

1.2.1

AI25BTECH11001 - ABHISEK MOHAPATRA

August 21, 2025

Question:

Find the values of x, y, z so that the vectors $x\hat{i} + 2\hat{j} + z\hat{k}$ and $2\hat{i} + y\hat{j} + \hat{k}$ are equal.

Solution: From the given information,

$$\begin{pmatrix} x \\ 2 \\ z \end{pmatrix} = \begin{pmatrix} 2 \\ y \\ 1 \end{pmatrix} \quad (0.1)$$

$$\Rightarrow x = 2, y = 2, z = 1 \quad (0.2)$$