(b) Write a short note on Semantic Network.

7 ½

7. (a) Explain various types of ambiguities encountered in natural languages. Give examples of each type of ambiguity. 8

(b) Write a short note on PARSING. 7

Unit-IV

8. (a) Describe following LISP functions by giving examples: 7 ½

    (i) CONS

    (ii) APPEND

    (iii) CAR

    (iv) CDR

    (v) COND

(b) Write a short note on expert system MYCIN. 7 ½

9. (a) Compare and contrast LISP and PROLOG Programming Languages. 5

(b) Describe characteristics of an Expert System. Also describe Expert System Architecture. 10

A (Printed Pages 4)

Roll No. _____

SFS-4713

B.C.A. (Semester-VI) Examination, May 2015

Introduction to Artificial Intelligence

Old Course

Paper-I

Time Allowed : Three Hours] *[Maximum Marks : 100*

Note : Answer five questions in all. Question No. 1 is compulsory. Attempt one question from each of the four Units I, II, III, & IV.

1. Answer the following in brief: 4 × 10 = 40

(a) Write the difference between conventional computing and intelligent computing.

(b) Describe Chinese Room test.

(c) How knowledge is important in making human being intelligent. Explain the importance of knowledge in day to day life.

(d) What is meant by logic? Write the importance of logic in human's life.

(e) Explain the difference between blind search and heuristic search technique.

(f) Write a short note on Uniform Cost Search algorithm.

(g) Differentiate between data, information, knowledge and belief by giving examples.

(h) Describe the characteristics of Expert System.

(i) What do you mean by heuristics? List various techniques used in Heuristic search.

(j) Define 'Well Formed Formula' (WFF). Explain the properties valid, satisfiable, unsatisfiable equivalence of well formed formula.

Unit-I

2. (a) Describe various branches of Artificial Intelligence & explain how these help in human activities. 7½

(b) Discuss the components of Artificial Intelligence in detail by describing utility of each component. 7½

3. (a) Enumerate the complexity of tic-tac-toe problem. Describe various PEAS for an automatic tic-tac-toe player. 7½

(b) Elaborate the components of Production system by describing a real life problem. Explain the salient features of production rules. 7½

Unit-II

4. (a) Discuss various characteristics of Heuristic search. Explain Hill climbing search technique by describing various associated conditions with examples. 10

(b) List various properties of Depth First Search (DFS). 5

5. (a) Explain A* search in detail. 7½

(b) Write the algorithm of Best first search by describing it. 7½

Unit-III

6. (a) Describe the components of First Order Predicate Logic. Explain various steps in knowledge engineering process of a First Order Predicate Logic (FOPL). 7½