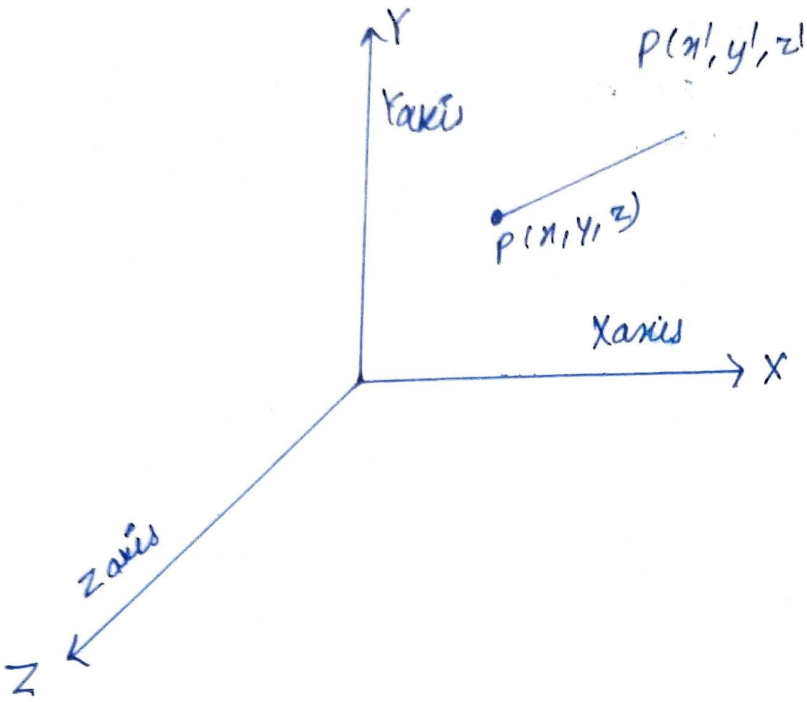
3D Transformation Matrix:-

Section-1

Ans-2 Transformation matrix is basic tool for transformation.



- 3D transformations takes place in 3 dimension plane.
- 3D tansformations are a bit more compex than 2D.
- 3D transformations are helpful in changing the position, size, orientation and shape.

here $V = ai + bj + ck$

$P'(x', y', z') = T_V \cdot [P(x, y, z)]$.

- we can perform rotation, translation and scaling in 3D.

=> Homogenous coordinates are ubiquitous in graphics because they allow common vector operations such as the following:-

=) translation
=) rotation
2) scaling.