Roll No. ....   Total No. of Pages : 2

Total No. of Questions : 09

B.Tech. (CSE) (Sem.–6)
NATURAL LANGUAGE PROCESSING (ELECTIVE-I)
Subject Code : CS-330
Paper ID : [A0478]

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTION TO CANDIDATES :
1.   **SECTION-A is COMPULSORY.**
2.   **Attempt any FOUR questions from SECTION-B.**
3.   **Attempt any TWO questions from SECTION-C.**

SECTION-A   (10 × 2 = 20 Marks)

l. (a) Write a short note on lexicography.

    (b) What are different approaches to extract word level information in a sentence?

    (c) Write a short note on ambiguous grammar.

    (d) What are available data types in Prolog?

    (e) What is the difference between semantic and syntactic information?

    (f) Write a short note on statistical machine translation?

    (g) What are applications of Earley algorithm?

    (h) What is the need of parsing of input sentence?

    (i) Write a short note on man-machine interface?

    (j) What are different types of ambiguities?

SECTION-B   (4 × 5 = 20 Marks)

2. What is the role of regular expression and automata in the development of NLP system?

3. Differentiate between inflectional and derivational morphology?

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4. What do you mean by Part-of-Speech Tagging? What is the need of this task in NLP?

5. What are different techniques for the semantic analysis of a sentence?

6. Compare ATN and RTN in a tabular manner.

SECTION-C   **(2 × 10 = 20 Marks)**

7. Differentiate between top down and bottom up parsing? What algorithms are used for each of these types of parsing?

8. (a) What are important tools available for the development of NLP applications? Write the features of each of these tools?

     (b) Name any five machine translation systems? Write the main features of these systems.

9. Explain different phases in the development of a speech recognition system.