

B.E. (Computer Technology) Semester Seventh (C.B.S.)
Elective - II : Natural Language Processing

P. Pages : 2

Time : Three Hours



KNT/KW/16/7483

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.

1. a) What are the applications of Natural Language Processing? **7**
b) Discuss the role of machine learning in Natural Language Processing. **6**

OR

2. a) Describe the NLP tasks in syntax, semantics and pragmatics. **7**
b) Discuss the key issues in Natural Language Processing. **6**
3. a) Explain the methods of evaluation of natural language models. **7**
b) What do you mean by Part - of - speech Tagging (POS)? Explain with suitable example. **6**

OR

4. a) Explain Maximum Entropy model with suitable example. **7**
b) What is Sequence Labelling? Why it is needed? Explain with example. **6**
5. a) Explain Grammar formalisms and Tree Banks. **7**
b) What is the difference between syntactic parsing and statistical parsing? Discuss. **7**

OR

6. a) Explain Lexicalized PCFG with example. **7**
b) Discuss the role of Probabilistic Context Free Grammar (PCFG) in Natural Language Processing. **7**
7. a) What is semantic role labelling? Explain with example. **7**
b) Explain word - sense disambiguation with suitable example. **6**

OR

8. a) Discuss Lexical semantics in semantic analysis. 7
b) What is compositional semantics? Explain with example. 6
9. a) What is the significance of sequence labelling in Information Extraction IE? Discuss. 7
b) How sentiment analysis is accomplished by using Natural Language Processing? 6

OR

10. a) What is Named Entity Recognition? Explain its significance with respect to Information Retrieval. 7
b) What do you mean by automatic summarization? 6
11. a) What are the basic issues in Machine Translation? Discuss. 7
b) Explain the process of machine translation for synchronous grammar? 7

OR

12. Write short notes on : 14
- i) Statistical Machine Translation
 - ii) Rule - based machine translation.
 - iii) Example - based machine translation.
 - iv) Phrase - based machine translation
