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M.Tech. 2nd Semester (Artificial Intelligence and Data
Science) Examination, July-2022

NATURAL LANGUAGE PROCESSING AND SPEECH

RECOGNITION

Paper-21MTA122C2

Time allowed : 3 hours] [Maximum marks : 100

*Note : Attempt five questions in all, selecting one question
from each unit. Q. No. 1 is compulsory.*

1. Write short note on following :

(i) Regular Language

(ii) TTS

(iii) Tagging

(iv) Parsing

20

Unit-I

2. Define Natural Language Processing and how do
we represent syntax in NLP and also explain its
applications.

20

23738-P-3-Q-9 (22)

[P.T.O.]

(2)

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3. (i) How the tokens are generated using Regular expressions. 10
(ii) Give a complete description about Morphology. 10

Unit-II

4. Explain the following :
(i) Latent Dirichlet Allocation
(ii) Phonology 20
5. Describe the following :
(i) Edit Distance
(ii) Probabilistic Model 20

Unit-III

6. Explain the following :
(i) The viterbi Algorithm
(ii) Transformation based Tagging 20

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(3)

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7. Describe the following :
(i) Normal form of Grammer
(ii) Sentence level constructions 20

Unit-IV

8. Explain the following :
(i) Unification
(ii) The chomsky Hierarchy 20
9. Describe the following :
(i) Deep Learning
(ii) Recurrent Neural Networks 20

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