Q	Discuss the significance of Sampling and quantization of digital image
	we desine image as a Two dimensional intensity sunction say & (x,y) where x and y are The co-ordinatest representing horizontally and vortically. The Value of & (x,y) at any point give The pixel value at the point of image
	Typically, a stome grabber or digitizer is used to sample and quantize the analogue video signal
	it? S digitizer is USEd to Sample and quantize the analog Video signal
	This Process involves Sampling and Quantization Processes
	The sampling to rate governs the resolution of digitized image while The quantization level fixes The number of grey levels in The digitized image.

Date / /20

A magitude of the sampled image is expressed as a digitul value in image processing

The number of quantization tevel should be high enough for human perception of Sine Shading details in the imag.

a2-The important of imag processing in under standing the digital image podata?

pre-processing involves operation on images at the lowest level

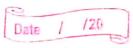
where bothe input and output image are intensity images

The aim of pre-processing is an improvement of the image data.

That eliminates distortions are the most appealing en huncement is the most appealing pre-processing to chique

Basically The idea behind enhance is ment is the most technique is ment is the that is to bring out detail that is alghlight abscribed or simply to alghlight

certain soutures of interest in an image such as . changing brightness & contrast est · Foure Categories 05 Imag preprocessing methodes according to size of the pixe I neighborhor - Pixel Exightness Trunsformation · pre-processing method that 20 bood weighbur hood of the processed pixed . I mage Pre Processing use the considerable redundancy in image Q3-Justisy image unalysis and understanding is an useful Task for better society building The digitulimas processing deals with developing a digitul system That performs operations on adistitul image. it involves Image understanding and image analysis and computer vision electronically. The sundamental steps in digital imay processing ise which are aim to imate the process af human



	Date
	Digital imag Processing DIP
	is a multidisciplinary science
	that makes us to employ the
	Principles Svom various sields
	such as
	the state of the s
	Artificial intelligence
	Robotics
	· Computer Science
	mathematics.
	~ Phy Sics
	statistic
7	This is the fundamental area ;
	of pigital image processing worth
	is Useful Task better in
	society building
72.3	
31	
(21	Discuss the important of
	Biometric Considering Inc
	current application
	there are many example in
	Biomatric that which is important
	considering the current application
	Banking
	Airport
	Electronic Voting.
	Defense sectors
	in these we have show how
	in the start and have strong that
	image is to extract

	The hidden information in an
	Using suitable pre processing
	Techiques its possible to extract the hidden information in an impli which is commonly used in
	Sorensic application
	Bunking Typical Tasks include:
	Document verification, person authentication, Bankers Cheque
	How these Tusks can be achieved essiciently
	Here we have shown the important
Y	bonk cheque
	The cheque is subjected to
	segmentation and subsequently subjected to automored cheque analysis for its understanding
	and validating the cheque
,	This image exhibit the roll of computer vision in general
	in desinating and autonomicas
F	



as - Explain Image representation

A district image is representation of a Two dimensional imag as a Sinite set of digital Values called Picture element or pixels

More formally we define imag as
Two: dimensional intensity and
wertically the value of & (x, y)
at any point gives The Pixel value
at that Point.

where x and y are the co-ordinates representing by horizordally and vertically

the value of f(xoy) at any point gives the pixel value at that point of an image

the representation of digital image using array data structure is show here.

we can notic here the reason to perform sampling and q quantization procession a given analog image to digital image

in order to persorm reperation on an analog signal with a digital computer, and in order to store an analog signal.