1)
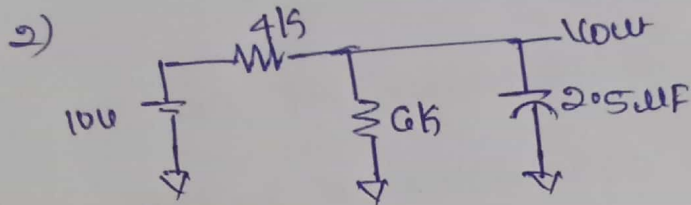

Find Vout,

2)

what is Vout;

⇒ what is Voltage across capacitor in steady state ?

⇒ here he was mainly interested in the approach

⇒ what is the voltage across capacitor at time t=0.

⇒ plot Vout

⇒ How much time, it will take for a capacitor to reach steady state

⇒ Here he asked my approach towards calculating the time constant.

3) Interviewer asked me to draw cmos Inverter, and asked about working of it.

⇒ then he asked to draw same inverter by keeping n-mos above and pmos below

⇒ asked like what will happen if I swap the positions of pmos & nmos.

   I-said it behaves a buffer and output with will not swing from rail to rail (VDD - GND)

⇒ asked why do we connected load capacitor at the output of the inverter while simulating the circuit on the simulator ?
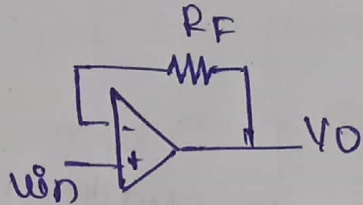
4) Then he started asking questions on Buffer

⇒ asked to draw buffer using op-amp

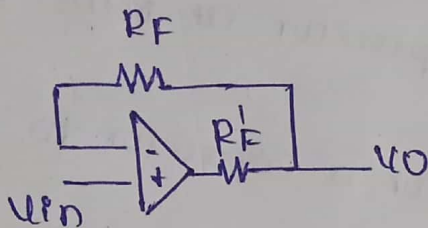⇒ asked about importance of Buffer while designing circuits

⇒ asked about properties of Buffer

⇒

R_F

Vo

Uin

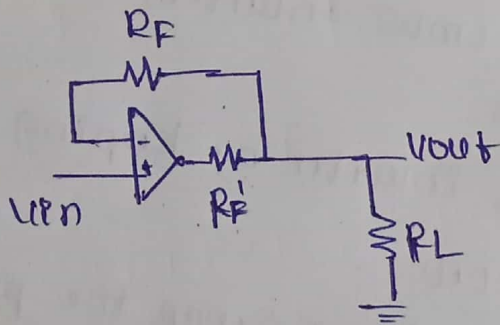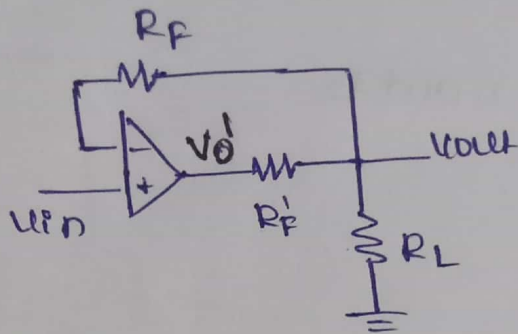asked about impact of baf Resistor in the feedback

R_F

Vo

Uin

asked about impact R_F' on output

wether the current flows through R_F' or ?

R_F

Vout

Uin R_F'

RL

now current flows through R_F' (or) not ?

