

OR

- (b) Explain the architecture of a single layer perceptron with neat diagram 10

PART - B (20 Marks)

- 4 Pick an Artificial Intelligence system that has appeared in the news or on TV recently and work out PAGE (i.e. Percepts, Actions, Goals, Environment) descriptions for it. How do these relate to their PEAS (i.e. Performance, Environment, Actuators, Sensors) descriptions? 10
- 5 In Figure 2, a single artificial neuron with three inputs is depicted. 10

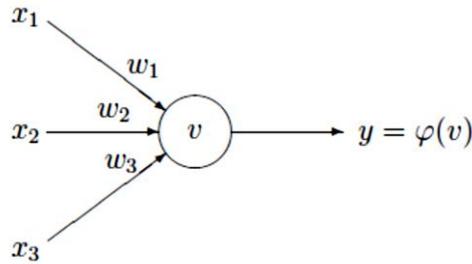


Figure 2

Suppose that the weights corresponding to the three inputs have the following values: $w_1 = 3$, $w_2 = -4$, $w_3 = 2$. The activation of the unit is given by the step-function:

$$\varphi(v) = \begin{cases} 1 & \text{if } v \geq 0 \\ 0 & \text{otherwise} \end{cases}$$

Calculate what will be the output value y of the unit for each of the following input patterns:

Pattern	P_1	P_2	P_3	P_4
x_1	1	0	1	1
x_2	0	1	0	1
x_3	0	1	1	1

