

**START OF QUIZ**

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## Question 1

Topic: Lecture 8

Source: Lecture 8

What are some assumptions that we make when we are interpolating between a document and a corpus? When should we trust the corpus more, and when should we trust the document more? (2)

## Question 2

Topic: Lecture 7

Source: Lecture 7

What is the purpose of an inverted index? (1)

### Question 3

Topic: Lecture 5

Source: Lecture 5

What advantages do sparse vectors have over dense ones. (1)

## Question 4

Topic: Lecture 5

Source: Lecture 5

Why can we be confident that a low-rank approximation of a matrix contains the most important information in a document? (1)

## Question 5

Topic: Lecture 7

Source: Lecture 7

What is the benefit (in terms of efficiency) of placing the most discriminative search terms first in a boolean search? (1)

## Question 6

Topic: Lecture 6

Source: Lecture 6

In class, we saw a few topics that we were unable to identify. What could be a cause for such pointless topics (ie, how might we ensure that our topics are better? (2 reasons). (1)

## Question 7

Topic: Lecture 6

Source: Lecture 6

In some ways, we could consider Beta distributions themselves to be an embedding of a document. Explain, and explain how we might be able to leverage that. (2)



## Question 8

Topic: Lecture 8

Source: Lecture 8

In class, I mentioned that high  $k$  value for BM25 TF weighting rewards documents with many, many instances of a term in them. Explain why that's the case. (2)

## Question 9

Topic: Coding

Source: Coding

Write a short function that confirms that the sum of  $n$  rank-1 matrices is identical to the product of an  $n \times k$  matrix and a  $k \times n$  matrix. (3)

**END OF QUIZ**