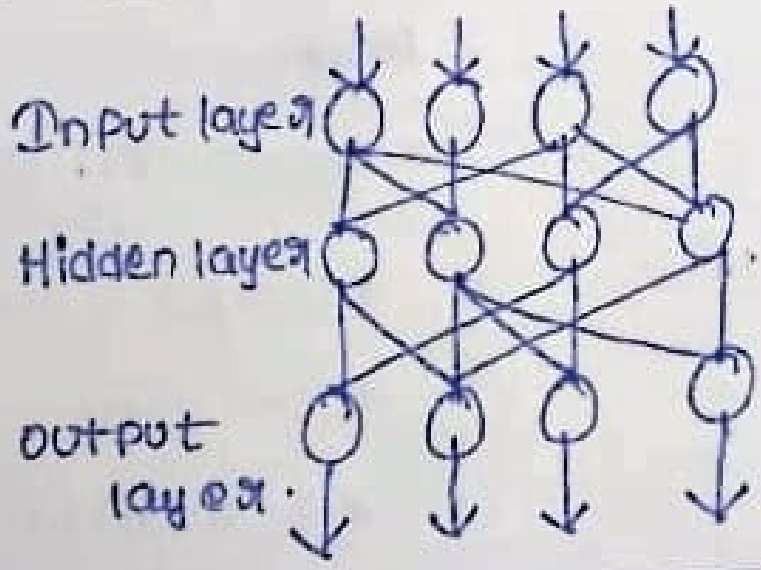
(5) Construct a two layer feed-forward neural network and draw the computing unit using single perception?

➡ A two layer feed-forward neural network consists of an input layer, one or more hidden layers, and the output layer. Each computing unit or neuron, In a neural network can be a represented using a single perception.

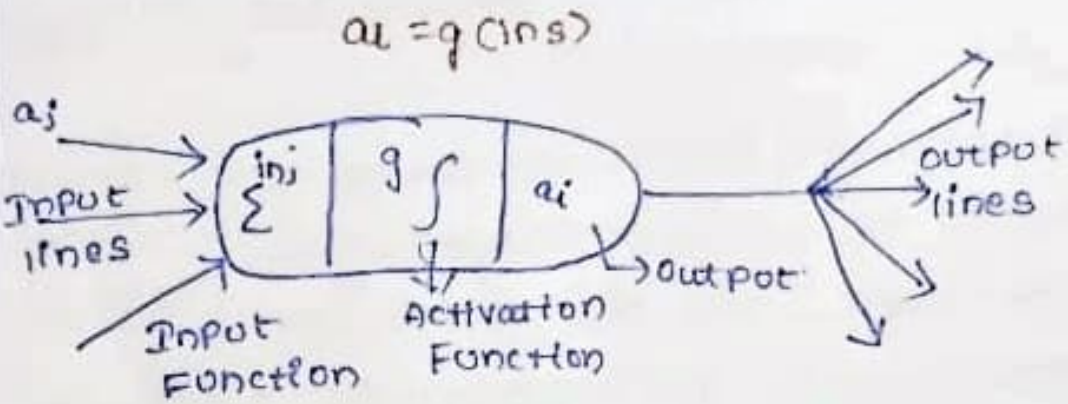
Here's a simple diagram of a two-layer neural network with a single perception in the hidden layer.



In a feed forward network, information moves in one direction, it never goes backwards.

A computing unit:-

Now in more detail but for a particular model only.

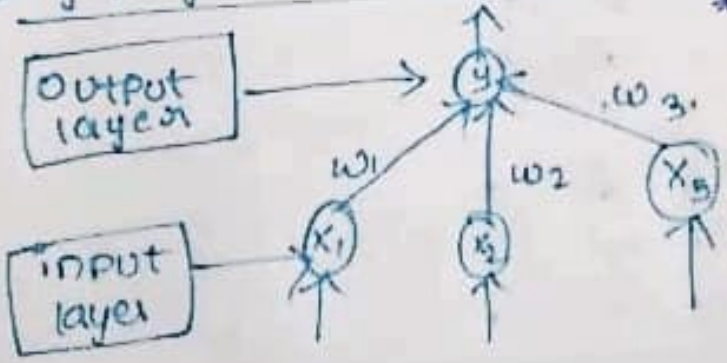


Types of Neural networks:-

* Feedback ANN → o/p returns in to the network
* Feed Forward → consists of 2 input layer and o/p layer.

Ex:- (Real time Application)

Single layer perception :- perception



* Input and output layers
* weight bias
* Net sum
* Activation Function.

20) The percept's for the mars Rover agent include various data it recieves from its sensors, such as images, spectroscopic data, temperature readings, and information about its current position and orientation on mars.

b) The operating environment of the mars Rover is the surface of mars itself. it is a harsh and challenging environment characterized by extreme temperatures, radiation dust storms, and rocky terrain.

c) The actions the mars Rover can take include movement: it can drive and maneuver across the martian terrain to reach specific locations. Sample Collections: it can use its robotic arm to collect rocks and soil samples.

d) Successful and sample Collection Analyses
- Effective navigation and obstacle avoidance
- Efficient power management and resource utilization

e) A suitable agent architecture for the mars Rover would be a combination of reactive and deliberative approaches.