**18CSD53**

**Hall Ticket Number:**

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| **IV/IV B.Tech (Regular) DEGREE EXAMINATION** | | | |
| **May, 2022** | **Computer Science and Engineering** | | |
| **Eighth Semester** | **Natural Language Processing** | | |
| **Time:** Three Hours | | **Maximum:** 50 Marks | |
| *Answer Question No.1 compulsorily.* | | | (1X10 = 10 Marks) |
| *Answer ONE question from each unit.* | | | (4X10=40 Marks) |
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| 1. | a) | Define a corpus and its importance? | CO1 |  |
|  | b) | Write a short note on categorical and numeric data. | CO1 |  |
|  | c) | What is the web scraping? | CO1 |  |
|  | d) | Differentiate between the word and a morpheme. | CO2 |  |
|  | e) | What is the use of porter stemmer algorithm? | CO2 |  |
|  | f) | Write a short note on positive look ahead search. | CO2 |  |
|  | g) | Write about the role of regular expression in NLP. | CO3 |  |
|  | h) | What is machine translation? | CO3 |  |
|  | i) | Compare CNF vs PCNF? | CO4 |  |
|  | j) | What is scalar and vector? | CO4 |  |
| **Unit -I** | | | | |
| 2. | a) | How the other branches involved in building an expert system using various concepts of NLP? Explain briefly. | CO1 | 5M |
|  | b) | Explain the basic application of NLP. | CO1 | 5M |
| **(OR)** | | | | |
| 3. | a) | Why do we need corpus to build NLP tools and applications? Explain briefly. | CO1 | 5M |
|  | b) | Demonstrate the development life cycle to build a NLP application. | CO1 | 5M |
| **Unit -II** | | | | |
| 4. | a) | Explain the different types of morphemes. | CO2 | 5M |
|  | b) | Demonstrate the working of morphological and lexical analysis. | CO2 | 5M |
| **(OR)** | | | | |
| 5. | a) | Write a python script to handle the tokenization and lemmatization. | CO2 | 5M |
|  | b) | How to handle the various types of ambiguities? Explain. | CO2 | 5M |
| **Unit -III** | | | | |
| 6. | a) | Categorize various methods of advanced regular expressions. | CO3 | 5M |
|  | b) | Discuss about the word tokenization and word lemmatization with suitable examples. | CO3 | 5M |
| **(OR)** | | | | |
| 7 |  | Demonstrate the basic pre-processing. | CO3 | 10M |
| **Unit -IV** | | | | |
| 8. |  | What is feature engineering and explain about the various challenges involved in it. | CO4 | 10M |
| **(OR)** | | | | |
| 9. | a) | Demonstrate the usage of parser with suitable example. | CO4 | 5M |
|  | b) | Explain about the NER. | CO4 | 5M |

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