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INTEGRAL UNIVERSITY
Digital Image Processing (EC-024)
IVth year 8th Semester
Group: EC2
Quiz-2

Date:

Name:

Branch:

Roll Number:

1. If the spectrum of a continuous (not sampled) image is the one in fig. 1. a), then the spectrum of its sampled version is, most likely-

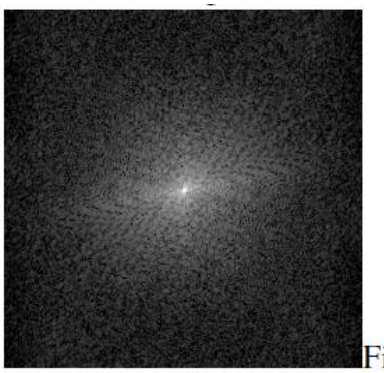

Fig. 1.a)

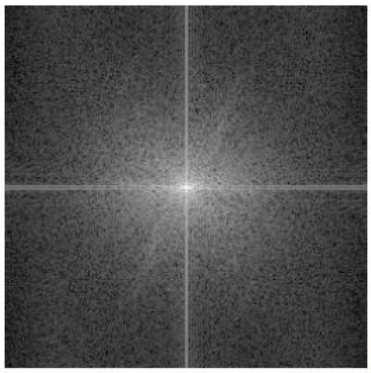

Fig. 1.b)

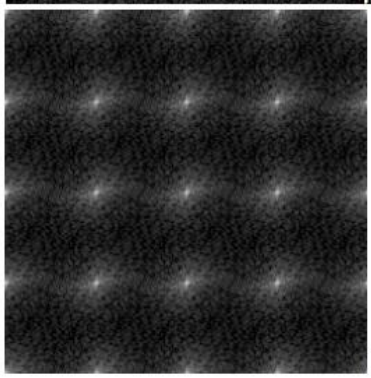

Fig. 1.c)

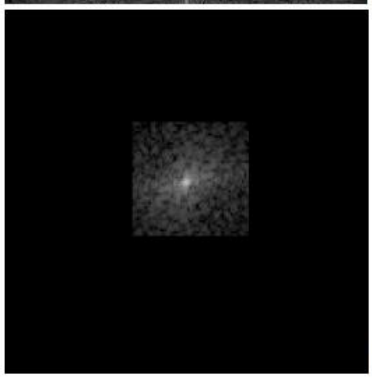

Fig. 1.d)

(a). the one in Fig. 1.b)
(b). the one in Fig. 1.c)
(c). the one in Fig. 1.a)
(d.) the one in Fig. 1.d)

2. The Optimal Filter, Weiner Estimator is used in digital image processing systems to-
(a). add noise
(b). remove noise
(c). minimize noise
(d). None of the above

3. The Euclidean distance between p and q where p is (x,y) and q is (s,t) is defined as-
   (a). $D_e(p,q) = [(x-s)^2 + (y-t)^2]^{\frac{1}{2}}$
   (b). $D_e(p,q) = [(x-s)^3 + (y-t)^5]^{\frac{1}{3}}$
   (c). $D_e(p,q) = [(x+s)^2 - (y+t)^2]^{\frac{1}{4}}$
   (d.) None of these

4. With what other name is City Block or Taxi Cab Distance also known as -
   (a). Mississippi Distance
   (b). Malaysian Distance
   (c). Manhattan Distance
   (d). None of these

5. The two pixels p and q are at points (2,3) and (5,4) respectively. Then calculate D_e , D_4 and D_8-
   (a). $\sqrt{15}, 8, 9$
   (b). $\sqrt{12}, 7, 10$
   (c). $\sqrt{10}, 4, 3$
   (d.) None of the above

6. Which one is the correct formula for calculating D_8 (Chessboard Distance) between points p≡(x,y) and q≡(s,t) -
   (a). $D_8(p,q) = \{[x-s],[y-t]\}$
   (b). $D_8(p,q) = min\{|x-s|,|y-t|\}$
   (c). $D_8(p,q) = max\{|x-s|,|y-t|\}$
   (d). $D_8(p,q) = min\{|x+s|,|y+t|\}$

7. To adjust the light intensity so that the gray level of individual pixels represent equal increments in light intensity by successive Gray Scale Transformations(GST) is known as -
   (a). Photo sensitive emmission
   (b). Photo Detector
   (c). Photometric Calibration
   (d). None of these

8. The optimality criterion for Weiner Filter is characterized by -
   (a). Mean Square Estimator
   (b). Mean Square Error
   (c). Mean Substituting Equation
   (d). None of these