

Total No. of Questions : 7]

SEAT No. :

**P3857**

**[5561]-285**

[Total No. of Pages : 2

**B. E. (Computer Engg.)**

**MULTIDISCIPLINARY NLP**

**(2012 Course) (Semester - I) (Elective - II)**

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) *Solve Q. 1 or Q. 2, Q. 3 or Q. 4, Q. 5 or Q. 6.*
- 2) *Q. 7 is compulsory.*
- 3) *Draw neat diagrams whenever necessary.*
- 4) *Make suitable assumptions wherever.*

**Q1) a)** Explain finite state morphological parsing with example **[10]**

**b)** Comment on Unsupervised method in NLP. **[10]**

OR

**Q2) a)** What is probabilistic parsing? Explain forward backward probability. **[10]**

**b)** Describe finite state machine based morphology in detail. **[10]**

**Q3) a)** Explain EM algorithm in natural language processing with example. **[8]**

**b)** Explain maximum entropy model for text categorization. **[8]**

OR

**Q4) a)** Explain the machine translation application in detail. **[8]**

**b)** Explain the concepts perception of speech, speech disorders & speech synthesis. **[8]**

**Q5) a)** Discuss cross lingual information retrieval with example. **[8]**

**b)** Describe psychology of speech production in detail. **[8]**

OR

**P.T.O.**

**Q6) a)** Explain multilingual dictionaries. **[8]**

b) Explain parsing algorithms with example. **[8]**

**Q7) Write short note on (any three)** **[18]**

- a) Sentiment analysis.
- b) NLP application in web mining parsing algorithms.
- c) Lexical knowledge networks.
- d) Graphical model for sequence labeling.

