Roll No. .....

Total No. of Questions : 08] [Total No. of Pages : 02

Paper ID [CS508]

(Please fill this Paper ID in OMR Sheet)

M.Tech.

NATURAL LANGUAGE PROCESSING (CS - 508)

Time : 03 Hours **Maximum Marks : 100**

Instruction to Candidates:

1) Attempt any **Five** questions.
2) **All** questions carry equal marks.

Q1) Write an algorithm for parsing a finite-state transducer using the pseudo-code. Explain the algorithm with an example. Also give the merits and demerits of this algorithm.

Q2) (a) How the natural language processing systems are evaluated? Explain.

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

Q3) Discuss the following:

(a) Language as a rule-based system.

(b) Stochastic Part-of-Speech tagging.

Q4) Write an algorithm for converting an arbitrary context- free grammar into Chomsky normal form. Explain it with a suitable example.

Q5) Describe the following with suitable example:

(a) Reference resolution.

(b) Elements of a language.

Q6) Give an algorithm for pronoun resolution and explain it with an example.

Q7) (a) Between the words eat and find which would you expect to be more effective in selection restriction-based sense disambiguation? Why?

(b) Investigate two of the more popular search engines and determine which,

if any, are employing some kind of morphological analysis.

Q8) Write short notes on the following:

(a) Text planning.

(b) Goals of NLP.

(c) Lexicons.

(d) Applications of NLP.