SEAT No. :

P1885

[Total No. of Pages :2

[4859]-1080

B.E. (Computer Engineering)
MULTIDISCIPLINARY NLP
(2012 Pattern) (Elective - II) (Semester - I) (410445 D)

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, Q. 7 or Q. 8, Q. 9 or Q. 10.*

    2)   *Neat diagrams must be drawn wherever necessary.*

    3)   *Assume suitable data, if necessary.*

    4)   *Figures to right indicate full marks.*

Q1) a)   Elaborate the difference between formal and natural language.   **[5]**

      b)   Define metaphor. Explain with example.   **[5]**

OR

Q2) a)   Define and list lexical knowledge structures. Elaborate any three lexical knowledge networks available and their features.   **[7]**

      b)   Explain syntax, semantics and pragmatics of a language.   **[3]**

Q3) a)   Explain the purpose of viterbi algorithm. What are the steps in viterbi algorithm.   **[8]**

      b)   Write short notes on applications of NLP.   **[2]**

OR

Q4) Write short notes on: **[10]**

      a)   Hidden Markov modelling

      b)   Morphological analysis

Q5) a)   Explain with block diagram the Auditory system.   **[8]**

      b)   Write short notes on "speech chain".   **[8]**

OR

Q6) a) Write short notes on "speech perception". [8]

b) Define speech processing. Elaborate on the major problems addressed in speech processing. [8]

Q7) a) Explain Wordnet theory with suitable example. [8]

b) Write short notes on "Word sense disambiguation. [8]

c) Differentiate between supervised and unsupervised learning. [2]

OR

Q8) a) Explain the need of multilingual dictionaries. [8]

b) Elaborate on Indian language Wordnet features. [4]

c) Explain semantic role labelling. [6]

Q9) a) Elaborate on the following terms: [8]

i) Text entailment

ii) Sentiment analysis.

b) Write short note on python language toolkit (NLTK). [8]

OR

*Q10)*a) Define cross language information retrieval (CLIR). Explain CLIR architecture with block diagram. [8]

b) Write short note on "Robust and scalable machine translation. [8]

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