Code: 13A05802

R13

B.Tech IV Year II Semester (R13) Advanced Supplementary Examinations July 2018
NATURAL LANGUAGE PROCESSING
(Common to CSE and IT)

Time: 3 hours   Max. Marks: 70

PART – A
(Compulsory Question)
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1   Answer the following: (10 X 02 = 20 Marks)
  (a)   List the applications of NLP.
  (b)   Define grammar.
  (c)   What are definite clause grammars (DCG)?
  (d)   List the methods for ambiguity resolution.
  (e)   What is probabilistic lexicalized CFG?
  (f)   Define Lexicons.
  (g)   Define semantic realization.
  (h)   What is meant by text planning? Explain.
  (i)   Explain identifying rhetorical structure.
  (j)   Explain about linguistic structure.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2   (a)   Differentiate top-down and bottom-up parsers with an example.
  (b)   Illustrate with example how morphological parsing is done using FST.
OR
3   (a)   How the natural language processing systems is evaluated? Explain.
  (b)   Differentiate between natural language processing and natural language understanding.

UNIT – II

4   Discuss the following:
  (a)   Language as a rule-based system.
  (b)   Stochastic part-of-speech tagging.
OR
5   What is ambiguity? Discuss the different disambiguation techniques with examples.

UNIT – III

6   How is lexicography related to CFG? Explain probabilistic lexicalized CFG with example.
OR
7   What are the issues in parsing? Describe various techniques used for parsing with suitable examples.

UNIT – IV

8   Discuss Earley- Style Semantic analyzer with an example.
OR
9   Explain the following with examples:
  (a)   Selection restrictions.
  (b)   Unification method.

UNIT – V

10   What is knowledge representation? Explain about the knowledge representation structure frames using the objects slots & roles for house, terrorist.
OR
11   Write short notes on defining conversational agent.