⇒

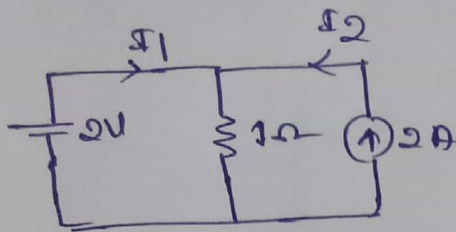are the voltages V_o' and $Vout$ same ?

asked to write KCL at node $Vout$

⇒ Last question he has asked one general question like
swap two numbers 'x' and 'y'
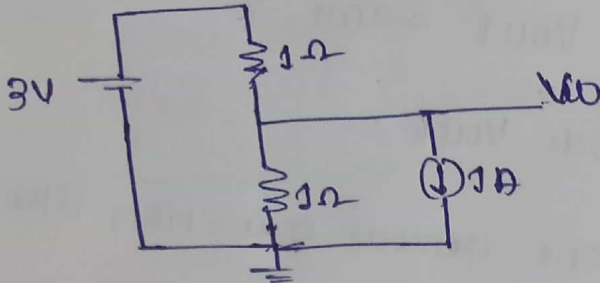swap the two numbers a & b without using another
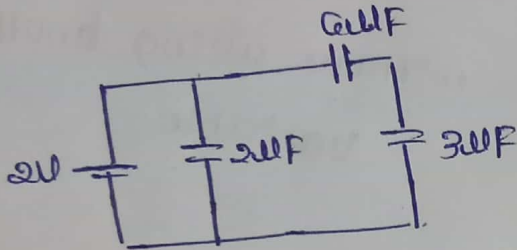^ values of - variable

①

Find I_1 and I_2
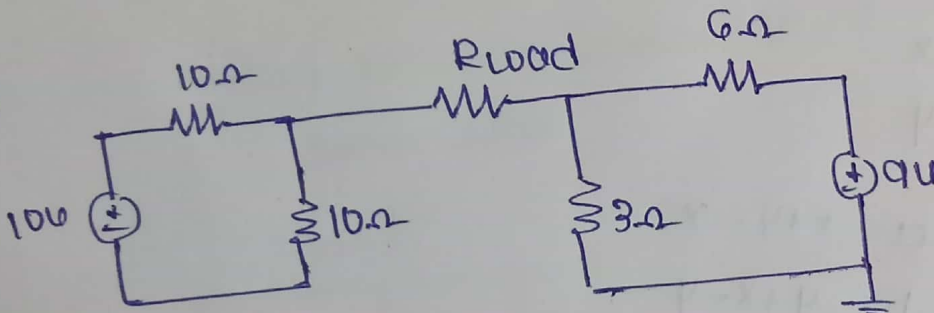
②

find V_0

③

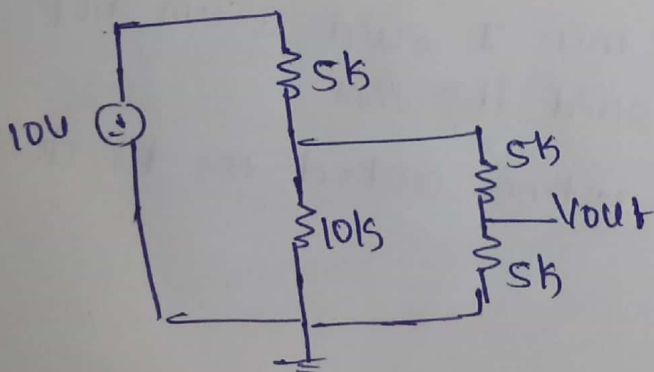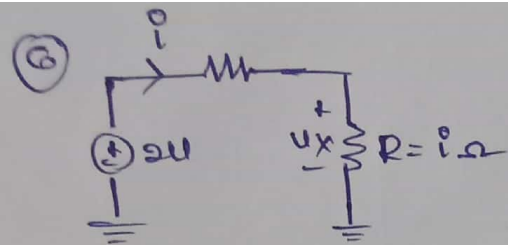
Energy stored in the following system

④

Find I_{sc} and equivalent resistance seen from R_{Load}.

