**ACI Assignment 2**

**Cryotherapy Data**

The cryotherapy data contains details of patients who took this treatment with the following attributes: Sex, Age, Time, Number of warts, Type, Area and the result of treatment (1 successful and 0 not successful).

You are required to do the following:

Question 1: Python

1. Construct a Bayesian Belief Network for the given data. : [20% WEIGHTAGE]

Use appropriate methods to predict the following:

1. Predict whether the treatment was successful or not using the following data: [10% WEIGHTAGE]

Female Patient who is 33 years old with 12 number of type 3 warts.

1. Infer the probability for the data with the following properties: A male aged 67 who has type 1 wart in area 51 and had a successful treatment: [10% WEIGHTAGE]
2. Find the probability of the patient with the following data: Age 15, Gender Male, Number of warts 5, Type 2, Area 100 and Treatment unsuccessful. [10% WEIGHTAGE]

Question 2: Prolog

1. Use any of the decision tree algorithms to build a decision tree for the given data. :[10% WEIGHTAGE]
2. Create rules from the decision tree: [10% WEIGHTAGE]
3. Code the rules into a Prolog Knowledge base: [20% WEIGHTAGE]
4. Get patient details as input from the user and classify whether the treatment will be successful or not. [10% WEIGHTAGE]