

QP CODE: 25047697



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, NOVEMBER 2025

Third Semester

M Sc Artificial Intelligence

ELECTIVE - AI810302 - NATURAL LANGUAGE PROCESSING (NLP)

2019 ADMISSION ONWARDS

348DCB56

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. Write a deterministic algorithm for recognizing strings.
2. How important is the training and test sets in N-gram modeled systems?
3. What is the significance of POS?
4. What are helping verbs?
5. What is local ambiguity? How to solve the ambiguity of an augmented top-down parser?
6. What is an RTN?
7. Why is meaning representation essential?
8. Define the phenomenon synonymy.
9. What are the choices a Natural Language System can make?
10. Discuss the working of speech generation systems.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Discuss about the content of a lexicon designed as a part of an English morphological parser.
12. Give an example of an HMM tagger.
13. Draw the parse tree for the sentence "I prefer a morning flight" and write corresponding bracketed notation.
14. Explain the working of CYK algorithm.
15. How to prove that a language is not regular?





16. Explain temporal logic.
17. Write about the constraints a)Number agreement b)Person and case c)Gender agreement
18. How ATN is useful in text schemata representation?

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Discuss the topic regular expressions with detailed examples.
20. Discuss the structure of a noun phrase and then design the grammar for noun phrase.
21. How a sense disambiguation system is working with supervised learning approaches.
22. Discuss the centering algorithm for pronoun resolution.

(2×5=10 weightage)

