

**START OF QUIZ**

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## Question 1

Topic: Lecture 8

Source: Lecture 8

What is the reasoning behind substituting TF-IDF with Okapi BM25? (1)

## Question 2

Topic: Lecture 5

Source: Lecture 5

The Frobenius norm looks very similar to a distance metric we've already observed. Explain which one. (1)

### Question 3

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 4

Topic: Lecture 7

Source: Lecture 7

Explain why the cosine similarity between a document and query vector is roughly equivalent to adding up the TF-IDF scores of each word in the document that occurs in the query.  
(2)

## Question 5

Topic: Lecture 6

Source: Lecture 6

Imagine we performed LDA on the classes in this block. What might their [Beta / Theta] distributions look like? (2)

## Question 6

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 7

Topic: Lecture 6

Source: Lecture 6

Why do we need a "human in the loop" for topic modeling? (1)



## Question 8

Topic: Lecture 7

Source: Lecture 7

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

## Question 9

Topic: Long

Source: Lecture 5

Imagine that we are working with a language other than English, such as Indonesian, with significant agglutinative morphology (words are inflected through the concatenation of affixes to a lemma). How do you think that this would impact our various vector space models? Which of them would be most affected, and which would be least affected? Explain. (3)

**END OF QUIZ**