sin t)j + (5t^2 \sin t - 11t \cos t - \sin t)k$	$(t^2 \sin t - 3t \cos t)i - ($
☐	MCQ	If $$A = 5t^2 + tj - t^3 k$$ and $$B = \sin t\, i - \cos t\, j$$. evaluate $$\frac{d}{dt}(A \cdot B)$$	$(5t^2 - 1)\cos t + 11t \sin t$	
☐	MCQ	Determine the unit tangent at the point where t=2 on the curve $$x = t^2 + 1$$, $$y = 4t - 3$$ and $$z = 2t^2 - 6t$$.	$$\frac{2}{5}i + \frac{2}{5}j + \frac{1}{5}k$$	
☐	MCQ	A particle moves along the curve $$x = 2t^2$$, $$y = t^2 - 4t$$ and $$z = 3t - 5$$,where t is the time. Find the components of the velocity at t=1 in the direction $$i - 3j + 2k$$	$$8\frac{\sqrt{(14)}}{7}$$	
☐	MCQ	A particle moves along a curve whose parameter equations are $$x = e^{-t}$$, $$y = 2 \cos 3t$$, $$z = 2 \sin 3t$$. Find the magnitude of the acceleration at t=0	$$\sqrt{(325)}$$	

☐	MCQ	Given that $$A = \sin t i + \cos t j + t k$$, evaluate $$\left\|\frac{d^2 A}{dt^2}\right\|$$	4	1
☐	MCQ	solve $\frac{d^{2} A}{d t^{2}}-4\frac{d A}{d t}-5A=0$	$A=C_{1} e^{5t}+C_{2} e^{-t}$	$A=-C_{1} e^{-5t}-C_{2} e$
☐	MCQ	Let $A=x^{2}yzi-2xz^{3}j-xz^{2}$ and $B=4zi+yj+4x^{2}k$, find $\frac{\partial^{2}}{\partial x\partial y}(A\times B)$ at (1,0,-2)	$2i-8j$	$-4i-8j$
☐	MCQ	If $A=\sin u i+\cos u j+ u k$, $B=\cos u i -\sin u j-3 k$ and $C=2i+3j-k$, evaluate $\frac{d}{du}(A\times (B\times C))$ at u=0	$7i+6j-6k$	$2i+3j-k$
☐	MCQ	If $A= 5t^{2}+tj-t^{3}k$ and $B=\sin ti -\cos tj$. evaluate $\frac{d}{dt}(A\cdot A)$	$112t^{3}+7t+8t^{5}$	$12t^{3}+22t+7t^{5}$
☐	MCQ	If $A= 5t^{2}+tj-t^{3}k$ and $B=\sin ti -\cos tj$. evaluate $\frac{d}{dt}(A\times B)$	$(t^{3}\sin t-3t^{2}\cos t)i-(t^{3}\cos t-3t^{2}\sin t)j +(5t^{2}\sin t-11t\cos t-\sin t)k$	$(t^{2}\sin t-3t\cos t)i-(t^{3}$
☐	MCQ	If $A= 5t^{2}+tj-t^{3}k$ and $B=\sin ti -\cos tj$. evaluate $\frac{d}{dt}(A\cdot B)$	$(5t^{2}-1)\cos t +11 t \sin t$	$(5t-1)\sin t +11 t \cos t$
☐	MCQ	Determine the unit tangent at the point where t=2 on the curve $x=t^{2}+1$, $y=4t-3$ and $z=2t^2-6t$.	$\frac{2}{5}i+\frac{2}{5}j+\frac{1}{5}k$	$\frac{2}{5}i-\frac{2}{5}j-\frac$
☐	MCQ	A particle moves along the curve $x=2t^{2}$, $y=t^{2}-4t$ and $z=3t-5$,where t is the time. Find the components of the velocity at t=1 in the direction $i-3j+2k$	$8\frac{\sqrt(14)}{7}$	$-2\frac{\sqrt(14)}{7}$
☐	MCQ	A particle moves along a curve whose parameter equations are $x=e^{-t}$, $y=2\cos 3t$, $z=2\sin 3t$. Find the magnitude of the acceleration at t=0	$\sqrt(325)$	$\sqrt(215)$
☐	MCQ	Given that $A=\sin ti+\cos tj+tk$, evaluate $\left\|\frac{d^{2} A}{d t^{2}}\right\|$	4	1
☐	MCQ	The following forces act on a particle P:$F_{1}=2i+3j-5k$, $F_{2}=-5i+j+3k$,$F_{3}=i-2j+4k$,$F_{4}=4i-3j-2k$, Find the magnitude of the resultant	$2i-j$	$2i-j+k$
☐	MCQ	Given the scalar defined by $\phi(x,y,z)=3x^{2}z-xy^{2}+5$,find ϕ at the points (-1,-2,-3)	12	5
☐	MCQ	Find a unit vector parallel to the resultant vector $A_{1}=2i+4j-5k$,$A_{2}=1+2j+3k$	$\frac{3}{7}i+\frac{6}{7}j-\frac{2}{7}k$	$\frac{1}{7}i+\frac{63}{7}j-$

☐	MCQ	If $A_{1}=3i-j-4k$, $A_{2}=-2i+4j-3k$, $A_{3}=i+2j-k$, find $\left|3A_{1}-2A_{3}+4A_{3}\right|$	$\sqrt{398}$	$\sqrt{112}$
☐	MCQ	A car travels 3km due north, then 5km northeast. Determine the resultant displacement	7.43	5.61
☐	MCQ	Let a and b be vectors, then $a \times b= ab\sin \theta$ is the _____	product	scalar
☐	MCQ	Given that $A_{1}=2i-j+k$, $A_{2}=i+3j-2k$, $A_{3}=3i+2j+5k$ and $A_{4}=3i+2j+5k$, Find scalars a, b, c such that $A_{4}=a A_{1} +b A_{2}+c A_{3}$	a=1,b=-1,c=1	a=-2,b=1,c=-3
☐	MCQ	Given that $A_{1}=3i-2j+k$, $A_{2}=2i-4j-3k$, $A_{3}=-i+2j+2k$, find the magnitudes of $2A_{1}-3 A_{2}-5 A_{3}$	5	$\sqrt 5$
☐	MCQ	Find the magnitude of vector $A=3i-2j+2k$	3	2
☐	MCQ	If a and b are non-collinear vectors and $A=(x+y)a+(2x+y+1)b$	x=1,y=1	x=2,y=4
☐	MCQ	The following forces act on a particle P:$F_{1}=2i+3j-5k$, $F_{2}=-5i+j+3k$, $F_{3}=i-2j+4k$, $F_{4}=4i-3j-2k$, Find the magnitude of the resultant	$2i-j$	$2i-j+k$
☐	MCQ	Given the scalar defined by $\phi(x,y,z)=3x^{2}z-xy^{2}+5$, find ϕ at the points (-1,-2,-3)	12	5
☐	MCQ	Find a unit vector parallel to the resultant vector $A_{1}=2i+4j-5k$, $A_{2}=1+2j+3k$	$\frac{3}{7}i+\frac{6}{7}j-\frac{2}{7}k$	$\frac{1}{7}i+\frac{63}{7}j-$
☐	MCQ	If $A_{1}=3i-j-4k$, $A_{2}=-2i+4j-3k$, $A_{3}=i+2j-k$, find $\left|3A_{1}-2A_{3}+4A_{3}\right|$	$\sqrt{398}$	$\sqrt{112}$
☐	MCQ	A car travels 3km due north, then 5km northeast. Determine the resultant displacement	7.43	5.61

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