First and last name .....

Question 1/20

What are the properties of task environment involved in chess with clock?

A. Fully observable, Dynamic ,Discrete, Multi Agent
B. Fully observable, Static,Discrete, Multi Agent
C. Fully observable, Static,Discrete, Single Agent
D. Partially observable, Static, Discrete, Multi Agent

Question 2/20

What is true about Iterative Deepening DFS?

A. It's a Depth First Search, but it does it one level at a time, gradually increasing the limit, until a goal is found.
B. It is the preferred informed search method
C. It does not perform DFS in a BFS fashion.
D. Is a depth-first search with a fixed depth limit l

Question 3/20

Consider the following logical inferences :
I1 : If it is Sunday then school will not open.
The school was open.
Inference : It was not Sunday.
I2 : If it is Sunday then school will not open.
It was not Sunday.
Inference : The school was open.
Which of the following is correct?

A. Both I1 and I2 are not correct inferences.
B. Both I1 and I2 are correct inferences.
C. I1 is not correct but I2 is a correct inference.
D. I1 is correct but I2 is not a correct inference

Question 4/20

The first order logic (FOL) statement ((RvQ)^(Pv¬Q)) is equivalent to which of the following?

A. ((Rv¬Q)∧(Pv¬Q)∧(RvP))
B. ((RvQ)∧(Pv¬Q)∧(Rv¬P))
C. ((RvQ)∧(Pv¬Q)∧(¬RvP))
D. ((RvQ)∧(Pv¬Q)∧(RvP))

Question 5/20

We can find a function similar to a given function and having approximately the same value at a point with the help of:

A. None of the above
B. Taylor Series
C. Linearization
D. Gradient descant

Question 6/20

We can find the approximate root of a number with the help of:

A. Taylor Series
B. Gradient descant
C. Linearization
D. None of the above

Question 7/20

What is the time complexity in Bidirectional search algorithm?

A. O(bd/2)
B. $O(b^{d/2})$
C. O(bm)
D. $O(b^{d})$

Question 8/20

In first-order logic, how would you express that “something likes something”?

A. xyLikes(x, y)
B. xyLikes(x, y)
C. xyLikes(x, y)
D. xyLikes(x, y)

Question 9/20

An orthogonal Matrix is a matrix, which when multiplied by its transpose results in

A. Any Singular matrix
B. Identity Matrix
C. Any Non-Singular matrix
D. None of these

Question 10/20

Singular matrix is?

A. invertible
B. non-invertible
C. None Of the above
D. Both non-invertible and invertible

Question 11/20

Matrix C has Hadamard product of two matrices A and B each element C is:

A. sum of the product of each row of matrix A with each column of matrix B
B. A random value
C. $c_{ij} = a_{ij} \times b_{ij}$
D. None of the above

Question 12/20

_____algorithm keeps track of k states rather than just one.

A. Hill-Climbing search
B. Local Beam search
C. Stochastic hill-climbing search
D. Random restart hill-climbing search

Question 13/20

Suppose that price of 2 ball and 1 bat is 100 units, then What will be representation of problems in Linear Algebra in the form of x and y?

A. x + y = 100
B. 2x + 2y = 100
C. 2x + y = 100
D. 2x + y = 200

Question 14/20

If a function is differentiable at a point, then function is?

A. not necessarily continuous at that point
B. none of these
C. not continuous at that point
D. continuous at that point

Question 15/20

What is true regarding Determinant of a Matrix?

A. To find determinant, subtract diagonal elements together.
B. determinant is a vector value that can be computed from the elements of a Trace matrix
C. Both A and C
D. The concept of determinant is applicable to square matrices only.

Question 16/20

Alpha-beta is guaranteed to compute the same value for the root node as computed by…..... with less or equal computation.

A. Depth First search
B. Breadth First search
C. Minimax
D. Bidirectional Search

Question 17/20

Let v(x) mean x is a vegetarian, m(y) for y is meat, and e(x, y) for x eats y. Based on these, consider the following sentences:
I. x v(x) (y e(x, y) ¬m(y))
II. x v(x) (¬(y m(y) ∧ e(x, y)))
III. x (y m(y) ∧ e(x, y)) ¬v(x)
One can determine that

A. Only II and III are equivalent sentences
B. I, II, and III are equivalent sentences
C. Only I and III are equivalent sentence
D. Only I and II are equivalent sentences

Question 18/20

Norm of a vector is its:

A. unit vector in its direction
B. none of the above
C. direction
D. magnitude

Question 19/20

A_____is an educated guess about a solution, such as a rule of thumb that points to the direction of a desired outcome but can't tell exactly how to reach it.

A. Knowledge
B. Learning
C. Heuritics
D. Explanation

Question 20/20

The scalar product of 8i + j – 5k and 3i – 6j + 7k is:

A. 10
B. -15
C. -17
D. 25