2CE702/2IT702-AI(TH-MCQ) Artificial Intelligence

* Indicates required question

1. Email *

2. Enrollment Number *

3. Student's Name *

4. Branch *

Mark only one oval.

- Computer Engineering
- Information Technology

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5. ∀x: ∈y: loyalto(x, y). Predicate the given logic. * 1 point

Mark only one oval.

- Everyone is loyal to some one
- Everyone is loyal to all
- Everyone is not loyal to someone
- Everyone is loyal to y

6. 'All monkeys have tails', How to represent the given statement in logic? * 1 point

Mark only one oval.

- ◯ ∀x: monkeys(x)-->hastail(x)
- ◯ ∀x:∀y: monkeys(x)-->hastail(y)
- ◯ ∀x: monkeys(y)-->hastail(x)
- ◯ ∀x: monkeys(x)-->has-->tail(x)

7. In A* algorithm the heuristic function used as f ' = g + h' to estimate the cost of getting from the initial state to the goal state, where g is a measure of the cost of getting from initial state to the current node and the function h' is an estimate of the cost of getting from the current node to the goal state. To find a path involving the fewest number of steps, we should set * 1 point

Mark only one oval.

- ◯ g=0
- ◯ g = 1
- ◯ h' = 0
- ◯ h' = 1

8. To infers and manipulates available knowledge in order to generate new knowledge a program is used, it is called_____. * 1 point

Mark only one oval.

- ◯ Reference Mechanism
- ◯ Data Dictionary
- ◯ Inference Engine
- ◯ Control Strategy

9. Which one of the following describes the syntax of prolog program? * 1 point

Mark only one oval.

- Rules and facts are terminated by full stop (.) and Variables names must with upper case alphabets.
- Rules and facts are terminated by full stop (.) and Rules and facts are terminated by semicolon (;)
- Rules and facts are terminated by semicolon (;) and Variables names must start with lower case alphabets.
- Variables names must with upper case alphabets and it must start with lower case alphabets.

10. Which are the main characteristics of genetic algorithm? * 1 point

Mark only one oval.

- Individuals among the population & Random mutation
- Random mutation & Fitness function
- Crossover techniques & Random mutation
- Fitness function & Crossover techniques

11. In which algorithm the concept of FUTILITY is used * 1 point

Mark only one oval.

- A-star
- A0-star
- Best First search
- Breadth First search

12. Up to which depth the alpha-beta pruning can be applied? * 1 point

Mark only one oval.

- 10 states
- 8 States
- 10 states and 8 states(both)
- Any depth

13. Which of the following is NOT a variation of Hill Climbing? * 1 point

Mark only one oval.

- Steep Hill climbing
- Steepest Ascent Hill climbing
- Stimulated Annealing
- All

14. The heuristic is used for what? * 1 point

Mark only one oval.

- To discover something or an idea embedded in a program
- To search and measure how far a node in a search tree seems to be from a goal
- To compare two nodes in a search tree to see if one is better than the other
- All

15. A perceptron is a _____. * 1 point

Mark only one oval.

- Feed-forward neural network
- Back-propagation alogorithm
- Feed Forward-backward algorithm
- Back-tracking algorithm

16. What is/are the functionality(s) of Axon in Biological neural network? * 1 point

Mark only one oval.

- ◯ Both
- ◯ Axons are fibres which emanate from the cell body and provide the receptive zones that receive activation from other neurons.
- ◯ Axons are fibres acting as transmission lines that send activation to other neurons
- ◯ None

17. Which of the following is not the component of BNN? * 1 point

Mark only one oval.

- ◯ Synapses
- ◯ Axon
- ◯ Dendrites
- ◯ Neurotransmitter

18. Which function is used to calculate the feasibility of whole game tree? * 1 point

Mark only one oval.

- ◯ Evaluation function
- ◯ Transposition
- ◯ Alpha-beta pruning
- ◯ All

19. Which search technique is similar to minimax search technique? * 1 point

Mark only one oval.

- Hill-climbing search
- Depth-first search
- Breadth-first search
- Problem Reduction

20. A mixed strategy which allows to solve the major parts of a problem first and then go back and solve small problems that arise in gluing the big pieces together is called * 1 point

Mark only one oval.

- State approach
- Constraint satisfaction
- Check constraint
- Means-ends analysis

21. Which of the following combination is not correct for Hill climbing? * 1 point

Mark only one oval.

- Local Maximum-Backtrack
- Plateau-Big jump
- Ridge-Apply two or more rules
- Local Maxima-Foothills

22. Which of the following is/are the advantage(s) of Hill climbing * 1 point

Mark only one oval.

- Useful in job shop scheduling, automatic programming
- To solve pure optimization problems where the objective is to find the best state according to the objective function
- All
- It requires much less conditions than other search techniques

23. A0-star algorithm is used for * 1 point

Mark only one oval.

- Breadth First Search
- Best First Search
- Problem Reduction
- Hill Climbing

24. To solve different types of problems, the problem should be represents in * 1 point terms of

Mark only one oval.

- Initial State
- Goal State
- A set of legal transitions to transfer states into new states
- All

25. What do you mean by path cost in terms of path finding for the given problem? * 1 point

Mark only one oval.

- The sequence of actions
- An operator takes the agent from one state to another state
- A number and a common path cost may be the sum of the costs of the steps in the path
- All can be

26. In Which example we have to take care about to good control strategy to be causes motion. * 1 point

Mark only one oval.

- Suppose we have implemented the simple control strategy of starting each time at the top of the list of rules and choosing the first applicable one
- Choose random rule among applicable rules
- Both
- Not given

27. In travelling salesman problem the good solution will be * 1 point

Mark only one oval.

- absolute
- relative
- both can be
- Not given

28. In which algorithm the concept of OPEN list and CLOSE list is used * 1 point

Mark only one oval.

- A-star
- A0-star
- Best First search
- Breadth First search

29. In Tower of Hanoi problem we get * 1 point

Mark only one oval.

- solution as a state
- solution as a path
- Both can be
- None

30. In which method an unexpanded node to be kept in memory and will be used when it looks more promising? * 1 point

Mark only one oval.

- Best First Search
- Problem Reduction
- Hill Climbing
- Generate and Test

31. In which method the concept of AND-OR graph is used? * 1 point

Mark only one oval.

- Best First Search
- Problem Reduction
- Hill Climbing
- Generate and Test

32. Which of the following is false about ANN and BNN? * 1 point

Mark only one oval.

- BNN is Slower in speed and ANN is Faster in speed.
- In BNN Adaptable is possible and in ANN Adaptable is not possible
- In BNN Memory and processing are separate and in ANN Memory and processing elements are collocated.
- In BNN if irrespective of faults in network connections, then also information is still preserved and in ANN If information corrupted in the memory, it can not be restored back.

33. What is the functionalities of bias in Neural Network? * 1 point

Mark only one oval.

- In ANN defines the output of neuron given a set of inputs.
- Bias nodes are added to increase the flexibility of the model to fit the data.
- Bias refers to the strength or amplitude of a connection between two nodes
- Not Given

34. Which of the following is an advantage of using an expert system development tool? * 1 point

Mark only one oval.

- rapid prototyping
- All of the given
- imposed structure
- knowledge engineering assistance