(Following Paper ID and Roll No. to be filled in your
Answer Books)

Paper ID : 110856   Roll No.

B. TECH.

Theory Examination (Semester-VIII) 2015-16

NATURAL LANGUAGE PROCESSING

Time : 3 Hours   *Max. Marks : 100*

Section - A

1. Attempt all questions from this section.   (2×10=20)

    (a) Explain terms baseline and ceiling in evaluation of NLP
         systems.

    (b) Explain part-of-speech tagging with example.

    (c) Differentiate between Left associative grammar and
         Ambiguous grammars.

    (d) Define pragmatics? Give example.

    (e) Explain deterministic parsing for human preferences
         in NLP.

(f) What do you mean by natural language generation (NLG)?

(g) What is machine translation? Explain with example.

(h) What are the two forms of knowledge that are curtail in knowledge representation?

(i) Represent a noun phrase segment of a transition network.

(j) Define the word senses and ambiguity with suitable example.

Section-B

2. **Attempt any five questions from this section.**

$$(5 \times 10 = 20)$$

(a) Give an algorithm for pronoun resolution and explain it with an example.

(b) Investigate two of the more popular search engines and determine with kind of morphological analysis.

(c) What information the knowledge bases need to contain to make the appropriate choices in your network?

(d) How natural language processing systems are evaluated? Explain.

(e) Differentiate between natural language processing and natural language understanding.

(f) Explain the graph models and optimization techniques used in semantics with example.

(g) "Kathy Jumped the horse" Parse the above sentence using top-down & bottom-up Methods.

Section-C

Note : Attempt any two questions from this section.

$$(15 \times 2 = 30)$$

3. Discuss in detail the syntactic & semantic constraints on Conference.

4. Write short notes on :

(a) Human preferences in parsing

(b) Natural language processing grammars

5. Write short notes on :

   (a) Probabilistic language processing

   (b) Probabilistic context-free grammars

(4)