PROVIDED REPORT's filename should be your student number. Do not forget to write your name and number inside the report. You can solve the theorical equations by hand, scan of it using apps like office lens and add to report as picture if easily READABLE otherwise use a related app for drawing equations like MS Word's equations. Unreadable equations will not be graded.

Q 1)
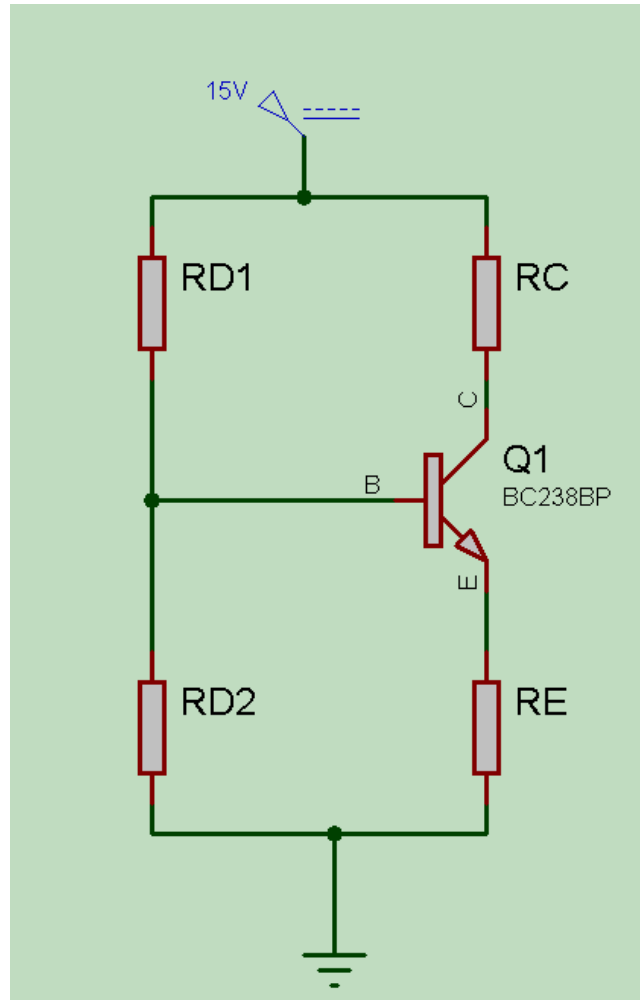
a) Solve the circuit, find equations for each of the terms I_b, I_c, I_{rd1}, I_{rd2}, V_b, V_c, V_e and V_{ce}

Calculate I_b, I_c, I_{rd1}, I_{rd2}, V_b, V_c, V_e and V_{ce}. Take RD1 and RD2 as last 2 digits of your student ID, consider zeros as ones. RC is the absolute value between your last two digits, and RE is the third digit from end. For example, if last 3-digit of your ID is 023, then RD1 = 2k, RD2 = 3k, RC = 1k (|2-3|) and RE = 1k (Assume the 0 digits as 1).

b) Implement circuit in simulation environment.

c) Calculate β of BJT using simulation output.

d) Measure values of I_b, I_c, I_{rd1}, I_{rd2}, V_b, V_c, V_e and V_{ce} in simulation and then compare your results with your calculations. If you use an ideal transistor, make necessary corrections.

e) Provide report containing theorical calculations and simulation outputs (drawings, measurements etc.)