Q.3 Answer:- Different stages in digital image processing :-

(a)

- Image acquisition :- This is first stage of digital image processing.

(b) Image acti acquisition stage involves preprocessing, such as scaling etc.

- Image enhancement :- Image restoration is an area that also deals with improving the appearance of an image.

(a)

- Color image processing :- Color image processing is an area that has been gaining its importence because of the significant increase in the use of digital images over the Internet.

(b) This may include color modeling and processing in a digital domain etc.

- Wavelets and multi-resolution processing ⇒ (a) Wavelets are the foundation for representing images in various degrees of resolution.

(b) Image is subdivided into smaller regions for data compression and for pyramidal representation.

- Compression ⇒ (a) Compression deals with techniques for reducing the storage required to save an image or the bandwidth to transmit it.

(b) Particularly in the uses of internet it is very much necessary to compress data.

- Object recognition ⇒ Object recognition is the process that assigns a label, such as, "vehicle" to an object based on its descriptors.

- Knowledge base ⇒ (a) Knowledge

(A) Knowledge may be as simple as detailing regions of an image where the information of interest is known to be located, thus limiting the search that has to be conducted in seeking that information.

(b) The knowledge base also can be quite complex, such as an interrelated list of all major possible defects in a materials inspection problem or an image database containing high-resolution satellite images of a region in connection with change-detection applications.