

Total No. of Questions : 4]

SEAT No. :

PD-304

[Total No. of Pages : 2

[6411]-83

B.E. (Information Technology) (Insem.)

NATURAL LANGUAGE PROCESSING

(2019 Pattern) (Semester - VIII) (414451C) (Elective - V)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Answer Q1 or Q2, Q3 or Q4.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Assume suitable data if necessary.*

- Q1)** a) Explain the applications of Natural Language Processing. [5]
b) List and Explain the challenges of Natural Language Processing. [5]
c) What are the Types of Statistical Language models. [5]

OR

- Q2)** a) List any two real time applications of NLP. [5]
b) Define the N-grams model. [5]
c) How do you build a simple statistical model. [5]

- Q3)** a) Explain why CFG is used to represent natural language in parsing. [3]
b) For each sentence, identify whether the different meanings arise from structural ambiguity, semantic ambiguity or pragmatic ambiguity? [6]
i) Time flies like an arrow
ii) He crushed the key to my heart
c) Identify the morphological type (Noun phrase, Verb Phrase, Adjective Phrase) of Following sentence segments. [6]
i) important to Bill
ii) looked up the tree

OR

P.T.O.

- Q4)** a) How to deal with spelling error detection and correction? Explain. [4]
- b) Describe augmented grammar in syntactic analysis State & Explain Virtualization of CPU/Memory/I/O Devices. [4]
- c) What are the problems with PCFG? [3]
- d) What is probabilistic parsing in NLP? What are the basic issues in parsing. [4]
