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elections of property del
Question - 5
I) Griven + (m,y) is real
    RTP FT (21.20) = F(-4,-10) Where F(21.00) is DFT of J(21.75)
    F(u_10) = \sum_{x=0}^{\infty} \sum_{y=0}^{\infty} f(w_1y) e^{-2\pi i j} \left(\frac{ux}{M} + \frac{uy}{N}\right) - \frac{1}{2\pi i}
   Courier transform for a descrete signal f (my) of size MXN is
  Complex. anjugue
  F^{+}(u, v) = \sum_{x=0}^{\infty} \sum_{j=0}^{\infty} f^{+}(x, y) e^{2\pi i (ux + vy)}
= \sum_{x=0}^{\infty} \sum_{j=0}^{\infty} f^{+}(x, y) e^{2\pi i (ux + vy)}
= \sum_{x=0}^{\infty} \sum_{j=0}^{\infty} f^{+}(x, y) e^{2\pi i (ux + vy)}
 fiven f(ny) is real f (a,y)=ft (n,y)
            25 5 (M, M) (MX 1 N)
        This can be written as
          - 5 2 f (aiy) e-2 mi (-u)x + (-v)y)
     from (I)
                     = F(-11,20) - 11-) - (UIL)
      F(u,v)= F(-u,-v)
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	and the state of the state of the state of the state of the
1	11) John f (718) i's real and even where a function f (1919)
	is an even function of f (M15)=+ (-71, -8)
	I de sono out the characteristical days of the
	RIP: 'F(4,01 is real and even.
	(C'11:)) = (C 11:)
	Consider, fory) be at size MXN then
	tabling.
	fourier from form of fair) is
_	# (u,v) = \( \sum_{\pi=0} \sum_
_	gnver Discrete Eurice Transform (10 fT)
_	(( 12) ) M-1 M-1 M-1 (12)
	f(ny) = 1 > 5 f(n,0) e 271(m - N)
	$f(m,y) = \frac{1}{N} \sum_{i=0}^{N-1} f(n,i) e^{i2\pi i} \left(\frac{nx}{m} + \frac{ny}{n}\right)$
	F(-1,-10) = 5 5 f(mis) exp(-211) (=u)x + (-u)y)
	- x = 0 = 0
	x=0 y=0 (211) (211) (211)
	Replace 2 - 4: - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
	0 0
	= \( \sum \frac{f(-\frac{\gamma', -\gamma'}{\gamma'} \) \exp(2\lambda') \( \frac{\gamma' \lambda'}{\gamma'} + \frac{\gamma' \lambda' \lambda'}{\gamma'} \)
	7=1-M 0=1-N
	0 1
	= \( \sum_{1} = 1 - N \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
-	·; ·f(n·y) i's even
	2 2 1 (χ', y') exp (2π i ( ux' + uy'))
	3; 1-W 2; 1-N = 5 5 1 (N,'A,) 6xb (5u! (Mx, + A))) 3; 1-W 2; 1-N
_	

	one hime
	Hwe carefully observer the above sum is a period sum
	along both x-axis (Time pould M) and y-axis (Time period N)
	dries telling to poden lasis ne ei
	.: It is a Discrete Fourier Transform it is Same as F(u, v) [ton
	would be marked by St. 16 18 37 1918
	: F(-u,-v) = F(u,v)
	[: f(u,v) i's even -(3)
-	market and a
	Now from previous part results to ment and and
1	
-	$f^*(u, 0) = f(-u, -v)$
	: f(u,v)is even tom 3 and your
	f'(u,v) = f(u,v) $f'(u,v) = f(u,v)$
	Or M 3 ((1/1)) 7 2 2 1 = (1/1) 1.
	: Complex conjugate of fruit) is itself
	in the state of th
	+ m ) ins ) 9 kg ( (u, v) is red ( ( - w -) -)
ł.	
7	in F(uno) is also real and even
_	
_	occi de l'Hence provede , x 12 todas gradas
_	1-M=1 1/2 1-M-1
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