

GANPAT UNIVERSITY
B. TECH SEM-VI (CE/IT/ CE-AI/CE-IOT/IT-IOT)
SECOND INTERNAL EXAMINATION – APRIL 2023
2CEIT602: Artificial Intelligence

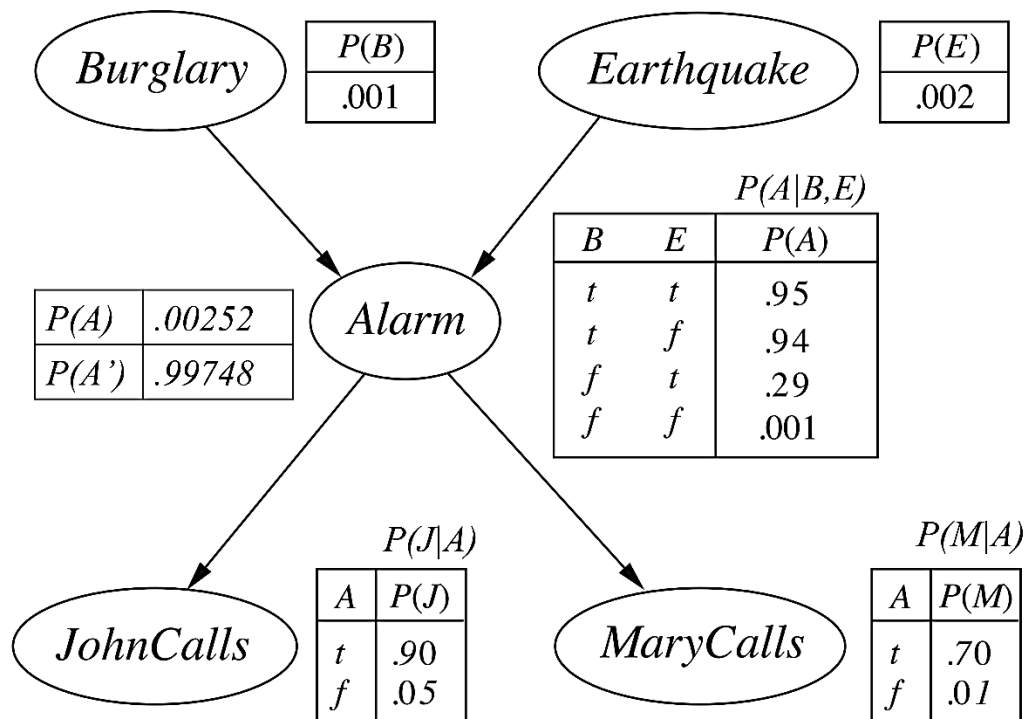
TIME: 1 Hour**TOTAL MARKS: 20**

Instructions:

- 1) Figures to the right indicate full marks.
- 2) Be precise and to the point in your answer.
- 3) The text just below marks indicates the Course Outcomes Numbers, (CO) followed by the Bloom's taxonomy level of the question, i.e., R: Remember, U: Understand, A: Apply, N: Analyze, E: Evaluate, C: Create.

Q.1 Suppose you have a single perceptron with three inputs and a threshold value of 50. You want to use it to implement the function $f(x) = 5x_1 - 10x_2 + 20x_3 + 50$, where x_1 , x_2 , and x_3 are the inputs. What are the weights that you should assign to the inputs of perceptron in order to implement the given function? **[4]**
3U

Q.2 In the Burglary Alarm, suppose the prior probabilities are given in the image below. What is the probability of a burglary given that Merry calls? In other words, what is $P(\text{Burglary}|\text{Merry Calls})$? **[6]**
1E



Q.3 What is the main difference between MP Neuron and Perceptron? List out different activation functions. **[5]**
3R

Q.4 Draw a Flow chart of the Genetic Algorithm and explain any one Genetic Operator. **[5]**
4N

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