

Item 1

1. Write an algorithm that controls the read address generator to produce a horizontal image shifting effect towards the right side of the screen
2. Write an algorithm to control the read address generator to achieve the effect of scrolling the image along the diagonal of the screen towards the top left vertex
3. Write an algorithm to control the read address generator to achieve a vertical obscuring effect towards the top edge of the screen

Item 2

Convert a colour image (RGB) with a 24-bit pixel structure into a monochrome image represented by a grey scale using:

- a) equation of transition from RGB to HLS model
- b) equation of transition from RGB to HSV(B)
- c) the arithmetic mean of the components R, G, B

Using linear tonal correction, write a programme that allows the brightness and contrast of a colour image to be varied over the full range of variation. Use the ScrollBar sliders to change the quality/contrast. Determine the brightness and contrast of the resulting images