

SUBJECT-ELECTIVE-III NATURAL LANGUAGE PROCESSING

Day: Tuesday
Date: 14/05/2019

S-2019-2831

Time: 02.30 PM TO 05.30 PM
Max. Marks: 60

N.B:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Use of non- programmable calculator is **ALLOWED**.
- 4) Assume suitable data if necessary.

Q.1 What is unigram, bigram and trigram mathematical model. Explain interpolation and back off. (10)

OR

Q.1 What are challenges in natural language processing? Explain with at least three suitable examples. (10)

Q.2 Draw FSA that will accept names of all people who have a first name beginning with P and last name beginning with m, any number of middle initials and the title Prof. Dr. and Ms. (10)

OR

Q.2 Define regular expression write regular expression for the following language (10)

- i) The set of all lower case alphabetic strings ending in 'b'.
- ii) The set all strings from the alphabet a, b such that 'a' is immediately preceded by & immediately followed by 'b'

Q.3 Assign Penn part of speech tags to all words in the following sentences using the notation (10)

- i) He is a tall skinny guy with a long sad and mournful voice .
- ii) No body ever takes the news paper she sells
- iii) John and Mary bought refrigerator her with three doors

OR

Q.3 Compare rule based part of speech tagging with stochastic tagging with suitable example. (10)

Q.4 Explain Shift-Reduce Parsers with example. (10)

OR

Q.4 Write a note on Probabilistic Parsing (10)

Q.5 Explain the function of translation memory in machine translation. (10)

OR

Q.5 What are various technique to improve user queries. How it is useful in information retrieval. (10)

Q.6 Explain Management of linguistic data with the help of GATE. (10)

OR

Q.6 What is ontology and web ontology? Why we need it? (10)