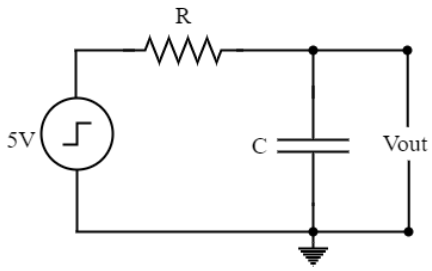
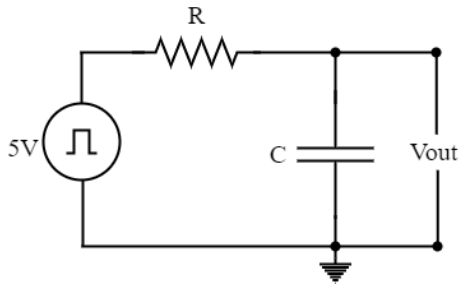
Assignment: RC Circuit

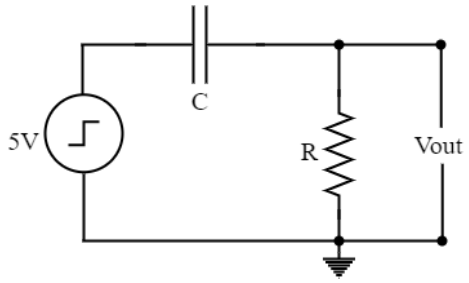
1. Draw the output waveform for the following circuit.



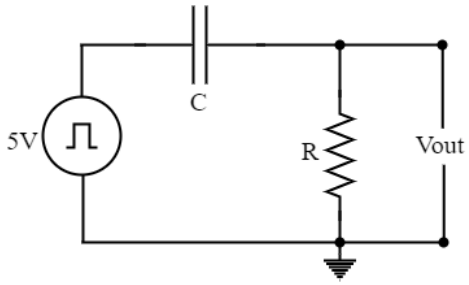
2. Draw the output wave form of the below figure for a pulse input.
    a) RC << T
    b) RC >> T
    c) Find the average output voltage for the above two cases.



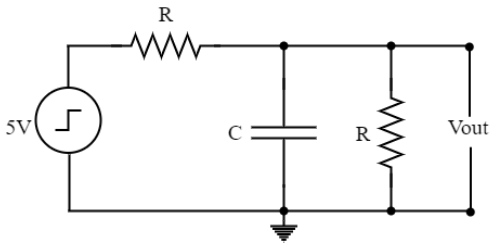
3. Draw the output waveform for the following circuit.



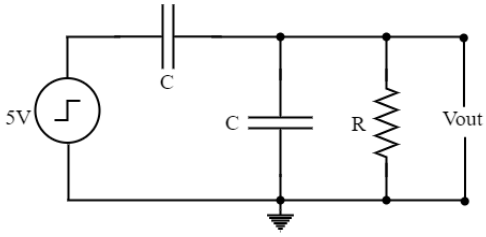
4. Draw the output wave form of the below figure for a pulse input.
    d) RC << T
    e) RC >> T
    f) Find the average output voltage for the above two cases.



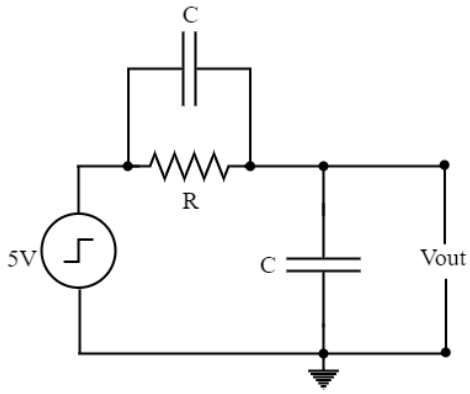
5. Draw the step response of the below circuit diagram.



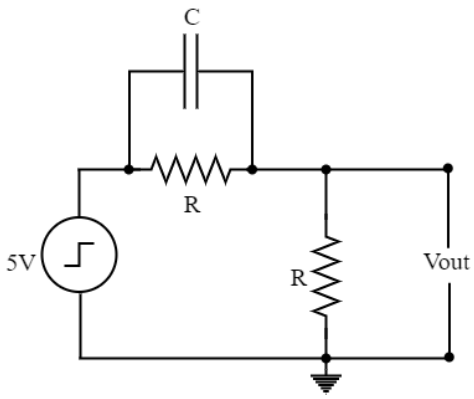
6. Draw the step response of the below circuit diagram.



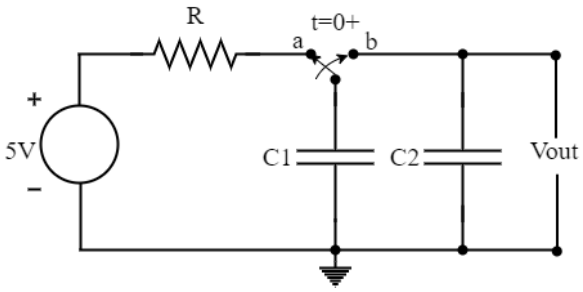
7. Draw the step response of the following circuit.



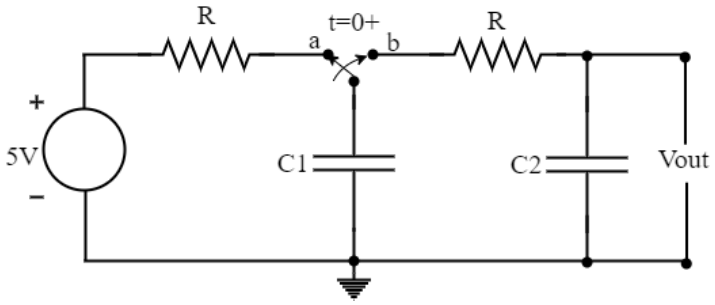
8. Draw the step response of the following circuit.



