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Ans: to the Q NO: (1)

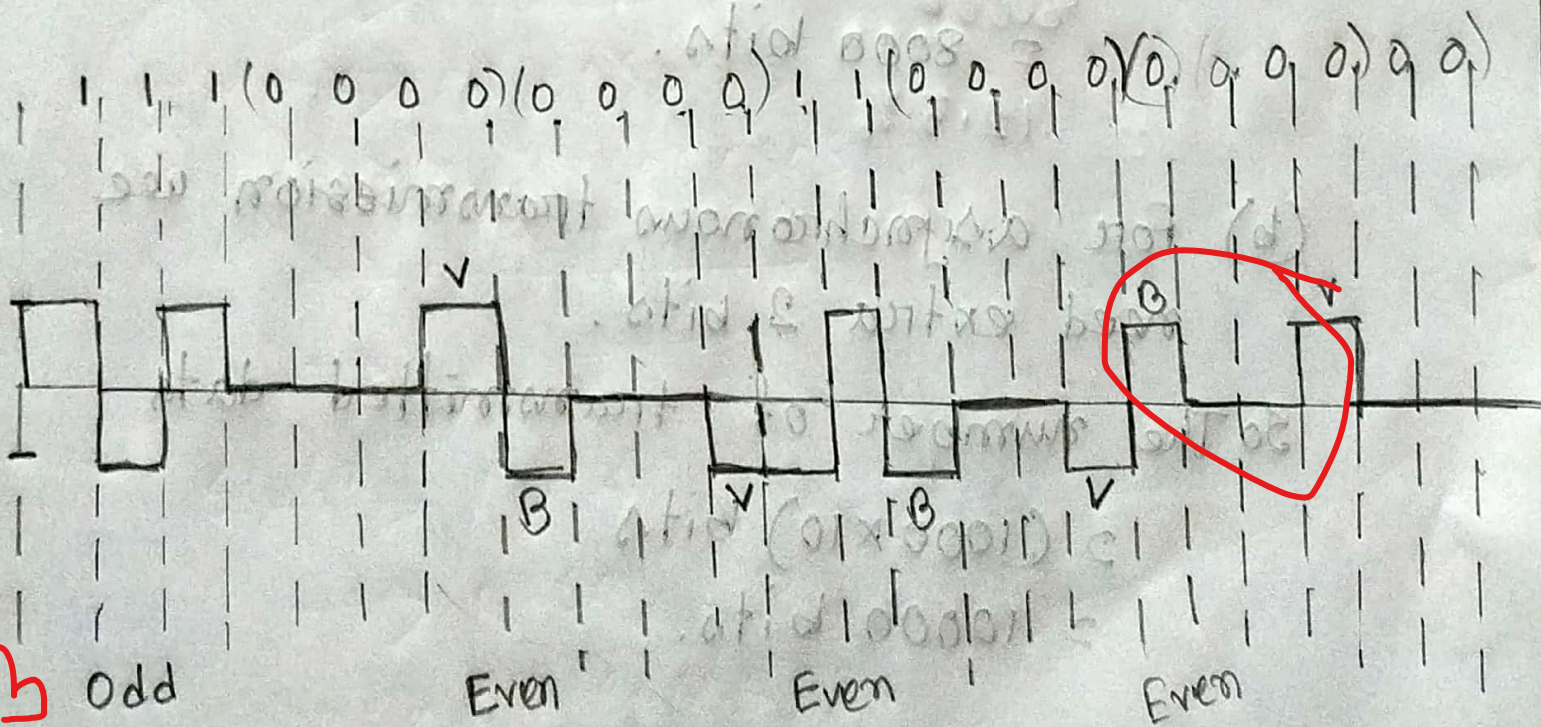
My Id is odd. So I have to use HDB3.

111000000000110000000000

If odd number of 1's \rightarrow 000V.

If even number of 1's \rightarrow B00V.

Bit (8 x 0001) =



Ans: to the Q NO: (2)

- (a) The number of transmitted bit for synchronous transmission we need do not need any extra bit. So, For 8 bit data we need to send 8 bit data only.

The number of transmitted data,

$$= (1000 \times 8) \text{ bits}$$

$$= 8000 \text{ bits.}$$

- (b) For asynchronous transmission we need extra 2 bits.

So The number of transmitted data

$$= (1000 \times 10) \text{ bits}$$

$$= 10000 \text{ bits.}$$

(c) The redundancy percent for each case.

$$\frac{8000}{8000} \times 100 = 100\%$$

for synchronous here is no redundancy

But for asynchronous,

$$\frac{10000}{8000} \times 100$$

$$= 12.5\%$$

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