POKHARA UNIVERSITY

Level: Bachelor   Semester: Spring   Year   : 2020
Programme: CE   Full Marks: 70
Course: Elective (NLP)   Pass Marks: 35
                                           Time   : 3
                                           hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions:

1. What are differences in between NLG and NLU? Discuss with examples. [10]

2. Explain anaphora, hypernymy and hyponymy. Discuss the different methods for dealing with them. [10]

3. What is POS tagging and its use in Syntax analysis? Explain Porters stemming algorithm with example. [10]

4. What does "embedding" in NLP means? Discuss various techniques you know. [10]

5. Given the following CFG grammar, perform syntactic analysis of the following sentence using any of the parsing method. [10]

    "Book the flight through Pokhara."

    S→NP VP
    S → Aux NP VP
    S → VP
    NP → Pronoun
    NP → Proper-Noun
    NP → Det Nominal
    Nominal → Noun
    Nominal → Nominal Noun
    Det → that | this | a | the

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Noun → book | man | flight
Verb → book | include |
prefer | man
Pronoun → I | she | me
Proper-Noun → Pokhara | Biratnagar
Aux → does
Preposition → from | to | through

6   Language is not barrier in today's world. Anyone can   20
    translate any languages via machine translation. If you were
    to develop a such machine translation application for
    translating languages, discuss what would be key processes
    to follow with suitable examples.

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