Reflex Agent takes decisions based on current conditions.

4) A rational agent chooses whichever action maximiss the expected alue of the perfoamcne measure goven the percept seqiece to date

5) PDDL? – Planning domain definition language

6) DFS – LIFO

BFS – FIFO

7) Last layer of a multi class image classification neural network is a softmax activation function

8) Obd?

9) True

10) True

11) Birthplace of AI is Dartmouth when and where does it start? – 1956

Workshop name?

12) State space is a set of all possible states

13) h(n) should be less than cost to goal from n. h(n) should not exceed total cost.

- Answer is (a)

14) labelled training data – supervised learning

15) neural network that classifies samples into 4 groups, each sample is represented by 3 values. How would you design your neural network?

- classifies into 4 groups means, output layer should have 4.

- Number of inputs are equal to the number of neurons in the first layer

(a) So, input layer with 3 inputs, output layer with 4 inputs and multiple hidden layers.

16) Normal triangle is maximizers, upside down triangles are minimizers. (c) 12

17) Convolutional neural network order of operation

Convolution->max pooling -> flattening -> full connection

First, convolution, apply filter and get modified image.

Second, activation function and get linear unit,

Third, Define the pooling layer and downsize to identify important features.

Fourth, flattening convert to 1d vector to convert your multi-dimensional image.

18) MP-net logical relation – draw truth table. AND gate.

19) Informed search technique – A\*

Uninformed – DFS, Depth limited, BFS

20) ChatGPT is generative AI

Explainable AI makes the workings of AI systems transparent and understandable to humans. Mixes symbolic and non-symbolic AI.

Artificial super intelligence – beyond humans intelligence.

EdgeAI – devices having intelligent algorithms.

21) Negative mapped to 0, and positive value mapped to the same function -> ReLU function.

22) 80% train 10% test 10% validation

23) b

24) b

25) Alpha 5, beta 3

26) (FSM) finite state machine. Double circle is the end state (accepting state)

Check if paths can be followed till the end. Last 2 answers. **(e)** , (d)

27) b

28) c

Study Areas

* AI workshop in Dartmouth in 1956
* Activation functions
* Neural networks – layers last layer is number of classes, first layer is inputs
* AND, OR, NOT, XOR, NAND
* Alpha beta pruning