Final paper

Digital Image Processing

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Date . **25th June 2020**

Question no 1

Part (a)

QUESTION:-1

(part: a)

*What is grey level slicing? Explain in your own words with Example?

Ans) Grey level slicing is equivalent to band pass filtering. It manipulates group of intensity level is an image upto specific Range by diminishing rest or by leaving them alone.

This transformation is applicable in medical images and satellite images such as X-Rays and C-T scan.

There are two approaches:-

1) Grey level slicing with background
2) Grey level slicing without background.

EXAMPLE:.

1) It brighten and darkens the dusk and dawn images.
2) Improves images for sand storm environments.

*) If a picture is in grey and white so the grey area can be whiten by applying this technique.

Question no 1

Part(b)

QUESTION:- 1

(part:b)

b) It is possible to get details in the Negative of a picture: Justify Your answer with suitable Example.

ANS) NEGATIVE OF A PICTURE:-

Negative of an image is a total inversion, in which light areas appear dark- A negative colour image is additionally colour-reversed- Negative image has basically details in it but they are reserved in the film they are opened on the photographic Page-

Negative film usally have less contrast, but a wider dynamic Range than the final printed positive images- The contrast typically increase when they are printed on photographic page- When negative film are brought into digital Rim there contrast can be adjusted at the time of scaning and by other processes-

Question no 2

QUESTION:- 2

Consida the picture Given below:-

Ans) In the given picture it is enhanced by the histogram equalizer - technique.

In histogram equalizer technique the adjustment of contrast of the image takes place - This technique improves the image appearance by scaling out the intensity range of the image. Through the re-assignment of pixel value, the distribution on the histogram is streched out to produce a more uniformly distribution.

Question no 3

QUESTION:-3

* find the following points:-

$P = (\hat{6}, \hat{1})$ & $Q = (\overset{j}{3}, \overset{i}{7})$

E·D $= [(i-n)^2 + (j-m)^2]^{1/2}$

$= [(7-1)^2 + (3-6)^2]^{1/2}$

$= [(6)^2 + (-3)^2]^{1/2}$

$= \sqrt{36+9}$

$= \sqrt{36} + \sqrt{9}$

$= 6 + 3$

$= 9$

C·B·D:- $= |i-n| + |j-m|$

$= |7-1| + |3-6|$

$= |6| + |-3|$

$= 6+3$

$= 9$

CH·B·D $= \max[[|i-n|, |j-n$

$= \max[|7-1|, |3-6|]$

$= \max[6, 3]$

Question no 4

Part (a)

QUESTION:- 4

(part: a)

What does Histogram of an image shows?

ANS) Histogram are very useful tools that many cameras offer their uses to help them get a quick summary of the tonal range present in any given image.

The Graph shows the tones in the image from black (on the left) to white (on the right). The higher the Graph at any point the more pixels of that tone that are present in an image. Histogram with lots of dark pixels will be skewed to the left and one with lots of lighter tones will be skewed to Right.

Question no 4

Part (b)