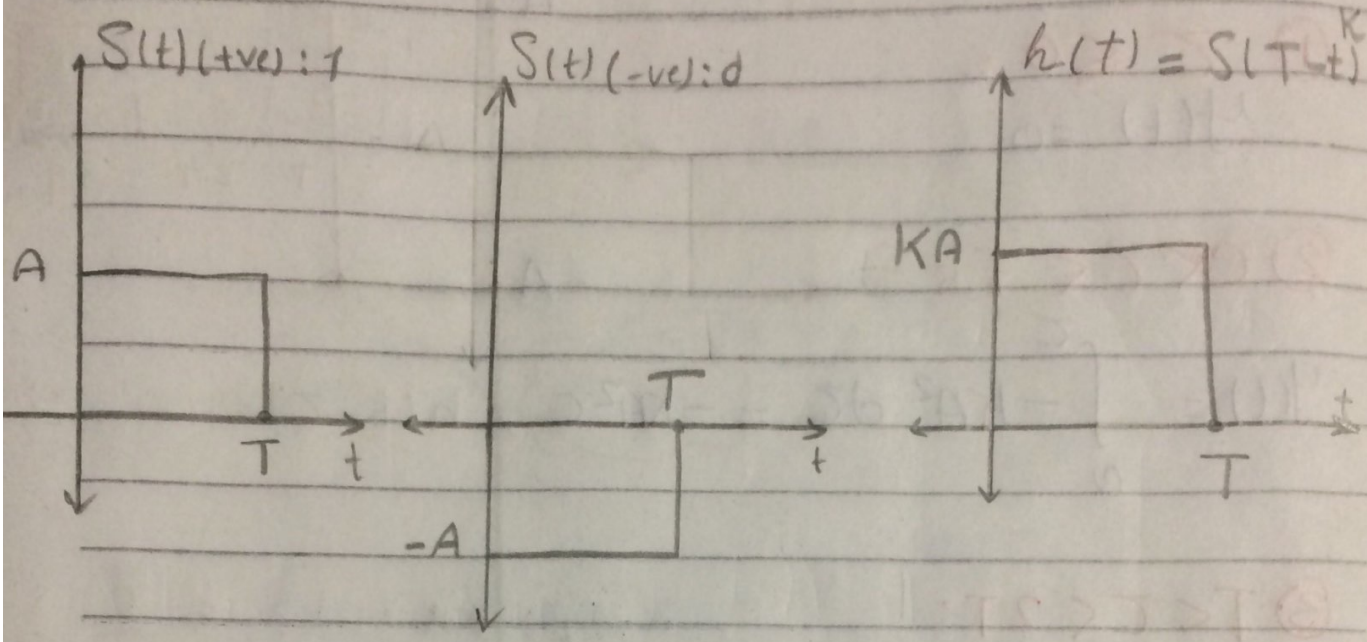
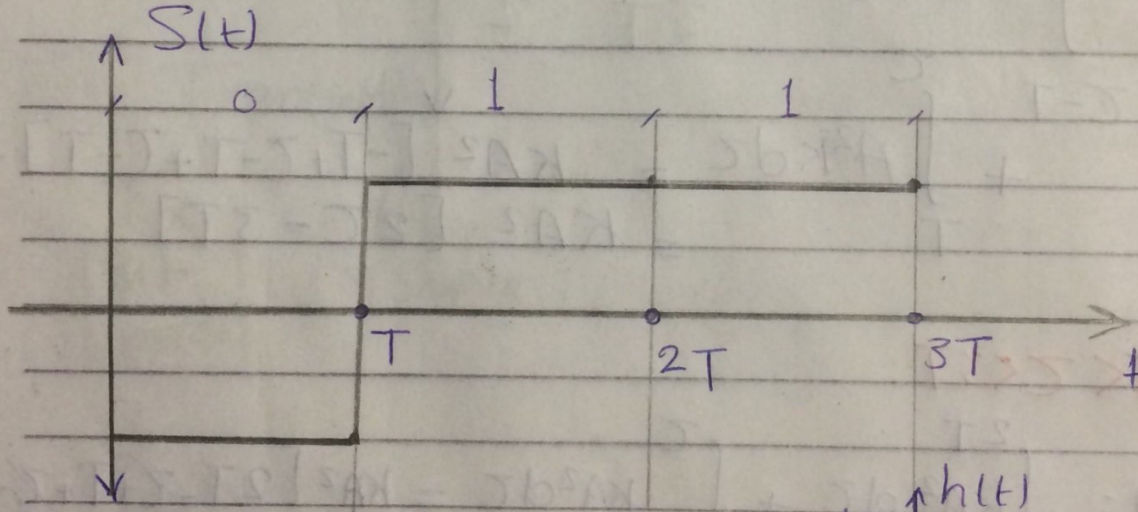
Date :_____ No:_____

