Code: 13A05802 **R13**

B.Tech IV Year II Semester (R13) Advanced Supplementary Examinations July 2017

NATURAL LANGUAGE PROCESSING

(Common to CSE & IT)

Time: 3 hours Max. Marks: 70

PART - A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) Define recursive transition network.

(b) Define grammar.

(c) What are definite clause grammars (DCG)?

(d) Define ambiguity.

(e) What is probabilistic lexicalized CFG?

(f) Describe coordination.

(g) Define semantic realization.

(h) What is rule-by-rule semantic interpretation?

(i) Explain identifying rhetorical structure.

(j) What is linguistic structure?

PART - B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT - I

2 Differentiate top-down and bottom-up parsers with an example.

OR

3 Write an algorithm for parsing a finite-state transducer using the pseudocode. Explain the algorithm with an example. Also give the merits and demerits of this algorithm.

UNIT - II

4 Discuss the following:

(a) Language as a rule-based system.

(b) Stochastic part-of-speech tagging.

OR

5 Discuss in detail the term Movement with respect to Transformational Grammar.

UNIT - III

6 How is lexicography related to CFG? Explain probabilistic lexicalized CFG with example.

OR

7 Describe the following with suitable example:

(a) Reference resolution.

(b) Elements of a language.

UNIT - IV

8 Give an algorithm for pronoun resolution and explain it with an example.

OR

9 Between the words eat and find which would you expect to be more effective in selection restriction-based sense disambiguation. Why?

UNIT - V

10 Discuss the knowledge representation structure frames using the objects slots & roles for house, terrorist.

OR

11 What information the knowledge base needs to contain to make the appropriate choices in your network?

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