**Artificial intelligence lab questions**

**SET (A)**

**This question set contains TWO questions. Students must attempt ALL TWO questions**

**Each question carries 2.5 marks.**

1.) There is a monkey at the door into a room. In the middle of the room a banana is hanging

from the ceiling. The monkey is hungry and wants to get the banana, but he cannot stretch high

enough from the floor. At the window of the room there is a box the monkey may use. The

monkey can perform the following actions: walk on the floor, climb the box, push the box

around (if it is already at the box) and grasp the banana if standing on the box directly under

the banana. Can the monkey get the banana? Implement the following problem in prolog.

2) Write a prolog program to input the side of a square and calculate it’s area in a loop until user sends stop signal to stop the program.

Area of square = side\*side

**Sample output**

Enter the side of square: 5.

The area of square is : 25

Enter the side of square: 2.

The area of square is : 4

Enter the side of square: stop.

**Artificial intelligence lab questions**

**SET (B)**

**This question set contains TWO questions. Students must attempt ALL TWO questions**

**Each question carries 2.5 marks.**

1.)With the given facts in the database define the following predicate.(0.5 each)

female(pam). female(liz). female(pat). female(ann).

male(jim). male(bob). male(tom). male(peter).

Parent(pam,bob).parent(tom,bob).parent(tom,liz),parent(bob,ann).parent(bob,pat).

a.)mother(X,Y)

b.)father(X,Y)

c.)haschild(X)

d.)sister(X,Y)

e) grandmother(X,Y).

2.) Write a prolog program which will ask two numbers from user and identify the **largest** number **AND** the **smallest** number between them. Use loop to run the program.

**Sample Output**

Enter the first number: 10

Enter the second number: 20

20 is larger than 10

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Enter the first number: 10

Enter the second number: 20

10 is smaller than 20