2015

MCA

4th SEMESTER EXAMINATION

ARTIFICIAL INTELLIGENCE LAB

PAPER—MCA-407

(Practical)

Full Marks : 50

Time : $1\frac{1}{2}$ Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer any *one* question selecting it by a lucky draw.

1. Write a Prolog program to calculate the sum of N natural numbers.

2. Write a Prolog program to calculate the number of elements in a list.

3. Write a Prolog program to check whether a list is palindrome or not.

4. Write a Prolog program to find out the reverse of a list.

5. Write a Prolog program to calculate the sum of elements of a list.

6. Write a Prolog program to delete all occurences of letter 'A' from the list [A, L, P, H, A, B, E, T].

7. Write a Prolog program to calculate the factorial of a inputted number N.

8. Write a Prolog program to find out the largest number from a list.

9. Write a Prolog program to find out the smallest number from a list.

10. Write a Prolog program to calculate the power of a given number (e.g. $2^4 = 16$).

11. Write a Prolog program to generate all sublists of a list L.

(Continued)

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12. Write a Prolog program to insert 'a' after each 'b' in the list L. L = [d, b, c, b, a], result will be [d, b, a, c, b, a, a]

13. Write a Prolog program to check whether a number is prime or not.

14. Write a Prolog program to print Fibonacci series upto N.

15. Write a Prolog program to delete last 3 elements from a list L.

Marks Distribution

1. Brief Description of the problem — 10% = 5

2. Program listing — 40% = 20

3. Result and Discussion — 30% = 15

4. Viva — 20% = 10