



Rajarata University of Sri Lanka
Department of Computing

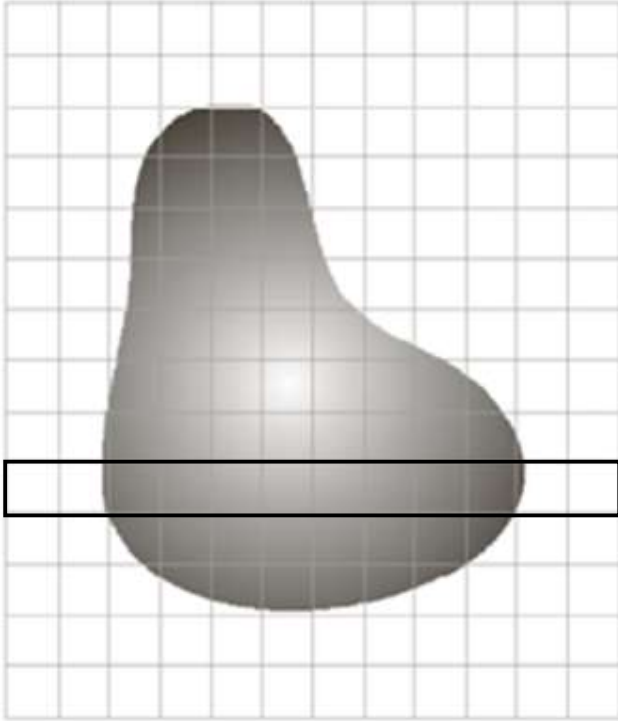
ICT 2403 - GRAPHICS & IMAGE PROCESSING
Class Activity -01

Mark whether the following statements are TRUE or FALSE.

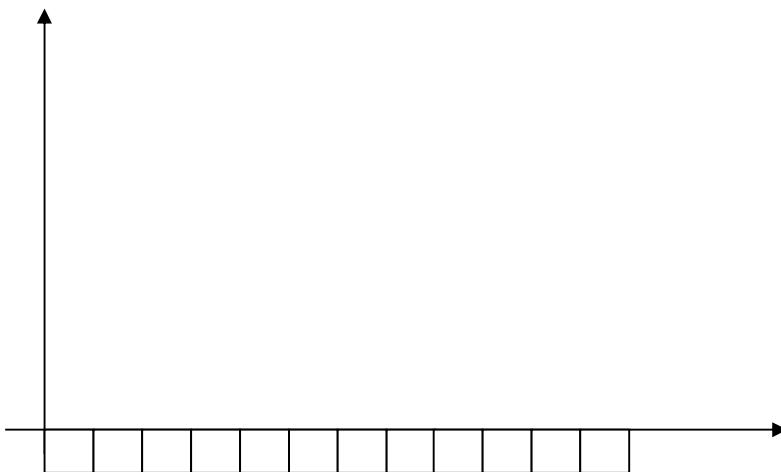
- 01) Wavelength (λ) and frequency (ν) of the EM spectrum can be expressed as $\nu \propto \lambda$
.....
- 02) The energy (E) of the various components of the EM spectrum is given by the expression $E = h \nu$ where, h is Plank's constant and ν is frequency
.....
- 03) The visible band of the EM spectrum spans the range from approximately 0.43 micrometer to about 0.74 micrometer.
.....
- 04) The term gray level generally is used to describe monochromatic intensity
.....
- 05) Depending on the nature of the source, illumination energy is reflected from, or transmitted through, objects.
.....
- 06) CAT, MRI and PET imaging are used multiple sensors which, mounted in a ring structure to produce images.
.....
- 07) In digital cameras, numerous electromagnetic and some ultrasonic sensing devices frequently are arranged in array format.
.....
- 08) The value or amplitude of the image function f at spatial coordinates (x,y) is a positive scalar quantity whose physical meaning is determined by the source of the image.
.....
.....
- 09) Illumination and reflection are component of image function $f(x,y)$
.....
- 10) It is required to convert the continuous sensed data into digital form to create a digital image and it is done through the processes called sampling and sub-sampling.
.....
.....

Sampling and Quantization

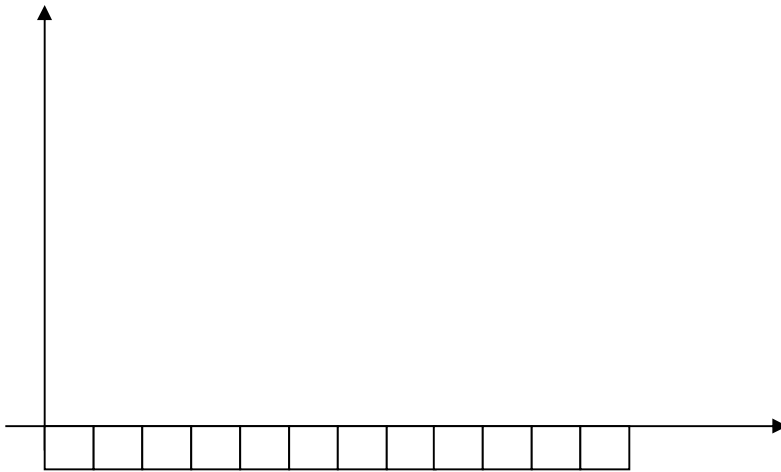
Continuous Image



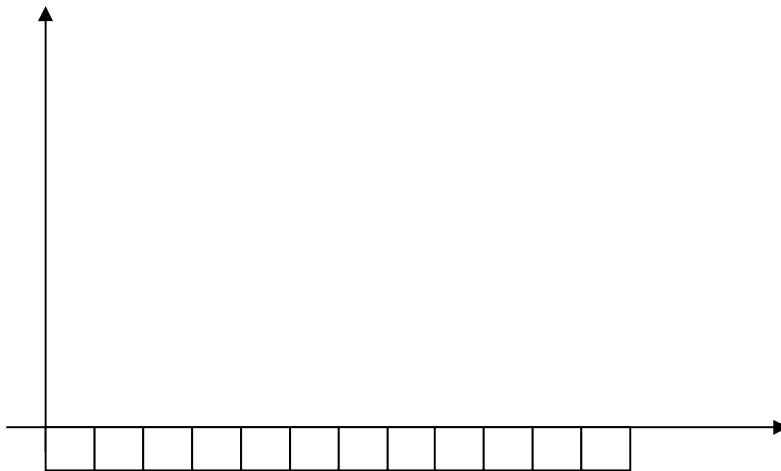
Signal Distribution along the Scan Line



Sampling



Digital Scan Line



Quantization



Formation of Digital Image

