SECTION-I

1. MTF(Modular Transfer Function) is also known as spatial frequency response of an image determines the sharpeness and quality of image. It is calculated by

MTF= Intensitymax-Intensitymin/ Intensitymax+Intensitymin

1. Visible light spectrum includes Violet(380-450nm),Indigo(420-450nm), Blue(450-495nm), Green(495-570nm), Yellow(570-590nm), Orange(590-620nm), Red(620-750nm). For classification of visible light spectrum, based on hardware element such as sensor and software element such as in imaging. The natural source, Sun emits the electromagnetic spectrum which will reach the earth’s surface through the atmosphere, an active sensor is used to collect the radiation and transfer it to the ground station. Sensor here used is active sensor because it provides its own energy source.
2. Some image processing techniques are Image Enhancement, Image preprocessing, Image restoration, Image compression, etc..,
3. Law of absorption in radiological point of view states that the intensity of an image must decreases as it passes through the absorbing material is exponential.

I=Io\*exponential(-ux)

I=Intensity transmitted

Io=Intensity of the beam initially entering the material

u=absorption coefficient

x=thickness of the material

1. Sensitivity of a sensor is the ratio of output and the measured input. For example, in a temperature sensor, it senses the temperature and the output is of voltage, a graph is drawn between these two parameters, produces a curve from there, find the slope of that transfer function is called sensitivity.

Selectivity of a sensor is based on the performance of the sensor. For example, a radio antenna takes only the particular frequencies and allow only certain frequencies, this will shows the selectivity criteria of a sensor.