

Ans 3:

Image Size

No. of filters = 7

Stride

Padding

 $W \times H$ filter size $S = 2$ $P = 0$ 64×64 5×5

$$\left[\frac{W + 2P - F}{S} \right] + 1$$

Input $\Rightarrow (1, 64, 64)$

$$\left(\frac{64 + 0 - 5}{2} \right) + 1$$

↓

Conv $\Rightarrow (7, 5, 5) \longrightarrow [7, 31, 31]$

$$= 30.5 \approx 31$$

↓

Max Pool $\Rightarrow (2, 2) \longrightarrow [7, 16, 16]$

$$\frac{31}{2} = 15.5 \approx 16$$

↓

Conv $\Rightarrow (14, 5, 5) \longrightarrow [14, 7, 7]$

$$\left(\frac{16 - 5}{2} \right) + 1 = 6.5 \approx 7$$

↓

Max Pool $\Rightarrow (2, 2) \longrightarrow [14, 4, 4]$

$$\frac{7}{2} = 3.5 \approx 4$$

↓

Conv $\Rightarrow (28, 5, 5) \longrightarrow [28, 1, 1]$

$$\left[\frac{4 - 5}{2} \right] + 1$$

↓

Max Pool $\Rightarrow (2, 2) \longrightarrow [28, 1, 1]$

$$= 0.5 \approx 1$$

↓

Flattening $\longrightarrow 28 \times 1 \times 1 = 28 \text{ nodes}$

$$\frac{1}{2} = 0.5 \approx 1$$

No. of nodes = 28