

B.Tech. SEM -VII Info. Tech. 2014 Course (CBCS) : WINTER - 2018
SUBJECT-ELECTIVE-III NATURAL LANGUAGE PROCESSING

Day: Friday
Date: 30/11/2018

W-2018-2566

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 are applications of natural language processing (NLP)? Explain following technologies write suitable example (10)
i) Morphology
ii) Syntax
iii) Semantics

OR

Q.1 Write out the equation for trigram, bigram and trigram probability estimation. When is smoothing applied in N-gram model? (10)

Q.2 How is lexicography related to Context free Grammar (CFG)? Explain probabilistic lexicalized CFG with example. (10)

OR

Q.2 How are idioms handled while processing natural language? (10)

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

- i) John and Mary bought a refrigerator with three doors
- ii) It was purchase from a very small store near their house.
- iii) Mary has a room with a scenic view.

OR

Q.3 How is Viterbi algorithm applied to language processing? (10)

Q.4 What is difference between top down recursive descent parsing strategy and bottom up parallel parsing strategy? Explain with example. (10)

OR

Q.4 What is Context-free Grammars? How to parse Regular Grammars? (10)

Q.5 Explain Vector space model. (10)

OR

Q.5 Explain the terms: homonymy, polysemy, synonymy with suitable example. (10)

Q.6 What are elements of balanced corpus? Write note on Tree Bank (10)

OR

Q.6 How linguistic Resource management is performed in XML? (10)