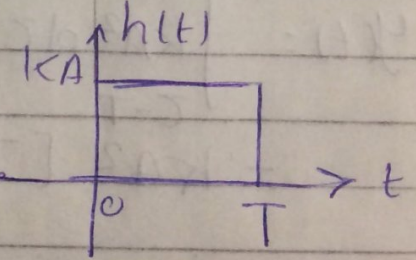
Prob1 :-



ⓐ b: 0, 1, 1



ⓑ MF : $h(t) = K\,S(T-t)$

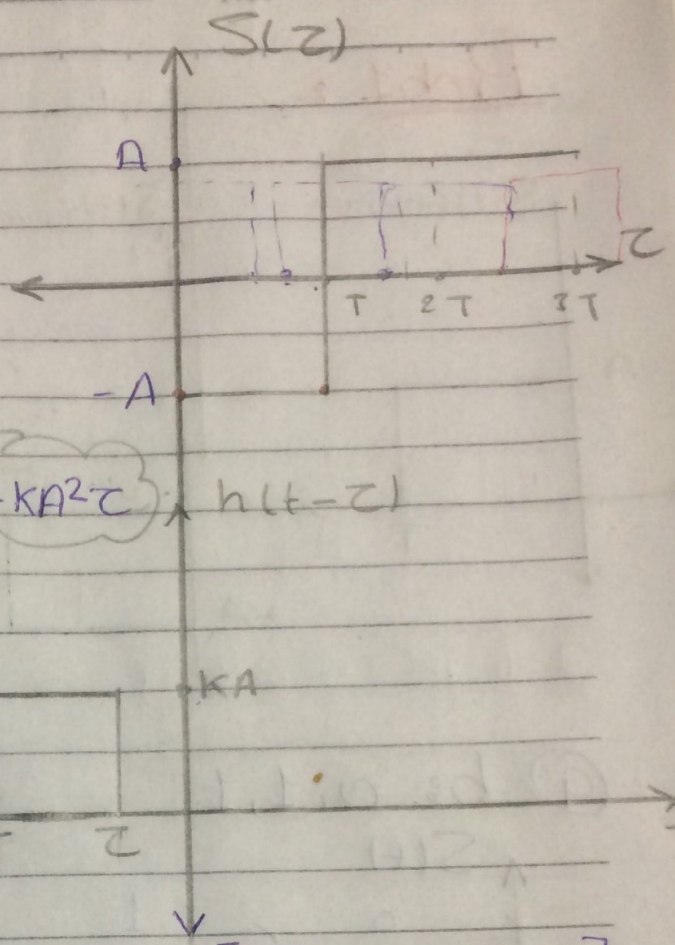


τ - T < 3T

Date: No:

(b)

$y(t) = s(t) * h(t)$



① $\tau \leq 0$:

$y(t) = 0$

② $0 < \tau < T$:

$$y(t) = \int_0^{\tau} -KA^2 \, d\tau = -KA^2\tau$$

③ $T < \tau < 2T$:

$$y(t) = \int_{\tau-T}^{T} -KA^2 \, d\tau + \int_{T}^{\tau} A^2K \, d\tau = KA^2[-T+\tau-T+\tau-T]$$

$$= KA^2[2\tau - 3T]$$

④ $2T < \tau < 3T$:

$$y(t) = \int_{\tau-T}^{2T} KA^2 \, d\tau + \int_{2T}^{\tau} KA^2 \, d\tau = KA^2[2T - \tau + T + \tau - 2T]$$

