QN II. [10]
Suppose we have a term-document matrix M for some document collection. We computed the term-term correlation matrix MM^T and here are the partial contents of this matrix

$$\begin{bmatrix} 15 & 7 & 6 \\ ? & 9 & 8 \\ ? & ? & 22 \end{bmatrix}$$

Where the entries with question marks are intentionally suppressed.

Qn 1.[2] Complete the matrix. What principle did you use to reconstruct the missing values?

Qn 2.[3] Suppose we are interested in finding which keyword is most correlated with keyword K_2. Show how you compute this information using the idea of normalized association clusters? Is the answer the same that given by un-normalized clusters?

Qn 3.[5] Supppose K_i is the keyword that you found to be most correlated with K_2. Recompute the correlation value of these keywords using the idea of scalar clusters.