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INTEGRAL UNIVERSITY
Digital Image Processing (EC-024)
IVth year 8th Semester
Group: EC2
Quiz-1

Date:

Name:

Branch:

Roll Number:

1. Which of the following is not a part of a Digital Image Processing System-
   (a). Imaging System
   (b). Sample and Quantize
   (c). PID Controller
   (d.) Online Buffer

2. The following is not a characteristic of an Image digitizer-
   (a). Pixel Size
   (b). Pixel spacing
   (c). Noise
   (d). None of the above

3. What does “dpi” stands for-
   (a). dashes per image
   (b). dashes per inch
   (c). dots per image
   (d.) dots per inch

4. For an RGB image of size 8inch x 12inch, what will be amount of storage will be required on disk -
   (a). 8.2 MB
   (b). 16.4 MB
   (c). 24.6MB
   (d). 22.4MB

5. In which type of image digitizer only one spot for the object is illuminated at any time, and all the transmitted light is collected for the sensor-
   (a). Scan-over
   (b). Scan-upon
   (c). Scan-in

(d.) Scan-out

6. On the original grey scale image from fig. 6 (a), which of the following point processing operations could have been applied to obtain the image in fig. 6(b)?

Fig. 6 (a)

Fig. 6 (b)

(a). Contrast Compression
(b). Negativation (image inversion)
(c). Some grey scale slicing operation
(d). Extraction of the most significant bit.

7. Which of the following is the correct definition of 2D Z-transform
(a).

$$X(z_1, z_2) = \sum_{m=-\infty}^{\infty} \sum_{n=-\infty}^{\infty} x(m,n)\, z_1^{-m} \,.\, z_2^{-n}$$

(b).

$$X(z_1, z_2) = \sum_{m=-\infty}^{\infty} \sum_{n=-\infty}^{\infty} x(m,n)\, z_1^{m} \,.\, z_2^{n}$$

(c).

$$X(z_1, z_2) = \sum_{m=-\infty}^{\infty} \sum_{n=-\infty}^{\infty} x(m,n)\, z_1^{2m} \,.\, z_2^{2n}$$

(d). None of these

8. The point operations is sometimes also called as which one of the following-
(a). Ergodic random variables
(b). Image transformations
(c). Gray scale transformations
(d). All of the above