 oylinder

$$
\frac{\overline{v_{B}}}{}=\vec{v}_{B / A x y z}+\vec{v}_{B} .
$$

$$
\omega_{D}=\square . \quad \omega_{A B}=\square
$$

$$
\vec{a}_{B}=\vec{a}_{B / A x y z}+\vec{a}_{B}+2 \vec{\Omega} \times \vec{v}_{B / A x y z}
$$

Quiz prob. $\vec{a}_{0}=>\vec{\alpha}_{n}=$ ?
$x I^{\alpha_{D}}$ Let OXYZbentatc and Axyz


$$
\vec{v}_{B}=\vec{v}_{B / A X y_{3}}+\vec{v}_{B^{\prime}}^{2}
$$

$\omega_{A B}=0.06, \omega_{D}=0.25 \quad \overrightarrow{\omega_{D}}=0.25 \mathrm{rad} / \mathrm{R2} \quad \vec{\omega}_{A B}=0.06 \mathrm{rad} / \mathrm{s}$
$\vec{a}_{B}=\vec{a}_{B / A x y z}+\vec{a}_{B}+2 \vec{\Omega} \times \vec{v}_{B / A x y s}$


$$
+2(0.06 \vec{K}) \times \frac{1.2}{5}(3 \vec{I}+4 \vec{J})
$$

$6(0.25)^{2} \vec{I}-6 \alpha_{0} \vec{J}=\frac{0.231}{5}(3 \vec{I}+4 \vec{J})+\frac{15(0.06)^{2}}{5}(-3 \vec{I}-4 \vec{J})$

$$
+\frac{15 \alpha_{A B}}{5}(4 \overrightarrow{ \pm}-3 \vec{v})+0.12\left(\frac{1.2}{5}\right)(3 \vec{J}-4 \vec{I})
$$

$$
=\left(-0.009+12 \alpha_{A B}\right) \vec{I}+\left(0.228-9 \alpha_{A B}\right) \vec{J}
$$

$\begin{aligned} & \vec{I}: \quad 0.375=-0.009+12 \alpha_{A B} \\ & \vec{J}: \quad-6 \alpha_{0}=0.228-9 \alpha_{A B}\end{aligned} \quad \alpha_{A B}=0.032 \quad \alpha_{D}=0.01$ $\vec{\alpha}_{D}=0.01 \mathrm{rad} / \mathrm{N}^{2} 5$
$15.114 \quad \vec{\omega}_{A E}=0.192 \mathrm{rad} / \mathrm{ks} \quad \vec{v}_{B / A E}=14 \mathrm{mn} / \mathrm{A}$ - $16.26^{\circ}$

$$
\begin{aligned}
& \vec{v}_{5 / \text { Adeys }}=1.2 \mathrm{bt} / \mathrm{R} 1_{3} \\
& \vec{a}_{B / \mathrm{Axyz}}=0.231 \mathrm{ft} / \mathrm{R}^{2} \int_{3} \\
& {\left[6 \omega_{0} \uparrow\right]=\left[1.2 / \frac{1}{3}\right]+\left[\begin{array}{l}
B_{A C}^{\prime} C_{A B}^{\prime} \\
15 \omega_{A B}
\end{array}\right]}
\end{aligned}
$$

