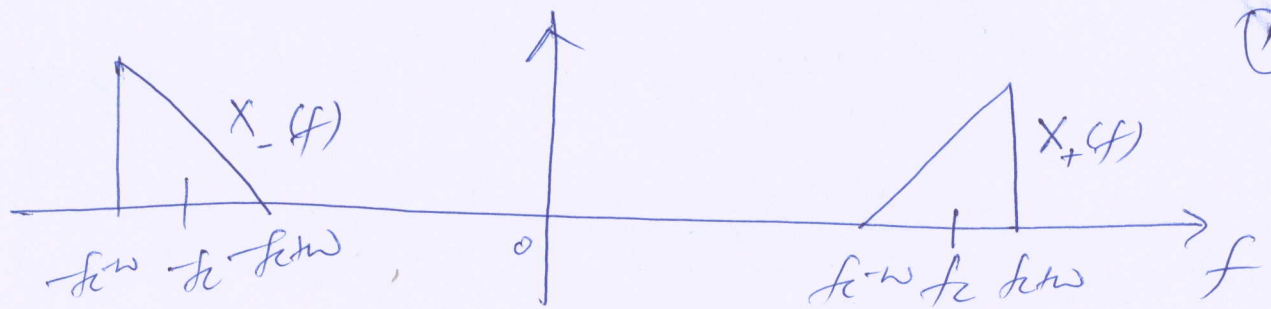


Bandpass signal $x(t) \Rightarrow X(f)$ ①



$$X_+(f) = 0 \quad \text{for } |f - f_c| > W$$

and

$$X_-(f) = 0 \quad \text{for } |f + f_c| > W.$$

$$X(f) = X_+(f) + X_-(f) \quad \text{--- ①}$$

since $x(t)$ is real

$$X(f) = X^*(-f), \text{ which implies}$$

that

$$X_+(f) = X_-^*(-f) \quad \text{--- ②}$$

Define

~~Then~~ $x =$

