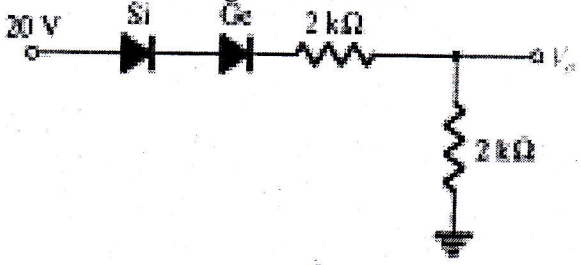
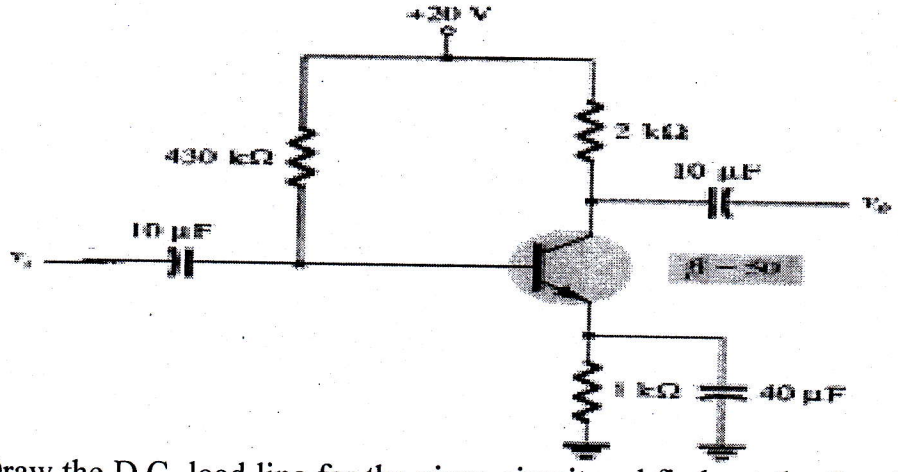
the two power supplies. The input current of the amplifier is sinusoidal with 0.2mA peak. Find the voltage gain, the current gain, the power gain the power drawn from the dc supplies, the power dissipated in the amplifier and the amplifier efficiency?

b) Find the value of ID for the given circuit?



4. a) Find out The following parameters of the given circuit: (i)IB(ii)IC(iii)VCE(iv)VB



b) Draw the D.C. load line for the given circuit and find out the Q-point with the help of graph paper?

5. What do you mean by virtual ground concept and derive the o/p voltage expression for an Instrumentation Amplifier?

6. a) Draw the basic block diagram of Oscilloscope and explain the function of each block?

b) Find out the complement of the given function and realize the complemented function using logic gates: F=(A+B)+BC

7. a) Minimize the following expression and Convert the given expression into POS form?

F=Σ(4,5,6,7)

b) Realize a full adder circuit using:

(i)Two half adder and a OR gate (ii)NAND logic

8. Write short notes of any **Two**:

a) Integrator

b) Clamper

c) AF sine and square wave generator

d) ADC