C 44414 (Pages : 2) Name.....

Reg. No.....

SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2013

IT 09 702 – NATURAL LANGUAGE PROCESSING AND KNOWLEDGE BASED SYSTEMS

(2009 Scheme – Supplementary)

Time : Three Hours Maximum : 70 Marks

Part A

Answer **all** *questions.*

Each question carries 2 *marks.*

1. Comment on the issues and difficulties in NLP Systems.
2. Formulate the following expression in predicate logic "Every voter either favors the amendment or despises it".
3. Write the principles of Frames.
4. What does a production system consist of ? Describe in detail.
5. Explain the steps of knowledge engineering process.

(5 × 2 = 10 marks)

Part B

Answer any **four (4)** *questions.*

Each question carries 5 *marks.*

6. How will you evaluate language understanding systems ?
7. Write the bottom up chart parsing algorithm.
8. Describe property inheritance with an example.
9. Develop a production rule that represents the following fact "Always check the traffic before entering a freeway". Explain.
10. Write the algorithm for resolution in predicate logic.
11. Describe the significance of planning.

(4 × 5 = 20 marks)

Part C

Each question carries 10 *marks.*

12. Explain the different levels of language representations.

Or

13. Describe the types of NLP Systems.

Turn over

14. Comment on Top down parsing with recursive transitive networks.

Or

15. What are deterministic parsers ? Explain with an example.

16. Write a script for 'trip to a theater'.

Or

17. How will you represent knowledge using frames? Illustrate with an example.

18. What is heuristically guided search? Describe the algorithm.

Or

19. Write a note on classification models.

(4 × 10 = 40 marks)