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Seventh Semester B.E. Degree Examination, Feb./Mar. 2022 Natural Language Processing

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What are the various components of transformational grammar? Explain the same in detail with the help of an example. (10 Marks)
b. What are the applications of NLP? Explain. (06 Marks)

OR

- 2 a. With a neat diagram, explain the components and organization of GB in detail. Also give the s-structure and d-structure for the sentence "Ram Was Killed". (08 Marks)
b. Explain X-bar theory in detail. Apply the same for the sentence "They cooked the cabbage yesterday". (08 Marks)

Module-2

- 3 a. Explain the dynamic programming for minimum edit distance and compute the minimum edit distance between intention and execution. (08 Marks)
b. Define FST and explain the same for morphological parser with an example. (08 Marks)

OR

- 4 a. What are the different categories under which part-of-tagging fall? Explain hybrid tagger in detail. (08 Marks)
b. Explain the Early Parsing algorithm in detail. (08 Marks)

Module-3

- 5 a. Discuss the computing of relation kernel in detail. (08 Marks)
b. With a neat diagram, explain the learning frame work architecture. (08 Marks)

OR

- 6 a. With a neat diagram, explain the architectural overview of Infact system. (06 Marks)
b. Explain in detail functional overview of Infact system. (10 Marks)

Module-4

- 7 a. Explain the semantically guided Swanson crossover approach and explain different kinds of mutations. (08 Marks)
b. With a neat diagram illustrate the working of the evolutionary model for knowledge discovery from texts. (08 Marks)

OR

- 8 a. Explain in detail the general document separation algorithm. (10 Marks)
b. Define Coh-Matrix. Examine the same considering freely available on-line psychology papers from different journals indicating its significance. (06 Marks)

Module-5

- 9 a. Explain the non-classical models of IR. (06 Marks)
b. Define Precision and Recall. Explain similarity measures in information retrieval system. (10 Marks)

OR

- 10 a. List and explain different part-of-speech tagger. (08 Marks)
b. Explain the word net for English language and its applications. (08 Marks)
