NLP Question Bank

2 marks Questions

1. Identify the referents and the referring expressions in the following discourse:
   There was once a young boy who had problem controlling his temper. When he became angry, he would just say anything that came to his mind and hurt people. So his father gave him a bag of nails and a hammer and said, "Every time you get angry, hammer one nail into the fence in our backyard".

2. Identify the referents and the referring expressions in the following discourse:
   Finally, on the day the child was removing the last nail, his father says, "You have done well, boy. But do you see the holes in the wall? The fence is never going to be the same, even after repainting. Likewise, when you say mean things in anger, you will leave a scar in the person's mind, as the nails did to the fence".
3. Analyze the following sentences and point out the ones, with suitableexplanation, that are One-Anaphoric
   1. When Atharva climbed the stage to give a farewell speech, a chorus ofclaps, plates and in one case, an egg, greeted his rise.
   2. Apart from the usual nonsense, Atharva made one very good point.
   3. Palak likes cats and she has one.
   4. If, unusually, there is no time pressure, Palak feeds her cats one at a timein order of their relative attractiveness.

4. Point out, with justification, the referents of "him" in the followingdiscourse.
   1. Paul went with Joel to the Cashew shop. Sebasty went with him to the cake shop.
   2. Paul went with Mariam to the Cashew shop. Sebasty told him not to buyanything.
5. Point out, with justification, the referents of "her" in the followingdiscourse.
   3. Agrima went with Mariam to the Cashew shop. Sebasty went with her tothe cake shop.
   4. Agrima went with Mariam to the Cashew shop. Sebasty told her not to buyanything.
6. Explain Count Vectorization with example.

7. Translate the following sentences into vectors using Count-Vectorization
   1. Neha went to the foyer, her favorite place, with her friend Rima to escape boring cooking and enjoy the sunny weather over a cup of cold coffee.
   2. Sam and Richie went for a hot coffee in the cold weather at their favorite coffee shop near the foyer to catch up on their missed lectures and discuss their upcoming script plans.
8. Translate the following sentences into vectors using TF-IDF vectorization.
   Consider the terms : {Lavanya, Mariam, boring, lectures}

   1. Lavanya likes last boring lectures but Mariam likes all boring lectures.
   2. Lavanya and Mariam argue in all boring lectures.
   3. Mariam attends all boring lectures but Lavanya gets attendance in allboring lectures.

   Mariam finds lectures boring but Lavanya loves boring lectures
9. Compute the cosine distance between the two documents.
   D_1 = Machlin and Mahima like Goa, but went to Bhau Ka Dhakka.
   D_2 = Zenus took money from Machlin and Mahima to book a plane ticketto Goa, but got the BEST bus ticket to Bhau Ka Dhakka.

10. Frequencies of some words in five documents are given below. Computetf-idf value for the following terms.
    1. TF-IDF(Syzygy, DOC 3)
    2. TF-IDF(Paradox, DOC 1)

	DOC 1	DOC 2	DOC 3	DOC 4	DOC 5
Colloquial	816	293	987	452	43
Serendipity	29	522	848	182	98
Syzygy	455	301	386	187	23
Eloquence	232	644	531	214	42
Paradox	123	258	421	438	21
Other Words	345	1982	3827	1527	273

5 Marks questions

11. Use Hobbs Algorithm to find out the correct referent of the referringexpression "she" in the second sentence.
    1. Mahima loves Linux shell programming. She sells C-shells.
    2.Samina left hostel. She is back to hometown.
    3.Rita read an article. She posted its review.
    4. Meeta cooked dish. She admired it.
13. Describe with clear steps, the Question Answering System.
14. Elaborate with example Valence, Arousal and Dominance from the theory of emotions.
15. Exemplify Naïve Based Algorithm.
16. Exemplify Cognitive Semantics.
17. Explain Anaphora Resolution using Cantering Algorithm.
18. Explain Yarowsky algorithm.
19. Write a short note on NLP Corpus study.
20. Exemplify Discourse Segmentation.