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B.TECH
(SEM VIII) THEORY EXAMINATION 2022-23
NATURAL LANGUAGE PROCESSING

Time: 3 Hours**Total Marks: 100****Note:** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief.**2 x 10 = 20**

- (a) Discuss pragmatic analysis?
- (b) Explain the term Discourse Integration.
- (c) Describe the basic moods of sentences.
- (d) Define meta knowledge related to AI systems.
- (e) Explain top down parser in brief.
- (f) Discuss morphological analysis?
- (g) Discuss Auxiliary verb with suitable example.
- (h) Discuss deterministic parser in brief.
- (i) Explain parts of speech tagging.
- (j) Explain encoding ambiguity in logical form.

SECTION B

2. Attempt any three of the following:**10x3=30**

- (a) Discuss the different applications of Natural Language Processing in detail.
- (b) Explain the different techniques of knowledge representation.
- (c) Write down the bottom up chart parsing algorithm also explain with suitable example.
- (d) Discuss the process of handling questions in context free grammar. Explain with suitable example.
- (e) Discuss best first parsing in detail.

SECTION C

3. Attempt any one part of the following:**10x1=10**

- (a) Explain the different steps in natural language understanding in detail?
- (b) Discuss Natural Language Processing and its components in detail.

4. Attempt any one part of the following:**10x1=10**

- (a) Discuss the process of representation of knowledge using semantic networks?
- (b) Discuss knowledge. Explain the different types of knowledge.

5. Attempt any one part of the following:**10x1=10**

- (a) Write & explain the top down parsing algorithm.

- (b) Discuss transition network. Explain the different types of transition network.

6. Attempt any *one* part of the following: 10x1=10

- (a) Elaborate Movement phenomenon in language. Discuss the different types of movement.
(b) Explain human preferences in parsing in detail.

7. Attempt any *one* part of the following: 10x1=10

- (a) Discuss the concept of probabilistic context free grammar in detail.
(b) Write short notes on
(i) Logical Form
(ii) Lexical Probabilities

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