

Question 25.

(i) Truth table.

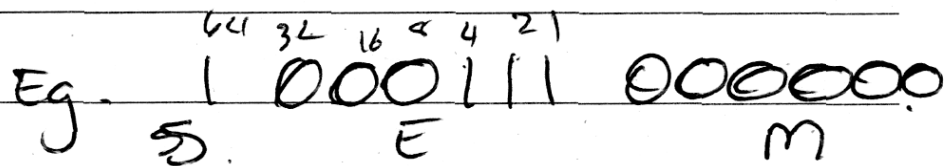
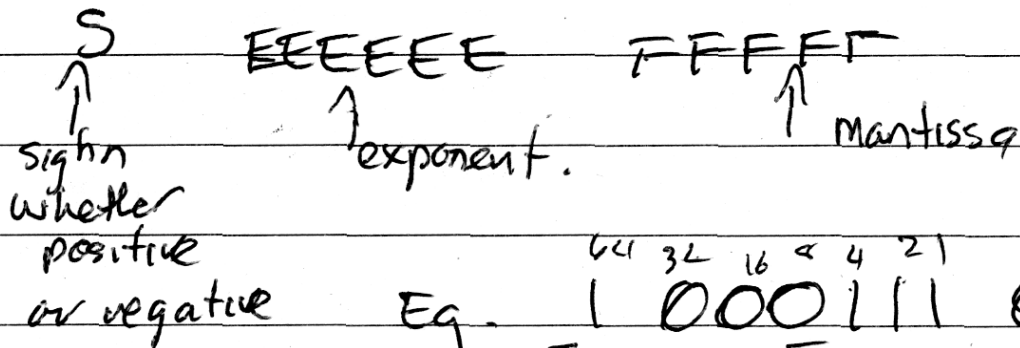
Input A	Input B	output	
		Carry	Sum
0	0	0	0
0	1	0	1
1	0	0	1
1	1	1	0

(ii) Full adder can be constructed with 2 half adders and an OR gate:





b) floating point represents fractional number using exponent functions consisting of a mantissa and ~~and~~ an exponent.



sign is negative (1)

$$\therefore -2^{(E-127)} \times 1.F$$
$$-2^{(11-127)} \times 1.0$$

Integer representation represents fractions in decimal numbers.

Eg. 1.00100

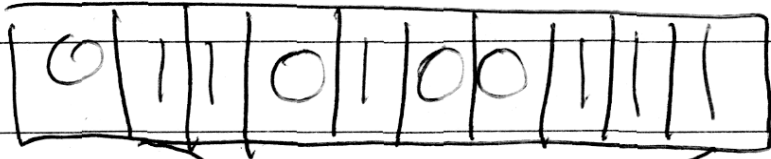
$$1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8}$$



c) (i)



X direction
0 for left
1 for right



Y direction
0 for down
1 for up

(ii)

