Q. Functions

imag ( ) = It represent the imaginary part of a complex number.

Example = imag (5 + 8i)

ans = 8

ones( ) = In matlab when we use this It creates array of all ones.

Y = ones (X)

o it will show x by x matrix of 1.

rand() := Applying there i will be equal number of element with random values

$$X = rand(3)$$

```
1 . 5   2

3  5  3
      5  9
```

(d) ifftshift () = ifft arranges discrete fourier transform with zero frequency component to center of spectrum.

(8)

(1). pass band. ripple = it is
the fluctuations which is measured
in dB occurs in the pass
band or stop band of a filters
frequency.

(2) stop band attenuation is the
minimum attenuation level,

(3)

5 (i) False True

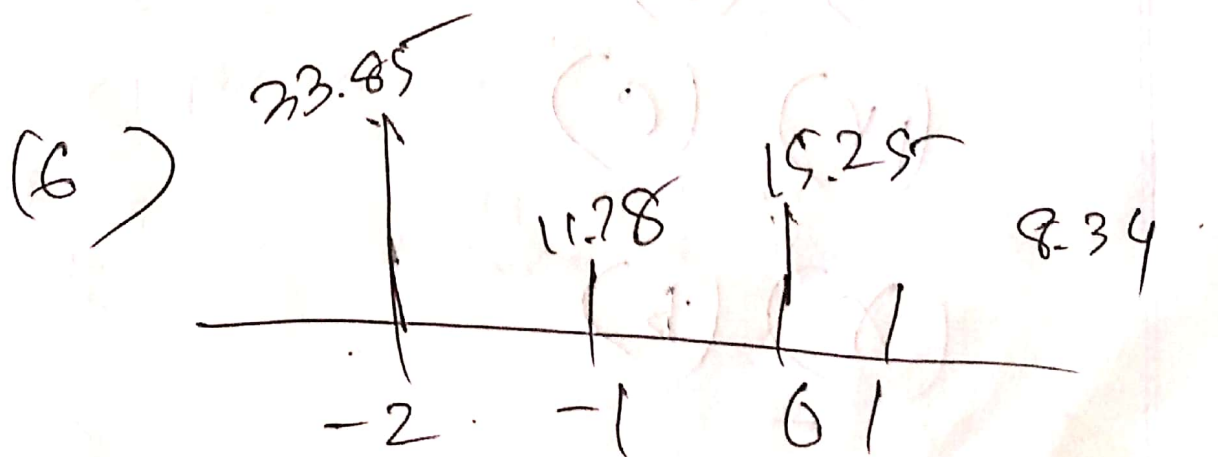(ii) False

(iii) true

(iv) false

(v) False

(3;) ele'

cloak

close all

x_n (n) = [3 6 9 11]

x_2 [x] , [11 5 28 3]

(10) fft computes discrete fourier transform and fft-shift doesn't compute anything but swaping the position of samples. thats why its necessary to use fftshift () after fft()

(6)

$$23.85$$
$$15.25$$
$$11.28$$
$$8.34$$
$$-2 \quad -1 \quad 0 \quad 1$$

4. (I) (1)
   (II) (b)
   (III) (c)
   (IV) (d)
   (V) (b)
   (VI) (a)
   (VII) (b)
   (VIII) (e)
   (IX) (c)
   (X) (b)

(2) it is used to assess the strength and direction of linear relationship between pairs of variables.

(90) (11) — $f = 20k\ Hz$

$N = 20$

given signal $= \sin(29k)$

$w = \dfrac{2f}{N} = 2\dfrac{\pi}{10}$

freq is $= \dfrac{fs}{N}\dfrac{20}{20}\ Hz$

$= (20\pi)$

$220\ KHK$