

# SPPU-BE-COMP-CONTENT – KSKA Git

Total No. of Questions : 4]

SEAT No. :

PB-264

[Total No. of Pages : 2

[6270]-52

**B.E. (Computer Engineering) (Insem.)**

**NATURAL LANGUAGE PROCESSING**

**(2019 Pattern) (Semester - VIII) (410252-A) (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) What do you mean of part-of-speech Tagging? What is the need of this Task in NLP. [5]

b) Differentiate between Natural languages and Programming languages. [5]

c) Explain Tokenization with its different types. [5]

OR

**Q2)** a) What is natural language processing (NLP)? Discuss various stages involved in NLP process with suitable example. [8]

b) Once a day the weather is observed as one of state 1 : rainy, state 2 : cloudy, state 3 : sunny. [7]

$$A = \begin{pmatrix} 0.4 & 0.3 & 0.3 \\ 0.2 & 0.6 & 0.2 \\ 0.1 & 0.1 & 0.8 \end{pmatrix}$$

Each row sums to 1

Given that the weather on day 1( $t=1$ ) is sunny (state 3) ,What is the probability that the weather for next 7 days will be “sun-sun-rain-rain-sun-cloudy-sun”?

**Q3)** a) Define Morphology? Explain stem and affix classes of morphemes with Example. [5]

b) Explain CFG with suitable example. [5]

c) What are different techniques for the semantic analysis for the Statement. [5]

**P.T.O.**

# SPPU-BE-COMP-CONTENT – KSKA Git

OR

- Q4)** a) Explain Derivational and Inflectional morphology in detail with suitable Example. [8]
- b) Explain with suitable examples following relationship between word meanings, 1. Homonymy 2. Polysemy 3. Synonymy 4. Hyponymy 5. Antonymy 6. Hypernymy 7. Meronymy [7]

