quiz 5 # M section

a) to introduce non-linearity to model (A)

b) to generate additional training data from exiting (C)

3) input img = 12 × 12 outputing = 12 × 12

Padding = 1 filter = 2 * 2

$$12 = \frac{12 - 2 + 2(1)}{S} + 1$$

$$S = \frac{12 - 2 + 2(1)}{12} + 1 = \boxed{2}$$

4) 1024 * 1024 → input img

filter = 3 * 3 no. of filters = 4

Stride = 6

P = 0

$$\text{Dimensions} = \frac{\text{Rows} - \text{RowsF} + 2(0)}{\text{Stride}} + 1 \quad \text{(0 → Padding)}$$

$$= \frac{1024 - 3}{6} + 1$$

Dimensions of Resultant = 171 * 171 * 4

(5) if input = 128 * 128, filter = 4 * 4

Stride = 3, P = 2 No of filter = 20

$$\text{Dimensions} = \frac{\text{Rows original} - \text{filterrows} + 2(2)}{\text{Stride}} + 1$$

$$= \frac{128 - 4 + 4}{3} + 1$$

Dimension = 43 * 43 * 20