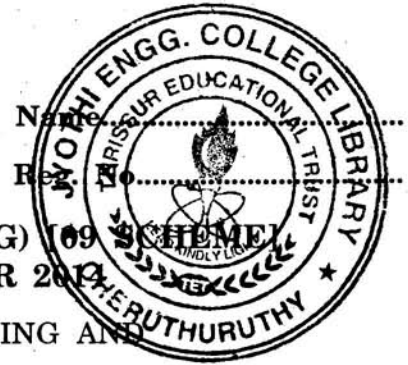


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SEVENTH SEMESTER B.TECH. (ENGINEERING) 109 SCHEME  
DEGREE EXAMINATION, NOVEMBER 2019

IT 09 702—NATURAL LANGUAGE PROCESSING AND  
KNOWLEDGE BASED SYSTEMS

Time : Three Hours

Maximum : 70 Marks

**Part A**

*Answer all questions.*

1. Mention any *two* issues in NLP.
2. Formulate the following expression in predicate logic "Rover Is a black dog".
3. What is Conflict resolution ?
4. Mention the two basic methods commonly used for problems with large problem spaces.
5. What is classification model ?

(5 × 2 = 10 marks)

**Part B**

*Answer any four questions.*

6. Write the levels of language representations.
7. Why is logic programming important. Discuss on it ?
8. Develop a production rule that represents the following fact: "Milk Is White". Explain.
9. What are Production systems ? Explain the global memory elements.
10. Describe Space transformation in detail.
11. Elaborate on least commitment principle.

(4 × 5 = 20 marks)

**Part C**

12. Describe the different forms of knowledge relevant for natural language understanding.

*Or*

13. Explain the organization of Natural language understanding Systems.
14. "Parsing is a special case of a search problem"- Justify the statement.

*Or*

15. Write the ATN Grammar for simple declarative sentences.

**Turn over**

16. How will you evaluate predicate logic ? Illustrate with an example.

*Or*

17. Write a note on reasoning with frames.

18. Explain Hierarchical planning with an example.

*Or*

19. "BBM is useful for structuring complex problems"- Justify this statement.

(4 × 10 = 40 marks)