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**Department of CSE (AI&ML)**

**Internal Assessment Test-I**

Course Name: Natural Language Processing

Course Code: 18AI641

Date: 25/04/2023 Time: 2:00PM to 3:00PM

Semester: 6th Max marks: 30

***Note: Answer any two full questions, choosing only one full question from each Module. Each full question carry maximum of 15 marks***

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| **Q. NO** | **Module-1 Questions** | **MARKS** | **CO** | **RBTL** |
| **1.**  **2.** | a) What is NLP? Explain different Phases in NLP with an example for each.  b) List and explain the application of NLP.  **OR**   1. List the various grammar based language model. Explain the government   and binding theory.   1. Construct the Surface structure and Deep structure for the following sentences:   The police will catch the snatchers.  She saw stars in the sky. | 08M  07M  10M  05M | CO1  CO1  CO1  CO1 | L1,L2  L1,L2  L1,L2  L3 |
|  | **Module-2 Questions** |  |  |  |
| **3.**  **4.** | 1. Write c-structure and f-structure for the sentences ‘A girl handed the baby a toy’ using the CFG rules as below.   S NP VP  VP V {NP}{NP}PP\*{S’}  PP P NP  NP Det N{PP}  S’ Comps   1. Define Morphology. Explain stem and affix classes of morphemes with   example.  c) Define the finite state transducer. Construct FST that accept two input  strings, hot and cat and maps them onto cot and bat respectively.  **OR**   1. What is language modeling? Explain the bigram and trigram language   model with example.  b) Compute the minimum edit distance between numpy and numexpr. | 05M  06M  04M  08M  07M | CO2  CO2  CO2  CO2  CO2 | L3  L1,L2  L1,L2  L1,L2  L3 |

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| CO1: Analyze the natural language text  CO2: Define the importance of natural language |

Name and Signature of Course Instructor–

Mr. Sanjay Kumar

Scrutinized by (Name and Signature)

Ms. B Kursheed

Mr. Puneeth Kumar P

HOD