

EIGHTH SEMESTER B. TECH DEGREE EXAMINATION

2013 scheme

13.805.3 NATURAL LANGUAGE PROCESSING (FR) (ELECTIVE IV)

Time: 3 Hours

Max Marks: 100

PART –A

Answer all questions. Each question carries 4 marks.

1. Explain Turing Test.
2. Design a FSA for time of day expressions like eleven o' clock, twelve –thirty, midnight or a quarter to ten and others
3. Write about Statistical Machine Translation
4. Write a note on Name Entity recognition
5. Explain Tree Banks.

(5 X 4 = 20 marks)

PART –B

MODULE –I

6. (a) List any three Standard Solutions to the problem of Non-determinism in FSA (3 mark)
(b) Explain the algorithm ND-RECOGNIZE with suitable example (12 mark)
(c) Briefly explain the intrinsic evaluation metric (Perplexity) for N-gram Model . (5 mark)

OR

7. (a) Explain in detail N- Gram Language Model (10 mark)
(b) Write about the Smoothing for Language Model (10 mark)

MODULE -II

8. (a) Briefly explain about Statistical Alignment Models? (10 mark)
(b) Write a note on A* Search. (10 mark)

OR

9. (a) What is meant by expectation Maximization.(3 mark)
(b) Write use of EM in Statistical MT alignment Models (7 mark)
(c) Explain Complete Statistical MT alignment Models? (10 mark)

MODULE III

10. (a) Differentiate between unsupervised and supervised machine learning. (8 mark)
(b) Explain in detail Named Entity Recognition (12 mark)

OR

11. (a) Explain Naïve Bayes Classifiers for entity classification. (10 mark)
(b) Write about Rule based Methods (10 mark)

MODULE IV

12. (a) Explain in detail probabilistic CFGs (10 mark)
(b) Explain with example Top down Parsing. (10 mark)

OR

13. (a) Briefly explain about Tree Banks(10 mark)
(b) Explain with example Bottom Up parsing (10 mark)