b) disconnect c) both disjoint & disconnect d) nothing

s defined by the total number of pixels within the region?

b-) Brightness c-) Intensity d-) Perimeter

___ is the principal factor, which helps in determining an image's spatial resolution.

ic range b-) Quantization c-) Sampling d-) Contrast

s the sum of all components of a normalized histogram?

b-) -1 c-) 0 d-) None of the above

…….. expands the range of intensity levels in an image so that it spans the ideal full intensity e recording medium.

stretching b) brightness

ıtrasts stretching &brightness d-) None of the above

ırier transform and its inverse are infinitely

odic b-) periodic c-) linear d-) non linear

ase angle is represented by the formula

x/y) b-) arcsine(x/y) c-) tan(x/y) d-) arctan(x/y)

re the categories of digital image processing?

Enhancement b-) Image Classification and Analysis

Transformation d-) All of the mentioned

n of the following is the first and foremost step in Image Processing?

acquisition b-) Segmentation

enhancement d-) Image restoration

oaches to image processing that work directly on the pixels of incoming image work in …...

domain b-) Inverse transformation

orm domain d-) None of the Mentioned

the concepts that must be understood when performing linear spatial filtering:

ion b) variance c) both correlation& variance d-) None of the above

the types of lowpass filters:

orth b) Gaussian c) both Butterworth, and Gaussian. d-) Nothing

hape of a Butterworth filter is controlled by a parameter called

der. b) ideal filter c) both filter order and ideal filter d-) Nothing

rge values of this parameter, the Butterworth filter approaches like:

ter. b) Gaussian filter c) Ideal filter & Gaussian filter d-) Nothing

represent a subset of pixels in an image. For any pixel p in S, the set of pixels that are connected called a …… of S.

ed b) connected component c) connected set d) nothing

represent a subset of pixels in an image. Two pixels p and q are said to be ……. in S if there

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y of Science
Grade: Max. 50 marks
pages: 1 page (2 faces).

Final Exam

Academic Year: 2023/2024
Course Name: Image Processing
Grade: Level 04 – Physics&CS
Time Allowed: 2 Hours
Jun 3, 2024

se the correct answer: (45 Marks)

R represent a subset of pixels in an image. We call R a region of the image if R is a connected set.

ent b) region c) disjoint d) nothing

egions that are not adjacent are said to be:

exists a path between them consisting entirely of pixels in S.

a) connected b) connected component c) connected set d) nothing

18-) Let S represent a subset of pixels in an image. If it only has one component, and that component is connected, then S is called ……

a) connected b) connected component c) connected set d) nothing

19-) Which of the following operations is used in homographic filtering for converting the input image to discrete Fourier transformed function?

a-) Exponential Function b-) Logarithmic Function

c-) Negative Function d-) None of the above

20-) In general, the log transformation can be represented by _____

a-) s = c.log (1 - r) b-) s = c - log (1 - r)