Name: Abu Obayed Talha

ID: 17201009   CT: 03   Date: 08.10.2020

Answer to the question no: 01
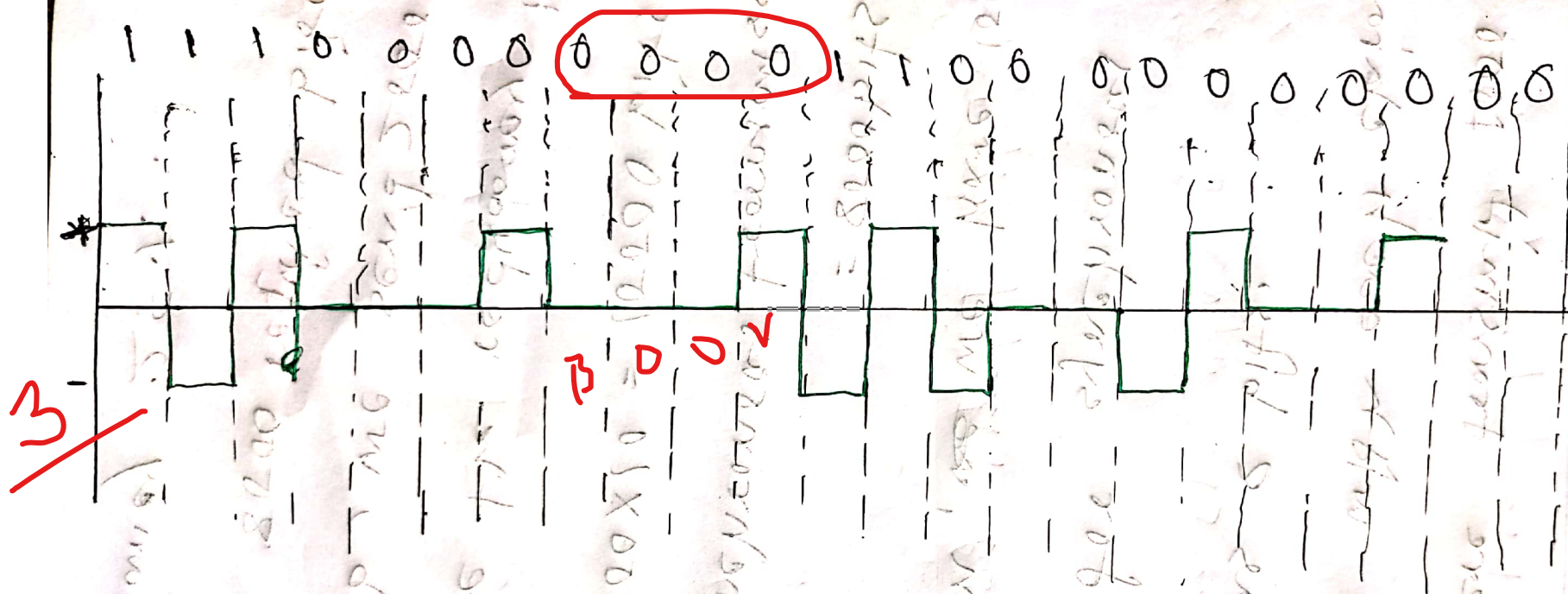
Here my id is 17201009 so it is

odd. so I use HDB3

Given that element:

1111000000000 110000000000000

$P = T \cdot 0$

②

1 1 1 1 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0

B 0 0 V

3 —

Black colour : time from

Green color : Scheme for HDBC

Here note :

    odd number of 1's ⟶ 000V

    Even number of 1's ⟶ B00V

V = violation

B = bipolar.

Answere to the question no: 02

a) Ans:- Here transmit 1000 characters with each character encoded as 8 bits.

a) Ans: for synchronous transmission, we we have 1000×8 = 8000 bits

b) for asynchronous transmission we have $1000 \times 10 = 10000$ bits.

c) for case the redudancy is 0%.

for case b, we send 2000 extra for 8000 required bits the redudancy 25%.