

Total No. of Questions : 8]

SEAT No. :

P-442

[Total No. of Pages : 2

[6003]-547

T.E. (Artificial Intelligence and Data Science)
NATURAL LANGUAGE PROCESSING (Elective - II)
(2019 Pattern) (Semester - II) (317532(B))

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Solve questions Q.1 or Q.2, Q3 or Q4, Q5 or Q6, Q7 or Q8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data if necessary.

Q1) a) Explain Combinatory Categorical Grammar. [8]

b) List and Explain grammar rules for English. [9]

OR

Q2) a) Explain partial parsing with example. [8]

b) Discuss Advanced Methods in Transition-Based Parsing. [9]

Q3) a) Explain Word Sense Induction. [8]

b) Explain Features-based Algorithm for Semantic Role Labeling. [9]

OR

Q4) a) Explain Connotation Frames. [8]

b) Explain defining emotions with Plutchik wheel of emotion. [9]

P.T.O.

Q5) a) Explain need of Machine Translation (MT) with suitable example. Which are the problems of Machine Translation? [9]

b) Write short note on :

i) Knowledge based MT System [5]

ii) Encoder-decoder architecture [4]

OR

Q6) a) Explain Machine Translation (MT) approaches with suitable example. Describe Direct Machine Translation in detail. [9]

b) Write short note on :

i) Statistical Machine Translation (SMT). [5]

ii) Neural Machine Translation. [4]

Q7) a) Elaborate Information retrieval- Vector space Model in detail. [9]

b) Write short note on : [9]

i) Categorization.

ii) Summarization.

iii) Sentiment Analysis.

OR

Q8) a) Discuss Information Extraction using Sequence Labelling in detail. [9]

b) Write short note on : [9]

i) Named Entity Recognition.

ii) Analyzing text with NLTK.

iii) Chatbot using Dialogflow.

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