As y is equal distribution therefore p(y=0) or p(y=1) equals 1/2

The entropy $H(y_s) = -2*(1/2)*lg(1/2) = 1$

Similarly, the entropy $H(z_s) = -2*(1/2)*lg(1/2) = 1$

According to conditional entropy of X given Y is:

$H(X|Y) = - \sum_j p(Y=y_i) \sum_I p(X=x_i|Y= y_i) \lg p(X=x_i|Y= y_i)$

As for $H(y_s|x_t)$, X has three value: 0, 1, 2 and probability should be 1/4, 1/2 and 1/4 respectively.

Therefore, $H(y_s \mid x_t) = -\sum_t p(X= x_t) \sum_s p(Y= y_s |X= x_t) \lg p(Y= y_s |X= x_t) = 1/2$

When X has value 0, there is only one circumstances that y and z all are 0 therefore for X=0, the entropy should be 0.

When X has value 2, there is only one circumstances that y and z all are 1 therefore for X=2, the entropy should be 0.

When X has value 1, there is only two circumstances either y or z is 1 and the other is 0, therefore for X=1, the entropy should be 1/2.

Therefore, $H(y_s \mid x_t) =-(1/4+1/2+1/4)*(0+0+1/2)*lg(1/2) = 1/2$

Similary, $H(z_s \mid x_t) = - \sum_t p(X= x_t) \sum_s p(Z= z_s |X= x_t) \lg p(Z= z_s |X= x_t) = 1/2$

And $H(z_s| x_t) = 1/2$

In conclusion:

$H(y_s \mid x_t) < H(y_s)$ and $H(z_s| x_t) < H(z_s)$ therefore information flows can happen from y and z to x.