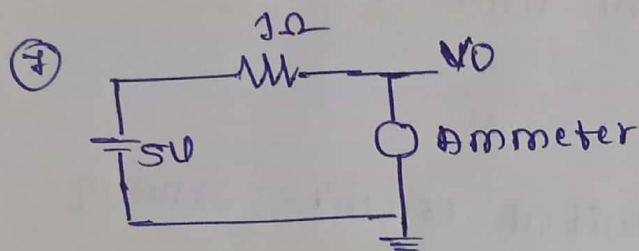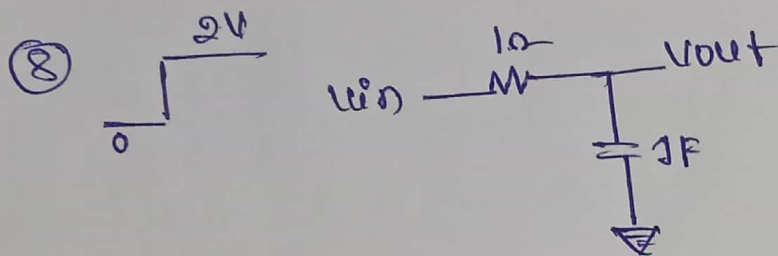* Very important question which I have seen in each and every online test and interview

⑤

Find V_{out}

⑥

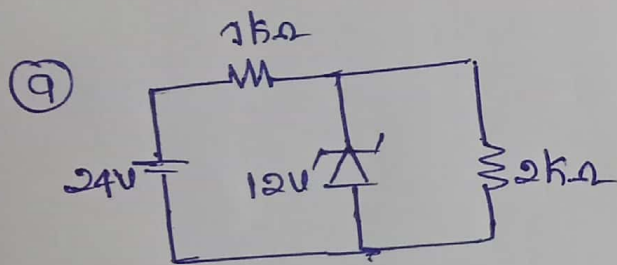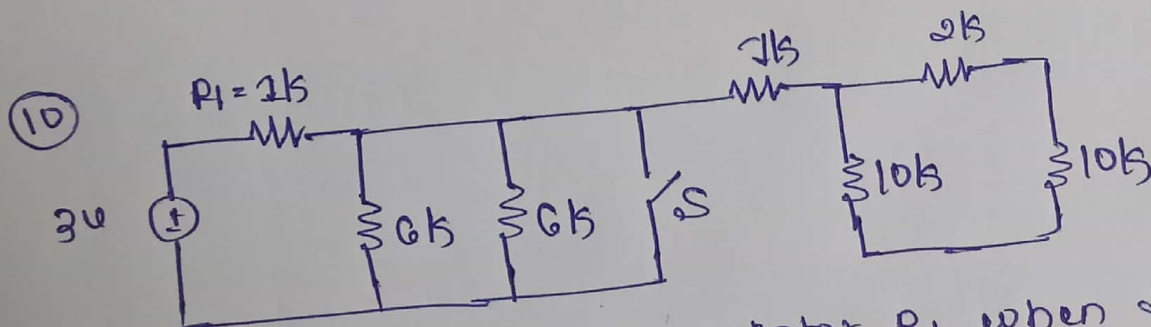what is the steady stat value of ux ?

⑦

what is Vo ?

⑧

given $ln(2) = 0.7$

time taken by capacitor to charge to half Of steady State value
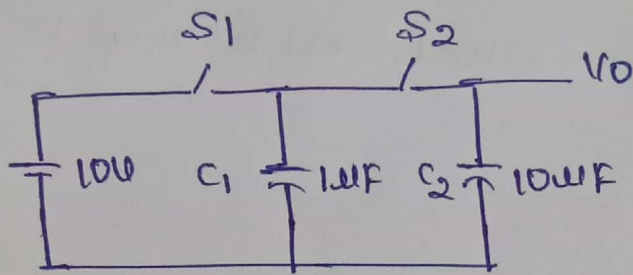
⑨

current flowing through the 1k ohm f 2k ohm resistors

⑩

current through the resistor R₁ when Switch is open and closed respectively

⑪

S1 S2 Vo

10V C₁ 1μF C₂ 10μF

S₁ is closed first, after some time S₁ is made open S₂ is closed what is Vo

⑫
→ There were some questions on digital circuits, solving for output, which were easy