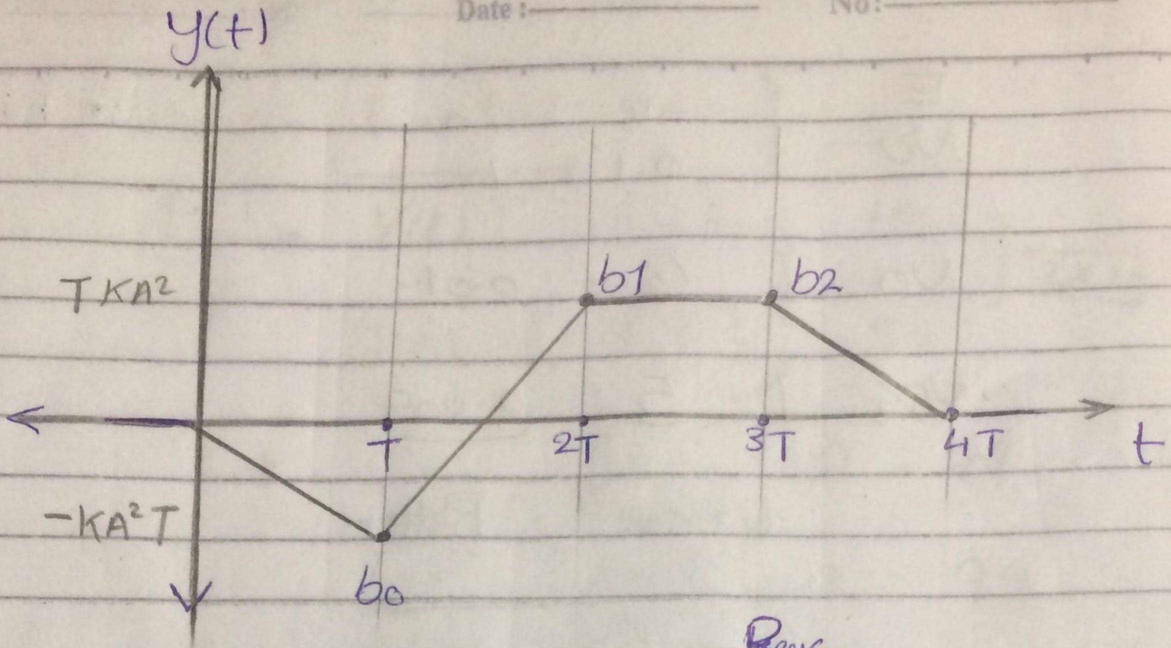
$$= KA^2[T] \text{ , fixed/const.}$$

⑤ $3T < \tau < 4T$:

$$y(t) = \int_{\tau-T}^{3T} KA^2 \, d\tau = KA^2[3T - \tau + T]$$

$$= KA^2[-\tau + 4T]$$

⑥ $\tau > 4T$: $y(t) = 0$ #



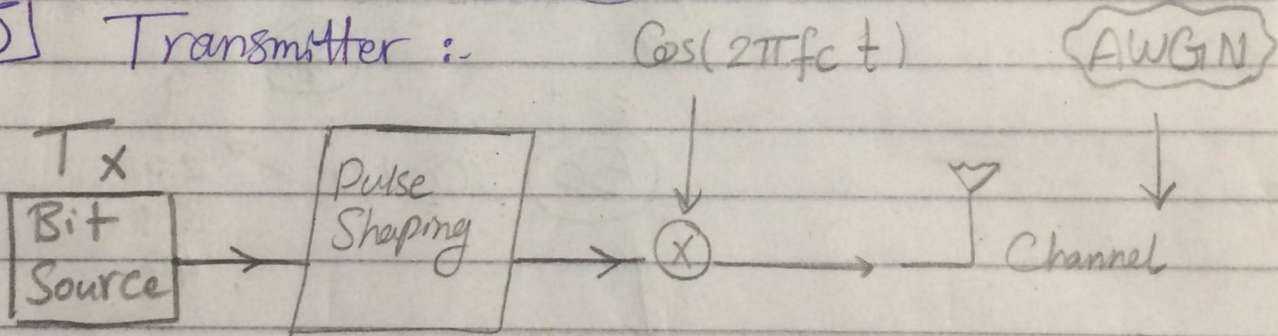
Rear

[C] b0 Sampled at T Value: $-KA^2T$

b1 ~ 2T Value: KA^2T

b2 ~ 3T Value: KA^2T

[D] Transmitter :-



Receiver :-