Step-1

4764-1.6-54P AID: 124

RID: 232 | 28/1/2012

Given block matrix is $M=\begin{bmatrix} A & B \\ C & D \end{bmatrix}$.

We have to find M^T.

Step-2

Since $M=\begin{bmatrix} A & B \\ C & D \end{bmatrix}$

So $M^T=\begin{bmatrix} A & B \\ C & D \end{bmatrix}$

Hence the transpose of the given block matrix is $\boxed{M^T=\begin{bmatrix} A & B \\ C & D \end{bmatrix}}$.

Step-3

The given block matrix is symmetric if $C=B$.