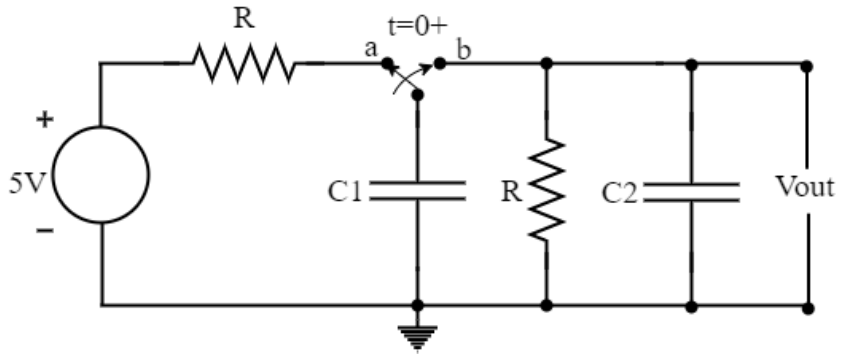
9. For a long time C1 connected to point ‘a’ through switch ‘S1’. At t=0+, C1 connected to point ‘b’. Draw the wave form at the output.



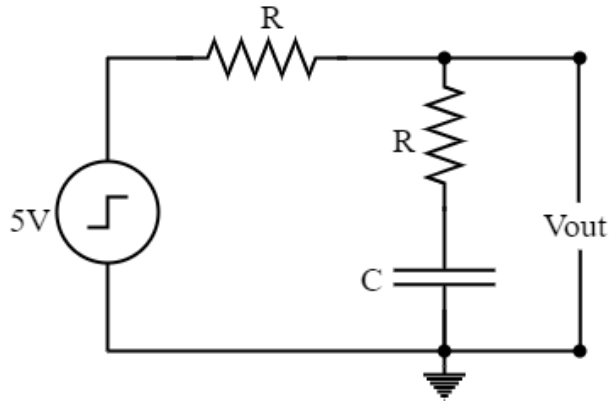
10. For a long time C1 connected to point ‘a’ through switch ‘S1’. At t=0+, C1 connected to point ‘b’. Draw the wave form at the output.



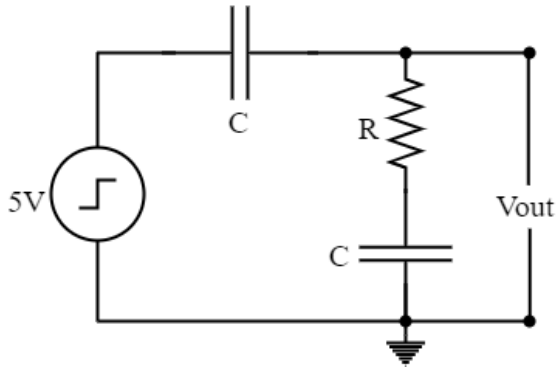
11. For a long time C1 connected to point ‘a’ through switch ‘S1’. At t=0+, C1 connected to point ‘b’. Draw the wave form at the output.



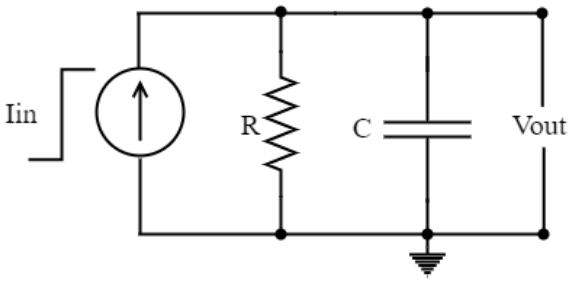
12. Draw the step response of the following circuit.



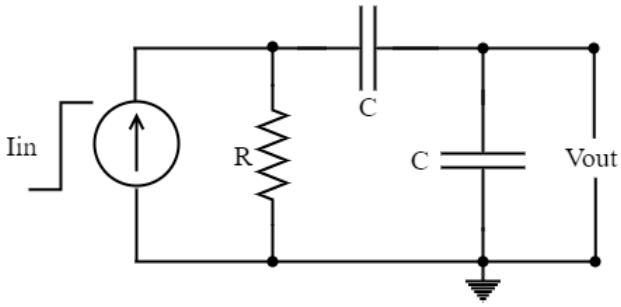
13. Draw the step response of the following circuit.



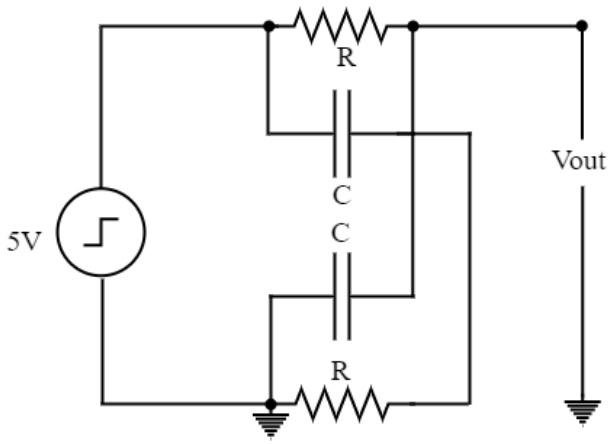
14. Draw the output voltage wave form with respect to time.



15. Draw the output voltage wave form with respect to time.



16. Draw the step response of the following circuit.



17. Draw the output waveform:
    a. When R1*C1 >> R2*C2
    b. When R1*C1 << R2*C2
    c. When R1*C1 = R2*C2
    d. Draw the Bode plot for the above three cases.